2006

Understanding sustainable tourism development from a complex systems perspective: A case study of the Swan River, Western Australia

Janine R. McDonald
Edith Cowan University

Edith Cowan University

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UNDERSTANDING SUSTAINABLE TOURISM DEVELOPMENT FROM A COMPLEX SYSTEMS PERSPECTIVE: A CASE STUDY OF THE SWAN RIVER, WESTERN AUSTRALIA

Janine Mc Donald
Bachelor of Applied Science (Ecotourism) [Honours]
Bachelor of Applied Science
Diploma of Teaching

This thesis is presented in fulfilment of the requirements for the degree of   Doctor of Philosophy

Faculty of Business and Law
Edith Cowan University
Perth, Western Australia

March 2006

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ABSTRACT

Tourism does not operate in a predictable and mechanistic environment and is influenced by unpredictable circumstances. Influences include underlying values and perceptions keeping the system unpredictable and dynamic. Tourism that utilises natural resources is exposed to the additional unpredictability of natural changes and activities and/or decisions of other stakeholders.

Tourism research generally adopts reductionist approaches and has not effectively understood tourism as a stakeholder within a complex system of stakeholders. Reductionist approaches have led to interpretations of sustainable tourism development being highly focused and sector specific limiting understanding of the complex systems in which tourism operates and resulting in narrow perspectives. To understand underlying elements influencing the system, a new paradigm is required.

Complex systems science is a possible tool for understanding tourism and sustainable tourism development and allows a holistic understanding of complex systems and the unpredictable and non-linear nature of interactions within them. As a complex system component, tourism is involved in an interactive process whereby individual agents can influence, or be influenced by, other agents in the system resulting in adaptation and system evolution. Timely intervention may ensure that changes produce sustainable outcomes for both the system and individual agents.

The purpose of this research is to determine the value of using a complex systems perspective as a tool for understanding sustainable tourism development for the Swan River in Perth, Western Australia. The Swan River is a complex system under increasing pressure within an urban environment of 1.4 million people. It holds 'icon' status with significant social, cultural and ecological values, supporting a diversity of stakeholders. The river is managed by a complex governance system including seventeen state and sixteen local government agencies.

Qualitative methodology was utilised and consisted of semi-structured in-depth interviews with forty eight key stakeholders using a predominantly interpretive paradigm that complemented the complex systems perspective. The intent was to achieve an empathetic understanding of underlying stakeholder issues and attitudes influencing sustainable tourism development outcomes and management of the Swan River. Quantitative methods were also used to identify issues from a tourist perspective.

Implementation of sustainable tourism development outcomes have proved problematic due to the complex interrelationships between tourism components and other components within a system. This research applied a complex systems science perspective to determine the interrelationships between stakeholders with political, environmental, economic, social and cultural interests in the Swan River. Common and disparate values and perceptions were identified. Underlying behaviours and issues, if left unidentified, have the potential to impact on sustainable tourism development outcomes and the system components.

This research viewed underlying issues in terms of the characteristics of complex systems, namely edge of chaos, butterfly effect, strange attractors, and conflict, which serve to explain patterns of behaviour that occur within a complex system. By adopting a complex systems perspective, key findings, which otherwise may not have emerged had a more reductionist approach been undertaken, include the lack of a shared vision for the river, the absence of tourism planning, and a lack of governance networks.

DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

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ACKNOWLEDGEMENTS

The development of this thesis over the last three years has been a personal journey of learning, facing challenges, stresses and importantly many rewarding experiences. The final thesis would not have been possible without the support, encouragement and guidance of many people who were instrumental in allowing me to achieve my aims.

Firstly, thanks to the staff of CSIRO who provided the seed from which this research grew. Secondly, I thank both my supervisors, Professor Ross Dowling, and Dr Joanna Fountain for their patience, knowledge and guidance over the three years. PhD students offer many challenges and Ross has always believed that I could achieve my aims. Joanna has tolerated many distant emails to New Zealand, given me constant support, encouragement and advice, and at times helped to keep my sanity when I needed it. Thank you both for giving me your valuable time and valuable input.

I thank my respondents who willingly participated in this research, and without whom I could not have completed it. Each respondent shared their personal stories, emotions and knowledge of the Swan River and I hope this thesis gives justice to their voices. I thank each of them for allowing me to delve into the new area of research, the use of complexity science in tourism research.

Many other people have constantly provided much needed support and assistance throughout the three years. Thanks to Julie Connolly for the PhD bear who watched over me, the administrative support and the much-needed good laugh. Anita Purkis proved invaluable with her assistance and Steve Charter's words of wisdom were greatly appreciated. In the last few months in particular, Acushla Felix has been especially supportive and helpful and I thank her for her calmness when assisting with those frustrating computer problems. Thanks to Sally Paulin for the Friday coffee briefings.

Finally, family support is a vital element in achieving a PhD. I give special thanks to my dad and sister for their many long distance phone calls encouraging me to keep going when I felt out of my depth. Living with a PhD student is not an easy experience and the most important person who has coped with all the emotions of the experience has been my husband Phillip. His belief in me has never wavered, and his patience and willingness to read my chapters was always undertaken with enthusiasm. I could not have travelled the PhD road without him being by my side. Thank you.

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CHAPTER 1

INTRODUCTION

> The universe is messy. It is nonlinear, turbulent and chaotic. It is dynamic. It spends its time in transient behaviour on its way to somewhere else, not in mathematically neat equilibria. It self-organizes and evolves. It creates diversity, not uniformity. That's what makes the world interesting, that's what makes it beautiful, and that's what makes it work (Meadows, 2001).

1.1   Research Background

This research began with a question as to why, after nearly twenty years since the concept of sustainability was brought to the global arena through the Brundtland Report (World Commission on Environment and Development 1987), sustainable tourism development outcomes remain problematic and continue to evoke emotive debate. Recognition that tourism is a complex phenomenon is discussed within the academic tourism literature (Fennell, 2002; Hall, 1995a; McKercher, 1999; Swarbrooke, 1999), yet much tourism research continues to take a reductionist approach which does not recognise its inherent complexity. Reductionist views of the world separate nature from humans, regarding it as an impersonal object and also separate facts from values associated with nature (Carley & Christie, 2000). In practice, the complex nature of tourism is not readily understood by those implementing tourism developments of natural resources when this separation of nature and values occurs. This lack of understanding is reflected in the debate that continues within the tourism literature as to whether sustainable tourism outcomes are actually sustainable (Adams & Infield, 2003; Cater & Goodall, 1997; Cater & Lowman, 1994; Lindberg, Enriquez, & Sproule, 1996). At a local scale, conflicts continue to arise within communities when tourism developments of natural resources are proposed. This research attempts to understand why the implementation of sustainable development goals is so problematic, particularly in relation to tourism development of natural resources in urban areas.

Tourism is an industry that has increasingly recognised the natural environment as a crucial attraction of most destinations and one that can be utilised as a significant

resource product (Farrell & Runyan, 1991; Haig & McIntyre, 2002). Increased environmental awareness during the 1980s led to the reassessment of the role of tourism and an increased recognition of its negative impacts (Archer & Cooper, 1998; Coccossis & Nijkamp, 1995; Cooper, Fletcher, Gilbert, & Wanhill, 1993). While it is acknowledged that tourism contributes to environmental degradation of natural areas and can be self-destructive (Eagles & McCool, 2000; Twining-Ward, 1999), there is also acknowledgement of tourism's potential to bring about significant enhancement of the environment and economic benefits (Herath, 2002; Pigram, 1992).

A decade has passed since the World Travel and Tourism Council (WTTC) at the Rio Earth Summit in 1992 was called upon to make travel and tourism a model industry for environmental improvement and to work towards its sustainable development (Butler, 1996). During that decade and beyond, a common theme remains within academic tourism literature, that is, tourism that degrades the resource base from which it derives its opportunities and negatively impacts on communities without returning benefits, is unsustainable (Ahn, Lee, & Shafer, 2002; Allcock, Jones, Lane, & Grant, 1994; Graham Brown, 1997; Cater & Goodall, 1997; Hunter, 1997). It is now widely accepted that the influential concept of sustainability guides natural and cultural resource management (Eagles & McCool, 2000; Moore, Jennings, & Tacey, 2001). Within tourism literature there is also an acceptance that it is imperative that the concept of sustainability be embraced by the tourism sector (Weaver, 2000). Tourism that utilises natural and cultural resources needs to adopt practices which minimise negative impacts and maximise positive benefits in order to work towards sustainable tourism development outcomes (Twining-Ward, 1999; Twynam & Johnston, 2002).

Despite the acknowledgement that sustainable tourism development (STD) is a necessary goal for the tourism sector, implementation has proved problematic (Carter, Baxter, & Hockings, 2001; Sharpley, 2000; Weaver, 2000). In order to work towards goals of STD, numerous pathways have been suggested. These include accreditation and certification schemes, such as the Eco–certification Program (Ecotourism Australia, 2005), Green Globe21 (Green Globe 21, 2005), the use of best practice (Pigram, 1997), development of sustainable tourism indicators (Miller, 2001), and the development of alternative forms of tourism, such as ecotourism (Boo, 1993; Ceballos-Lascurian, 1993; Cleaver & Muller, 2002; Fennell, 2003). However, despite the implementation of these

measures, conflict remains in the sustainable tourism discussion on how to achieve goals of STD. In fact, implementation of sustainable development goals in general has been problematic (Butler, 1998; Hall, 1998).

Within the tourism academic literature, it is evident that there is no common understanding of the term 'sustainable development' or 'sustainable tourism development' and as a result, the terminology in itself is problematic. Sharpley (2000, p. 1) contends that the sustainability terminology is interpreted in various ways, with no consensus as to its meaning and believes that attempts to provide definitions have become a 'cottage industry' within academic literature. Definitions of sustainable tourism and sustainable tourism development abound within the literature. This thesis does not propose to add to the cacophony of definitions. However, the perceptions of these terms and other related terminology outside of academia are of interest, and have been explored in this research in an attempt to clarify implications for achieving sustainable tourism outcomes. As Heinen (1994) asserts, people have different biases, concepts and approaches to sustainable development, depending on the context in which the term is used and discussed. Therefore it should not be assumed that a common understanding is prevalent amongst stakeholders using a natural resource; varying perceptions need to be understood. The different perceptions amongst stakeholders results in unforeseen conflicts when implementing governance or planning processes to achieve sustainable development outcomes.

One of the complexities of understanding sustainable tourism development lies in the different values individuals associate with a natural resource. According to Walsh, Jamrozy and Burr (2001), sustainable tourism development is a normative process which involves stakeholder values. Natural resources utilised for tourism tend to be common pool resources, involving diverse stakeholders with differing value systems (Bosselman, Peterson, & McCarthy, 1999; Holden, 2005). Values that people assign to a given resource, and their perceptions of that resource, will influence the pathways deemed appropriate to achieve outcomes that are considered sustainable (Hall, 1998). According to Checkland (1999), a person's perception of their world is interpreted by ideas whose source is the world itself (Figure 1.1).
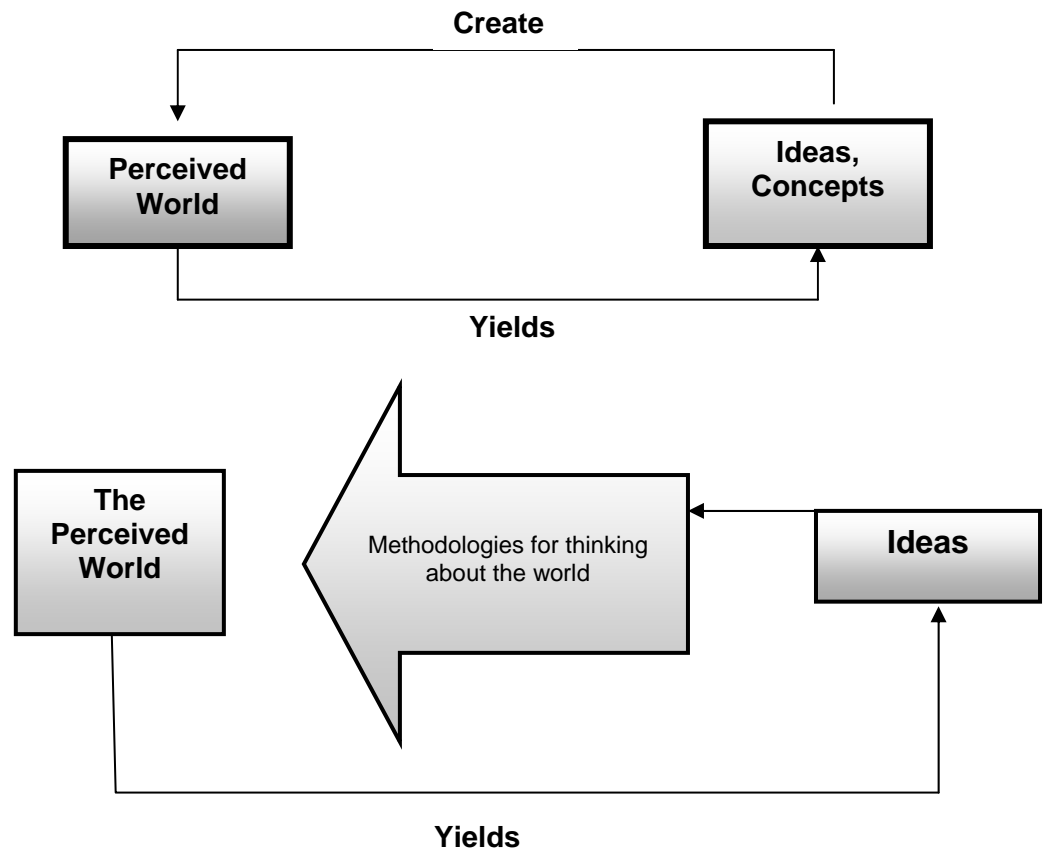
Figure 1.1   The perceived world (After : Checkland 1999, p. 21)

When ideas and concepts develop, methodologies emerge which enable individuals to think about their perceived world and to establish values and norms. Therefore, at the most basic level, there is a need to understand stakeholders, their values, perceptions and visions prior to developing sustainable tourism development goals or implementing planning and management processes. In fact, Butler (1998) attests that the failure to understand the value-laden nature of the concept of sustainable development has led to a misperception that there is actually a common understanding of the term.

1.2   Research Overview

In regard to sustainable tourism development, the academic literature tends to focus on natural and protected areas where tourism impacts on the environment and/or the community. There appears to be little attention given to urban-based tourism which relies on natural resources such as an urban river and the associated issues with its sustainability (Dodds & Joppe, 2001).

This research focuses on the Swan River which flows through the city of Perth, Western Australia as a case study and applies a complex systems perspective to understand the issues associated with urban-based tourism development of a natural resource. The river is an example of a common pool resource.

The Swan River is a significant landscape for Perth, which has a population of 1.4 million people. However, it is an urban river under increasing pressure and tourism development has been highlighted as a potential threat (Swan River Trust, 2004b). Other potential threats derive from both agricultural activities in the river's catchment areas and the urban environment, which has seen rapid changes to land use patterns along the foreshore. For example, agricultural activities and increased urban development has resulted in increased nutrient runoff which has had a significant ecological impact on the river system (Swan River Trust, 2004a). As an urban river, it has been officially recognised as a state icon holding significant social, cultural and ecological values for the broader community. Whilst The Swan River Trust, established in 1998, is responsible for managing the waterways and maintaining a water quality monitoring program, the river comes under the jurisdiction of seventeen government agencies, including the Department of Fisheries, Department of Planning and Infrastructure, Department of Conservation and Land Management and various state statutory authorities. In addition, sixteen local government councils also have governance responsibilities for the river. Community and non-government organisations also have a key interest in the river. Hence, it is possible to view the Swan River as a complex system, which incorporates socio-cultural, economic, political and ecological systems.

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Tourism development on the Swan River does not occur in isolation; instead tourism activities and operators interact and interconnect with the diverse range of components within the complex system. The interconnections between the different component systems within the larger complex system can produce long-term unpredictable behaviours within the system leading to a state referred to as chaos. Tourism as a component of the complex system has the potential to influence and be influenced by other components of the system. Very small changes within the system can result in major changes to the system components leading to either adaptation or their demise. For instance, changes to government legislation regarding activities on the river may result in operators relocating their activities to locations other than the Swan River. As a result, businesses relying on flow on effects from that particular activity may suffer economic losses and be forced to close down. Changes and periods of self-organisation in a complex system are said to occur at the 'edge of chaos'(Stacey, 1996; Waldrop, 1992). The development of a sustainable tourism industry which can adapt to changes needs to be understood in terms of a component system within a larger complex system. Both chaos and the edge of chaos are important features of complex systems and will be discussed further in Chapter 3.

The Swan River can be regarded as an emergent tourism setting at the edge of chaos. Emergent tourism settings have particular characteristics which include, firstly, a combination of both ecological and social systems that are complex, uncertain and unpredictable (Reed, 1999, p. 333) and secondly, governance systems which consist of numerous organisations and a 'lack of a well-defined inter-organizational process' (Jamal & Getz, 1995, p. 196). The uncertainty of emergent tourism settings is often reflected through problems such as changes in population and land use patterns which can lead to unpredictable behaviours (Reed, 2000). The Swan River demonstrates characteristics of an emergent tourism setting such as: changes to its foreshore through increased residential development and recreational activities on the river and changing ecological conditions. A framework that creates understanding of these characteristics is necessary. The impacts to tourism are unpredictable and uncertain. This research proposes that viewing the world and adopting a framework in terms of complex systems thinking is appropriate for an emergent tourism setting such as the Swan River. The framework will allow understanding of underlying stakeholder issues or behaviours that

have the potential to influence the complex system and sustainable tourism development outcomes for the river.

Given limitations of time, and the finances and personnel required to include the whole of the Swan River, clear boundaries have been identified within the river system for this research. The Perth Water Precinct, located in the city of Perth, is the main tourism node along the river and is regarded as one of the dominant landscape features of the city (Figure 1.2). The Perth Water Precinct is one of eight separate precincts (Figure 1.2) established by the Swan River Trust, which make up the larger catchment of the Swan and Canning River system. The precinct has the characteristics of an emergent tourism setting and provides an important boundary to focus the research.

Figure 1.2   Swan and Canning Precincts - Adapted from Swan and Canning Precinct Planning Project Precinct Handbook.(Western Australian Planning Commission, 2002, p. 6)

1.3 Conceptual Framework

The study of tourism and tourism research in general, is regarded as a relatively new discipline which is still developing theoretical frameworks (Jennings, 2001). According to Sarantakos (1998, p 9), social research theory and social theoretical frameworks develop from a set of logically interrelated propositions that arise from research, have been tested rigorously, and help to explain social phenomena. The concepts or conceptual frameworks are the initial stages of the development of a social theory which have not, as yet, been tested through research (Sarantakos, 1998).

Theoretical and conceptual frameworks have been identified within the tourism literature specifically relating to the concept of sustainable tourism development. These include ethical (Wight, 1993), ecological (Ward, Hughey, & Urlich, 2002), social (Walsh et al., 2001) and alternative tourism frameworks (Reynolds & Braithwaite, 2001; Ross & Wall, 1999). However, Hardy, Beeton and Pearson (2002), in their overview of the development of sustainable tourism development, point out that there is still no universally accepted theory related to this concept.

Despite being regarded as a new discipline, McKercher (1999, p 425) argues that tourism thinking has been locked into an 'intellectual time warp that is up to 30 years old' and it is time for a new framework to guide and add to the discussion of tourism. This research adopts a complex systems perspective to viewing tourism, and more importantly sustainable tourism, and offers a new paradigm.

A complex systems perspective acknowledges that tourism, as a system (Leiper, 1990; Mill & Morrison, 1998), operates within a complex system, which has crucial components external to the tourism system, that will influence the outcomes of tourism development. It also acknowledges that the tourism system influences other components within the system. Importantly, in a complex systems perspective, each external component part can be regarded as a separate system, which has its own sub-systems. It is through understanding the component parts, their interrelationships, and the values, perceptions and issues of each of the stakeholders aligned to these

component parts, that appropriate planning in regard to sustainable tourism development can occur.

Complexity thinking provides an alternative way of looking at the world which will affect the policy and planning decision making process. Instead of viewing nature as a duality between humans and nature, where there is an optimal point of resource use by humans, complexity thinking removes the duality notion and instead, views humans as part of nature (Waldrop, 1992). Without the notion of duality, Waldrop (1992) argues, the exploitative nature of resource use is also avoided because a complex systems approach stresses the need to accommodate both nature and human activity as a whole. A holistic understanding of the complex system is achieved through adoption of a complex systems perspective, which is vital for the sustainable development of tourism. This research begins with the premise that sustainability and sustainable development is intrinsically linked to nature, and humans and their values are a part of nature, not apart from nature.

The United Nations Environment Program (UNEP) (2002) suggests that in order to work towards sustainable tourism development, tourism planning must be holistic in nature and must involve coordination of all stakeholders such as agencies, organisations and authorities who have a connection with tourism development. Governance will play an important role in ensuring that planning is both holistic in nature and effective. A complex systems perspective will enable identification of elements within the system potentially influencing planning and governance of the river and allow greater understanding of the components which influence system outcomes. A complex systems perspective provides a more holistic approach than is possible when tourism is viewed as a system that operates in isolation. Figure 1.3 displays the initial conceptual framework applied to this research.
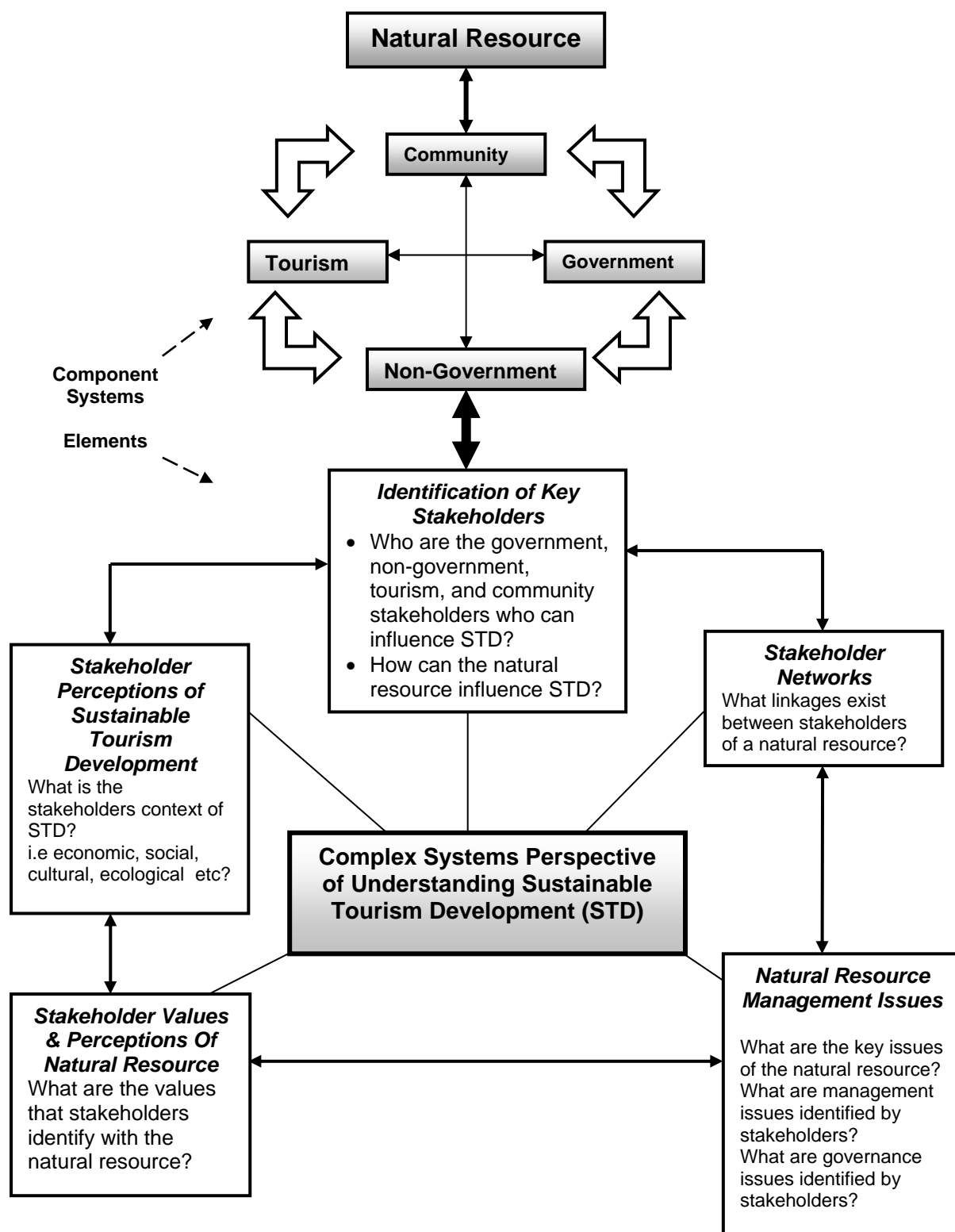
Figure 1.3   Conceptual framework for Swan River case study

Within the complex system of the Swan River, the framework identifies five key component systems that are pertinent for the case study. The first four of these are the community, government, non-government and tourism systems. Importantly, this

framework also identifies the resource (Swan River) as a key component and key influence of the system, which will impact on, and influence the actions of other component systems. The interaction and interconnections between each of these component systems will influence other components of the complex system and eventually influence sustainable tourism development outcomes.

As the framework implies, five key elements are associated with these component systems: key stakeholders, stakeholder networks, natural resource management issues, stakeholder values and perceptions, and stakeholder perceptions of sustainable tourism development. Each of these elements needs to be addressed in order to provide holistic understanding of sustainable tourism development of the Swan River system at a local level. The framework suggests that the interactions and connections between each of these five elements, and the links to each of the component systems, will influence each of the components. The interactions of all key component systems within the complex system are non-linear in nature and will impact on the sustainable development of tourism on the river. Each of these elements needs to be understood prior to establishing sustainable development goals and/or implementing planning and management processes. The conceptual framework identifies elements at a micro level, rather than at meso or macro level. Bosselman, Peterson, and McCarthy (1999 p. 15) believe that because of the localised nature of tourism resources, management strategies need to be localised. This research concentrates on the micro level in order to identify localised issues pertinent to management of the Swan River. However, there is an understanding that issues at the wider spatial levels would also need to be identified by the managers of a given resource.

Whilst it is acknowledged that each component system consists of sub-systems, for the purposes of this research, these sub-systems were not the focal point. Instead, this research identified key stakeholders from each of the component systems and focussed on the interactions and interconnections between each of the stakeholders and the key elements. Sub-systems might include the multi-administrative levels in which government and non-government organisations operate. Tourism also operates at varying supply and demand levels and includes operators who rely on services, such as hospitality services, food supply, or marketing sub-systems which maintain their

product and tourism organisations which have promotional roles. Further research is required to determine the interconnections between the sub-systems and the component systems.

1.4   Significance of the Study

This study will have multi-dimensional significance. Firstly, it will make a significant contribution to tourism research by demonstrating how a complex systems perspective will increase understanding of sustainable tourism development of a natural resource in an urban context. The research will provide a much needed alternative theoretical framework for understanding sustainable tourism development of natural resources within an urban context.

Complex systems science, or complex systems thinking has evolved from general systems theory which essentially views the world in non-linear terms and attempts to explain novel behaviour patterns which emerge from interactions of the parts within the system (Waldrop, 1992). The literature review in Chapter 3 will explain the background and theoretical framework of complex systems. There are those within the tourism literature that acknowledge that tourism is indeed complex in nature and does not operate in isolation (Ashworth, 1992; Holden, 2000; Hughes, 2002; Leiper, 2003; Swarbrooke, 1999), however, tourism research has not effectively understood the relationship of tourism as a stakeholder within a complex system of stakeholders. This research addresses this gap by looking at the relationships that exist between stakeholders of a complex system and the underlying behaviours and issues within the system.

Specifically, in order that sustainable tourism development decisions are made for the Swan River, an understanding of how tourism operates in terms of a complex systems view of the world is required. It is essential to understand where tourism fits into a complex system of an urban river; to understand the overall vision for the river and the connections between tourism stakeholders and other key stakeholders involved with the river. It is also essential to understand underlying influences within the system that could impact on the components. Specific characteristics associated with complex

systems include self-organisation, strange attractors, conflicts, and the edge of chaos which will be discussed further in Chapter 3. Behaviours associated with these characteristics need to be identified and understood. Understanding these behaviours will ensure that management of sustainable development is effective by identifying possible leverage points where intervention in the system is required.

Secondly, Hardy and Beeton (2001) argue that to date, there has been little research which explores stakeholder perceptions of sustainable tourism development and unless there is an understanding of these perceptions, sustainable tourism may not be possible. Often when discussion of sustainable tourism development occurs, it is the maintenance of tourism that is the agenda. Hardy and Beeton's (2001) study of the Daintree region of Far North Queensland concluded that management strategies may not be suitably addressed if the needs of stakeholders are not understood. This research will contribute to the tourism research literature on stakeholder perceptions of sustainable tourism development by identifying how perceptions influence behaviours in the complex system in which tourism operates.

Thirdly, this research explores the complex dimension that stakeholder values and perceptions of a natural resource have in determining sustainable development outcomes for that resource. It is acknowledged that values play a vital role in sustainable tourism development outcomes, but these values are not readily understood (Butler, 1998; Hall, 1998; Walsh et al., 2001). The values that each of the stakeholder groups involved in the study associate with the river, and their perceptions for sustainable tourism development of the river, need to be identified in order to build a holistic picture of how to manage the resource effectively.

Fourthly, this research will contribute to the literature on urban tourism, which has been a neglected area of tourism research (Hinch, 1996, 1998). Although Page and Hall (2003) argue that urban tourism research is gaining significance, the focus is on heritage and cultural urban tourism rather than the natural resources used for tourism.

Fifthly, this research incorporates a resource focus, which has not been adequately addressed in the tourism literature or within tourism research on

sustainability (Carter et al., 2001). Carter, Baxter & Hockings, (2001) in their critical overview of current tourism research, concluded that despite the growth of tourism literature on sustainability, and an acknowledgement that this is the future direction for tourism, there is a lack of focus on natural resource management issues. They argued that tourism research has remained stagnant within the confines of its own discipline and has not matured to incorporate broader disciplines which will assist in natural resource management and sustainability. Jennings (2001) concurs with the argument that tourism research has yet to become truly interdisciplinary. Farrell and Twining-Ward (2005, p. 111) more recently argue that orthodox tourism research is based on disciplinary lines, such as social science or business, and ignores natural sciences and interdisciplinarity which they believe are important components of sustainable development. As a result, tourism's contribution to sustainability studies has been limited. This research addresses these issues by concentrating on the nature of the resource and the interrelationships between tourism and the management agencies which make development decisions of that resource. This research identifies natural resource management issues that are pertinent to the overall management of the Swan River, not just tourism management.

Urban rivers, such as the Swan River, are increasingly under pressure from competing user groups and urban development. The fragility of the Swan River's ecology is currently highlighted, with the occurrence of one of the largest algal blooms devastating fish stocks in June and July 2003. Although The Swan River Trust is responsible for planning, protecting and managing the river, until recently, there was no cohesive vision for the river's management and development which incorporated all government bodies that have jurisdiction over the river's activities. At a Swan River public forum in July 2003, the Hon Judy Edwards (MLA), the Minister for the Environment, launched '*Riverplan*' which is the proposed management plan and implementation strategy for the Swan and Canning Rivers. *Riverplan* is the overarching management plan which has a single body coordinating all groups. Issues surrounding *Riverplan* and management of the river were identified in this research. The timing of this research is therefore important and will contribute to the current literature on urban based tourism that relies on natural resources. Riverplan will be discussed in Chapters 5 and 8.

It is through these five identified areas of significance that the question as to why implementation of sustainable tourism development goals has been so problematic over the past twenty years will be addressed.

1.5   Purpose of the Study

The purpose of this research is to determine the value of using a complex systems perspective as a tool for understanding sustainable tourism development utilising qualitative methodology. A complex systems perspective will provide a framework for developing sustainable tourism outcomes within a complex system, using the Swan River as a case study. The framework can be used in other localities by management agencies and communities involved in sustainable tourism development of common use natural resources, where different values and perceptions exist. Specific project outcomes of this research were to identify underlying issues that need to be addressed in the development of sustainable tourism development policy, planning and management for the Swan River.

It is pertinent to note that the purpose of this research was not to explore the use of mathematical modelling to explain the interconnections between the components within the complex system as is often used in the physical sciences. Instead, the ideas from the complexity sciences have been adapted to suit a qualitative approach to illustrate the underlying behaviours that influence the complex system that tourism operates within and understand why sustainable tourism development is so problematic. The researcher believes that a qualitative approach will bring about intimate knowledge of the system that tourism operates within that cannot be achieved through mathematical modelling alone. Future research, however, may incorporate modelling to delve further into the complex interactions of the Swan River system.

Further to the overall research purpose stated above, outcomes of this research include:

- identification of issues influencing sustainable tourism development outcomes;

- an understanding of the role of stakeholder values and perceptions in the management of sustainable tourism development of natural resources;

- a contribution to the development of a theoretical framework linked to sustainable tourism development of natural resources; and

- a contribution to the literature on urban tourism and natural resource use in an urban environment.

1.6   Research Questions

This research will answer two major research questions:

1. How can a complex systems perspective assist understanding of sustainable tourism development issues?

2. How do stakeholder values and perceptions influence sustainable tourism development of a natural resource?

In conjunction, four secondary research questions will also be answered:

a. How can a complex systems perspective framework assist management agencies in planning for, and developing, sustainable tourism of a natural resource?

b. What are the issues and factors arising from stakeholder perceptions of sustainable tourism that influence sustainable tourism development outcomes?

c. What are the issues and factors arising from stakeholder values of a natural resource that influence sustainable tourism development?

d. How do the interrelationships that exist between tourism operators and key stakeholders connected to a natural resource impact on sustainable tourism outcomes?

1.7 Research Objectives

Key objectives for this research that relate to the research purpose are to determine:

1. key government agencies, community groups, non-government agencies and tourism operators connected to the Swan River;

2. common stakeholder perceptions of sustainable tourism development;

3. key stakeholder values associated with the river by the key government stakeholders, community groups, non government agencies and tourism operators;

4. common stakeholders' vision for future tourism development on the river;

5. the level of network structures between government agencies, community groups, non government agencies and tourism operators;

6. the level of communication between each of the above groups;

7. areas of conflict which may arise between stakeholders; and

8. the underlying issues and factors influencing the complex system of the Swan River and sustainable tourism development outcomes of the river.

1.8 Research Process

A pragmatic research philosophy underlies the research process undertaken for this research. Pragmatic research advocates that behaviours are dictated more by practical consequences than by theory or principles and views science as a process of learning how to learn by reflecting on processes which help understand social problems in the world (Diesing, 1991; Mintz, 2004). A pragmatist does not believe there are a priori notions of absolute truths and therefore within a pragmatic research philosophy, the search for truth is not static and final but is dynamic in nature and constantly changing (Mintz, 2004). The philosophy of pragmatism sits comfortably with the

indeterministic characteristics of complex systems which are dynamic in nature and have the ability to self-organise through emergent behaviours. It is hoped that this research will result in practical outcomes for the Swan River and for the stakeholders that utilise the river.

In keeping within the philosophy of pragmatism, a complex systems perspective using qualitative methodology is used for this research in order to answer the research questions and achieve the research objectives. Complex systems phenomena have often been explained through mathematical modelling. However, the purpose of this research is to determine the value of using a complex systems perspective as a tool for understanding sustainable tourism development in a qualitative framework. Therefore, the researcher has adapted a complex systems approach to a qualitative framework without the intention of producing mathematical models.

It should be stated from the outset that this research did not set out to test complex systems theory, but instead utilised elements of complex systems to determine important influences on a complex system where tourism operates. The butterfly effect, edge of chaos and strange attractors are elements which can identify potential areas of instability within a system. It is also acknowledged that changes within a complex system occur over evolutionary timeframes and at different scales. However, this research was limited to viewing a static snapshot in time, rather than analysing dynamic changes over time. The research does not set out to test the complex systems elements explicitly, but instead uses the elements to analyse issues surrounding sustainable tourism development.

Qualitative methodology allowed rich data to be collected and rich insights into the complex system of the Swan River and sustainable tourism development from the perspective of the respondents and was holistic in nature. The intent of this research is to understand key stakeholder perspectives and discover the ways in which they view their world in the context of the Swan River. (cf: Figure 1.1) The world for the stakeholders is the river which will be perceived and interpreted in diverse ways according to their personal context. This research intends to gain an understanding of stakeholder perceptions and their interpretations of that world through the values they

associate with the river. In addition, the intent is to achieve an empathetic understanding of underlying stakeholder issues and attitudes which may influence sustainable tourism development and overall management of the river.

Qualitative methods used in this research consisted of semi-structured in-depth interviews that complemented the complex systems perspective. Purposeful, critical case and snowball samplings were adopted initially to identify key tourism, government, non-government and community stakeholders connected to the Swan River. In addition, quantitative methods in the form of surveys were used to identify issues from a tourist perspective. For the purpose of this research, tourists were viewed as a separate stakeholder group.

Secondary data was used as a means of data triangulation, to gain a greater understanding of the ecological, social, cultural and governance context of the Swan River than was possible by conducting semi-structured interviews in isolation. This was achieved through reading government documents including annual reports, management strategies, survey reports, and non-government data such as historical documents, books, reports and newspaper items. Secondary data was invaluable in achieving this understanding and a vital element of the research process. The cyclical nature of this research process is conceptualised in Figure 1.4.
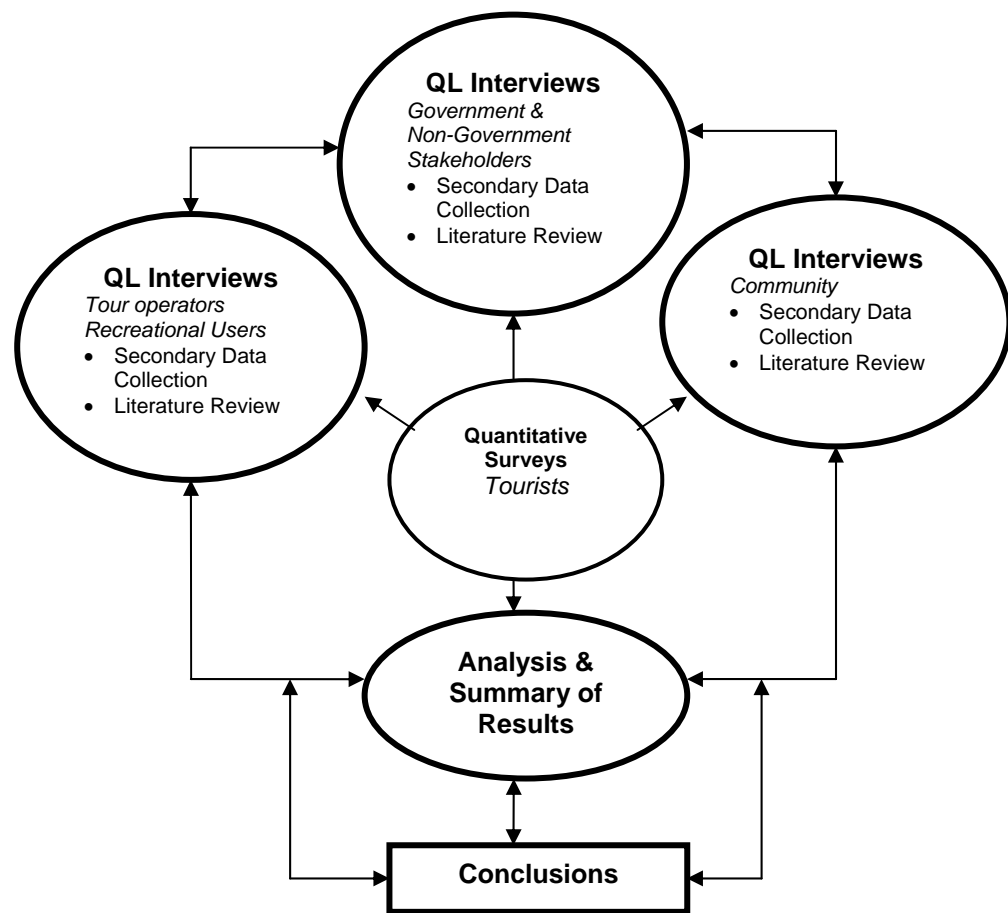
Figure 1.4   Cyclical flow of research process

1.9   Research Definitions

Four definitions need to be clearly defined from the outset of the research process.

Firstly for the purpose of this research, an adaptation of Freeman's (1984) definition of stakeholder was used. Freeman's book, *Strategic Management: a Stakeholder Approach* (1984) was regarded as a landmark book which discussed the role of stakeholders in strategic management of organisations (Donaldson & Preston, 1995). Freeman (1984, p. 46) defines stakeholders as 'any group or individual who can affect or is affected by the achievement of the organization's objective.' This research defines stakeholders as any group or individual who can affect or is affected by sustainable tourism development on the Swan River.

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Secondly, whilst acknowledging that there is no one agreed upon definition and the debate continues as to its meaning, for the purposes of this research, the term sustainable tourism development is defined as:

> the management of all resources upon which tourism depends in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems (Murphy, 1998, p. 179).

Thirdly, for the purposes of this research, the term complex system is defined as:

> the study of systems consisting of large numbers of agents who interact with each other to produce adaptive survival strategies for themselves and hence for the system, or parts thereof, that they belong to. Their system in turn interacts with others, making up a larger suprasystem in which they are agents that coevolve together (Stacey, 1996, p. 19)

Fourthly, the Water and Rivers Commission's definition of 'natural resource management' has been adopted in this research as:

> the ecologically sustainable management of the land, water and biodiversity resources for the benefit of existing and future generations, and for the maintenance of the life support capability of the biosphere. (Waters and Rivers Commission, n.d)[*]

1.10   Outline of Thesis

This thesis is constructed according to the themes that emerged throughout the research process. An outline of the chapters contained within this thesis is presented below.

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[*] From 1st of January 2006 the Water and Rivers Commission is operating as the Department of Water.

Chapter 2   Perceptions of Sustainability in Tourism

This chapter gives a brief overview of the concept of sustainability and sustainable development and then establishes the ways in which the terminology has been interpreted and perceived within the academic literature, highlighting the complex nature of sustainable tourism development. In addition, the chapter discusses the importance of governance and planning in the debate of sustainable tourism development.

Chapter 3   Complex Systems: A Tool for Understanding Sustainable Tourism Development

Tourism is discussed in terms of systems and systems theory and it is argued that a new, more holistic systems approach than is currently available is required to understand sustainable tourism development. The chapter outlines the emerging science of complex systems and their characteristics and discusses the implications of this approach to tourism.

Chapter 4   Methodology

This chapter presents the philosophy that underlies the research process and the qualitative paradigm that was adopted for this research. Qualitative data collection and data analysis methods are discussed along with the limitations of the research methodology. The chapter also discusses secondary data collection and the quantitative method that was used to conduct tourist stakeholder surveys.

Chapter 5   Case Study - The Swan River

Chapter 5 describes the case study location, the Perth Waters Precinct, and its importance to the Perth community along with background information of this area. An overview of each of the stakeholder groups chosen for the research is then presented. In order to put the Swan River into context, the chapter discusses the indigenous significance of the river, the historical background and important modifications to the river and ecological aspects of the river. An overview of the current governance structure of the river is also discussed.

The following chapters present the findings of this research.

Chapter 6   Stakeholder Perceptions of Sustainable Tourism Development

This chapter introduces the stakeholder perceptions of tourism and of its impact to the Swan River along with the common and disparate stakeholder perceptions of the sustainability terminology. Common stakeholder issues that emerged surrounding regulations, best practice and perceived barriers to sustainable tourism development are also discussed.

Chapter 7   Stakeholder Values and Perceptions of the Swan River

Results of the findings surrounding stakeholder values associated with the Swan River which connect stakeholders are presented in this chapter. The chapter highlights the different stakeholder perspectives associated with those values which have implications for the river and sustainable tourism development outcomes. Findings suggest that different stakeholders have both commonly held values for the river as well as values that distinguish differences between the groups. In addition, results from the tourist surveys and secondary data relevant to the findings on values are presented.

Chapter 8   Tourism Planning Issues

Both chapters 8 and 9 present key stakeholder issues that emerged throughout the research which connect stakeholders. The issues have the potential to influence the complex system of the river and its components and therefore influence sustainable tourism development outcomes. Chapter 8 discusses management and planning issues that emerged during the research which could influence planning processes for the river. Issues include, who should be responsible for tourism planning, perceived conflicts, and the need for a sustainable tourism development vision.

Chapter 9   Governance Issues

The research identified important governance issues surrounding the Swan River that have implications for sustainable outcomes. Governance issues include a perceived need for holistic management of the river, perceived problems with the development approvals process and the perceived influence of politics on tourism development. Finally, the networks that currently exist between stakeholders and the implications associated with these networks are presented.

Chapter 10   Discussion and Conclusion

Chapter 10 draws together the implications of the findings of this research. It begins with an overview of the complex systems perspective and discusses the major findings and their implications. Understanding the connections and disconnections between stakeholders and their values and perceptions; the diverse stakeholder perceptions of sustainability and sustainable tourism development; and the planning and governance issues that emerged through the research not only have implications for management of the Swan River but for the river itself.

1.11   Concluding Remarks

A complex system perspective using a predominantly qualitative methodology was a useful tool to understand sustainable tourism development of the Swan River. The perspective highlighted the common connections and disconnections that exist between users of a common pool resource such as the Swan River and also allowed identification of underlying issues that could influence sustainable tourism development outcomes and the complex system of the river. The research did not intend to find definitive answers and in fact raised many new questions, however this is in keeping with the idea of complex systems, being unpredictable, dynamic in nature and self-evolving.

Footnote: From the outset it is important to emphasise that specific indigenous terms have been used in this thesis. Advice on spelling these terms was sought by the researcher from a member of the indigenous community prior to writing; no offence is intended if terms used are not viewed as being correct.

CHAPTER 2

PERCEPTIONS OF SUSTAINABILITY IN TOURISM

Probably the most challenging task facing humanity today is the creation of a shared vision of a sustainable and desirable society, one that can provide permanent prosperity within the biophysical constraints of the real world that is fair and equitable to all of humanity, to other species, and to future generations (Constanza, 2003, p. 664).

2.1   Introduction

The concept of sustainability has been an agenda item for governments, non-government and private sector interests for the past twenty years, with sustainable tourism development on the agenda for more than half of that period (Liu, 2003). As a concept, sustainable tourism development has been widely debated within the academic literature and the tourism industry has attempted to operationalise the concept throughout that period. The debate on the merits of sustainable tourism development continues; conflicts between stakeholders prevail where tourism develops, and balancing the need for ecological responsibility and economic realities is a constant struggle (Curtin & Busby, 1999; Knowles-Lankford & Lankford, 2000; Liu, 2003; Pacific Asia Tourism Association, 2002). There are those who argue that no real attempts towards change have been made within the tourism industry and that sustainable tourism development remains a 'wicked problem' (Cottrell, van der Duim, Andersmid, & Kelder, 2004, p. 409).

The question one can ask is why, more than a decade after the concept of sustainable tourism development was proposed in the global arena, at the Rio Earth Summit in 1992 (Hardy et al., 2002), there remains continued strong debate and prevailing opposing views on the issue of sustainable tourism with no clear agreements. The aim of this chapter is to explore the complexities involved with adopting the concept of sustainability to tourism development.

Milne (1998) points out that the importance of understanding interactions and the nature of interconnectedness between stakeholders is critical in understanding sustainability in tourism development. It is argued in this thesis, that understanding stakeholder perceptions of sustainability and stakeholder values associated with natural resources are crucial aspects in the understanding of sustainable tourism development outcomes at a given destination. A system's capacity for self-organisation and consequently sustainability, will in fact, be derived from how the system's members accept a shared set of values (Dolan, Garcia, & Auerbach, 2003). Understanding the common connections between stakeholders' values and perceptions will assist in assessment and understanding of issues surrounding sustainable tourism development outcomes. Also, critical to understanding sustainable tourism development outcomes are planning and governance issues surrounding natural resources that are utilised by tourism (C. Ryan, 2002; Trousdale, 1999). Effective governance and planning requires contributions from stakeholders to ensure sustainable tourism development goals are achieved, adding to the complexity of the concept (Trousdale, 1999).

Perceptions of sustainability and sustainable development have been interpreted in numerous ways within the literature, but more commonly focus on socio-economic and environmental issues and interests. Differing interpretations ultimately lead to tension and conflict between these interests. Butler (1998) in fact, believes that there is a common misperception that there is a common understanding of the term sustainable development. Stakeholders who are either impacted by, or connected to, a particular tourism development, and have different perceptions of sustainability, may have conflicting approaches and views regarding the sustainability issues of that particular tourism development. A more holistic perception and understanding of the concept is required and a collaborative approach should be taken when applying the sustainability concept to tourism.

Operationalisation of the term sustainability has been attempted through implementation of 'best practices' and through the development of alternative forms of tourism, such as ecotourism. Governments, non-government and tourism authorities which have developed strategies and policies on sustainable tourism development encourage best practice by producing various guidelines, policy documents, and codes of practice to assist and encourage their development (Commonwealth of Australia,

2004; United Nations Environmental Program, 2002; World Tourism Organization, 1996). Despite being viewed in a positive light by some, debate continues as to whether these options are actually sustainable. As yet, research has not produced clear evidence to suggest one way or the other and further research is required.

A further complexity in the operationalisation of sustainability is the consideration and understanding of the lifecycle concept as proposed by Butler (1980). When the lifecycle concept is applied to destinations, a number of progressive stages can be recognised that may lead to decline or stagnation of an area (Butler, 1980). Within the tourism literature, this concept has been applied to alternative tourism, such as ecotourism, and implementation of best practices. It is argued that unsustainable practices may occur during different stages of development (Burton, 1998). An understanding of the lifecycle concept, however, can lead to the development and implementation of strategies and mitigation measures to prevent decline or stagnation from occurring.

In order to understand the concept of sustainability, and why the tourism industry has attempted to operationalise the concept, a brief overview of its historical development is discussed before presenting the common terms that appear in the literature. These terms themselves generate debate and it appears that there is no clear agreement as to their definitions or their use. Despite a lack of agreement, there does appear to be a general consensus as to the principles that underlie the concept of sustainability as applied to tourism.

From the literature it is apparent that, when applied to the tourism industry, the concept of sustainability is complex and its application therefore will not be simple, requiring considerable cooperation and holistic approaches by the various stakeholders involved in the industry. The following discussion explores the above issues, presenting some of the viewpoints found within the tourism literature.

2.2   Background to Sustainability and Sustainable Development

According to Tosun (1998), the original concepts of sustainable development go back to 1968 to the Paris Biosphere Conference and the Ecological Aspects of International Development Conference in Washington, and to the United Nations Conference on the Human Environment in 1972. However Tosun (1998, p. 596) points out that it was not until 1987, that the World Commission on Environment and Development (WCED) popularised the concept of sustainability and sustainable development.

During the 1980s, growing environmental consciousness and environmental concerns from around the world led to a number of internationally significant publications. The first of these was the World Conservation Strategy (WCS), published in 1980 by the International Union for the Conservation of Nature and Natural Resources (IUCN) (International Union for the Conservation of Nature and Natural Resources, 1980). Hall (1995b) claims that this document introduced the concept of sustainability to the public. The WCS strategy provided for the conservation of the earth's living resources. The significance of the WCS, according to Hall (1995b) and the World Tourism Organisation (UNWTO)(1996), lay in the involvement of more than 450 government agencies from over 100 countries who contributed to the preparation of this publication, thus ensuring a global perspective.

Seven years later, the World Commission on Environment and Development (WCED) released a report entitled 'Our Common Future', commonly known as the Brundtland Report (World Commission on Environment and Development 1987). It was the WCS and the WCED report which launched sustainability onto the global stage (Bramwell & Lane, 1993; Harris & Leiper, 1995). Stabler (1997) suggested that there was now widespread acceptance by governments and environmental organisations of the Brundtland Report and the principles of sustainability.

Further to the publication of the WCS and the Brundtland Report, a 'blueprint' for implementing sustainable development, known as *Agenda 21*, was adopted at the Rio Earth Summit in 1992 (Harris & Leiper, 1995; World Tourism Organization, 1996).

Agenda 21 established an action plan for securing the concept of sustainability (Holden, 2000) and identified environmental and development issues which were viewed as a threat to economic and ecological interests around the world (Jafari, 2000; World Tourism Organization, 1996). It should be noted that, as Weaver and Lawton (1999) point out, tourism was not a major consideration in *Agenda 21* and was only alluded to briefly. The purpose of *Agenda 21* was to provide guidance on the types of actions that governments and international organisations could take to achieve patterns of sustainable economic development (Commonwealth of Australia, 1992; Jafari, 2000). *Agenda 21* recognised that a deteriorating environment held consequences not only for the world population but also global economic growth. Importantly the document advocated a bottom-up approach to development rather than the more common top-down approach, prevalent in national plans (Holden, 2000).

Despite the fact that tourism was not the focus for *Agenda 21*, new opportunities for tourism and the positive role that it could play were recognised as a result of the document. For example, Mowforth and Munt (1998) point out that *Agenda 21* specifically mentioned that tourism could offer sustainable development opportunities to certain communities, particularly those in fragile environments. Tourism's impact on the environment was highlighted during this period when the concepts of sustainability and sustainable development were being developed. In 1995, the World Travel and Tourism Council (WTTC) was called upon to make travel and tourism a model industry for environmental improvement (Butler, 1996) and *Agenda 21 for the Travel and Tourism Industry* was developed (Hardy et al., 2002).

The rise of environmentalism and 'green' consciousness in the mid to late 1980s, led to a reassessment of the role of tourism and an increased recognition of its potentially negative impacts (Cooper et al., 1993, p. 86). Tourism was viewed as a largely benign activity prior to the 1970s and early 1980s but this perception was challenged when negative impacts to the environment and communities became evident, and it was realised that tourism was not a 'smokeless industry' (Bramwell & Lane, 1993; Curtin & Busby, 1999, p. 136). Liu (2003, p. 460) believes that key social changes that gave rise to the need for sustainable tourism, include: consumer dissatisfaction with existing products; an increased environmental and cultural sensitivity; destination understanding of resource vulnerability; and changes in

developer and tour operators' attitudes. There were those such as Pigram (1992, p. 76) who acknowledged that whilst tourism could contribute to environmental degradation and be self-destructive, it also had the potential to bring about significant enhancement of the environment.

The growing awareness of sustainability, which arose from the World Conservation Strategy and Our Common Future along with *Agenda 21*, paved the way for the possibility of a more sustainable approach to development of tourism around the globe, which required the development of important principles.

2.3 Principles of Sustainability

Within the tourism literature over the past ten years, principles of sustainability have been expressed differently but have displayed similar elements without the degree of debate or conflict that is apparent in the discussion on sustainability terminology. This section will present core elements of the principles of sustainability that can be found throughout the tourism literature, and issues that must be addressed by the tourism industry.

Principles inherent in the concept of sustainability provide clear guidelines for the tourism industry to work towards. The core elements of sustainability have been presented by government and non-government agencies and by numerous academic researchers reflecting a general consensus (Commonwealth of Australia, 2004; Goodall & Stabler, 1997; Jacobs, 1991; Slee, Farr, & Snowden, 1997). Developing an understanding of the principles necessary for sustainability can serve to alleviate the conflicts in interpretation of the terms 'development' and 'sustainability' (Tosun, 1998, p. 596) The interpretation of these terms is discussed in Section 2.4.

In an attempt to operationalise principles of sustainability after the Rio Earth Summit, Jacobs (1991) proposed three important points in relation to the term 'sustainability' and how it could be implemented. The first point states that institutions should incorporate environmental considerations into policy and practice in a logical

and consistent way. Secondly, no depletion of the natural resource stock is justifiable and there should be intergenerational equity with respect to the natural capital of the planet. Thirdly, sustainable development should not be viewed as synonymous with economic growth. Consideration of community wellbeing, cultural values and the intrinsic value of the environment in any comprehensive examination of development are deemed by Jacobs (1991) as essential. These three considerations are clearly in keeping with the WCED idea of economic growth whilst sustaining the environment for future generations.

Bramwell and Lane (1993, p. 2) although less specific than Jacobs' (1991) criteria, outlined four key principles deemed as crucial for sustainability:

1. holistic planning and strategy making;

2. preservation of essential ecological processes;

3. protection of both human heritage and biodiversity; and

4. development in such a way that productivity can be sustained over the long term for future generations.

In their discussion of the principles of sustainability, Bramwell and Lane (1993) emphasised that the Brundtland report highlighted the importance of equity between nations, and bridging the gap between the poor and the rich in society. A point that Bramwell and Lane (1993) believe must be considered by the tourism industry.

In Australia, post the Rio Earth Summit, the Australian Government moved to ensure that sustainable development principles were adopted in government tourism policies. *The Executive Summary of the Ecologically Sustainable Development (ESD) Working Groups (ESD Working Groups)* (Commonwealth of Australia, 1991, p. xxxi) identified four key principles of sustainability that applied directly to tourism which state that there is:

- improvement in material and non-material well being;

- inter-generational and intra-generational equity;

- protection of biological diversity and the maintenance of ecological processes and systems ; and

- recognition and consideration of the global dimension of environmental impacts of actions and policies.

These four principles of sustainability were adopted in Australian government policies such as the *National Strategy for Ecologically Sustainable Development* (Commonwealth of Australia, 1992) and the *National Ecotourism Strategy* (Department of Tourism, 1994). The principles outlined by both Bramwell and Lane (1993), and the Australian government are similar in nature, expressing the need for social, economic and environmental elements to be considered in working towards sustainability, supporting Jacobs' (1991) criteria. These three elements are commonly referred to as the triple bottom line in natural resource management literature. The term evolved from the three principle goals associated with sustainability; environmental stewardship, social responsibility and economic prosperity (Caswell, 2001; Placet, Anderson, & Fowler, 2005).

In general, there is a consensus within the tourism literature, as to principles of sustainability. Principles of sustainability, as discussed in the literature, reflect an array of issues that are often absent when the interpretations of the terminology are applied. Burr (1995), for instance, identifies that sustainable development embodies the interdependencies among environmental, social, and economic issues whereas the interpretation of sustainable development in relation to tourism, as will later be discussed, often tends to emphasise one element.

If principles of sustainable development are to be successful in tourism and have an important role in environmental protection and economic and social development, they should, according to Burr (1995, p. 14) :

- respect the culture and environment of the host area, the economy and traditional way of life, the indigenous behaviour, and the local leadership and political patterns;

- involve the local population in planning, proceed only with their approval and provide for a degree of local control;

- be undertaken with equity in mind, with the ideal of access to a fair distribution of benefits and costs among tourism promoters and host peoples and areas - now and in the future; and

- be planned and managed for the protection of the natural environment for future generations, planned in an integrated manner with other economic sectors, and assessed on an ongoing basis to evaluate impacts and permit action to counter any negative effects.

Burr's principles are not ambiguous and reflect the criteria and principles identified by Jacobs (1991), the ESD Working Groups (Commonwealth of Australia, 1991) and Bramwell and Lane (1993). Elements of governance and planning are highlighted by each of the above authors as being critical to achieving sustainable outcomes. Both of these elements will be discussed further in Section 2.8.

Despite the consensus of the elements within the principles of sustainability that is evident in the literature, Godfrey (1996) has raised concern as to whether the tourism industry has applied the principles adequately. Four key elements inherent in the principle of sustainability which Godfrey (1996, p. 60) believes tourism has not addressed are: meeting the basic needs of society's poorer members; being culturally sensitive; allowing for 'grassroots' participation in the development process; and improving the quality of life of all people. In other words, Godfrey (1996) believes that the social principles associated with sustainability have been inadequately addressed by those working within the tourism field.

On a global level, following the Rio Earth Summit, the World Tourism Organisation (UNWTO) adopted the *Agenda 21* programme and translated the *Agenda 21* actions specifically for the tourism industry (World Tourism Organization, 1996). The UNWTO argued that the tourism industry, as a major global economic force, had a moral responsibility to work towards a sustainable industry (World Tourism Organization, 1996). The UNWTO established a framework for sustainable development and included guiding principles to assist governments and the diverse

tourism organisations to achieve sustainable development at local and national levels. The guiding principles are highlighted in Table 2.1. At face level, these guiding principles appear to partially address Godfrey's (1996) concerns, however, it is debateable whether the principles such as inter-generational and intra-generational equity are addressed adequately, as evidenced in the debate on tourism's role in poverty reduction (D. Brown, 1998; Mbaiwa, 2005). In 2004, the UNWTO stated that sustainability principles incorporate environmental, economic and socio-cultural aspects of tourism development which must be balanced in order to achieve long-term sustainability (World Tourism Organization, 2004).

Table 2.1   *Framework for Sustainable Development: Guiding Principles*

1. Travel and tourism should assist people in leading healthy and productive lives in harmony with nature.
2. Travel and tourism should contribute to the conservation, protection, and restoration of the earth's ecosystem.
3. Travel and tourism should be based upon sustainable patterns of production and consumption.
4. Nations should cooperate to promote an open economic system, in which international trade in travel and tourism services can take place on a sustainable basis.
5. Travel and tourism, peace, development, and environmental protection are interdependent. Protectionism for trade in travel and tourism services should be halted or reversed.
6. Environmental protection should constitute an integral part of the tourism development process.
7. Tourism development issues should be handled with the participation of concerned citizens, with planning decisions being adopted at the local level.
8. Nations shall warn one another of natural disasters that could affect tourists or tourist areas.
9. Travel and tourism should use its capacity to create employment for women and indigenous peoples to the fullest extent.
10. Tourism development should recognise and support the identity, culture, and interests of indigenous peoples.
11. International laws protecting the environment should be respected by the travel and tourism industry (World Tourism Organization, 1996, p. 34).

It is important to recognise that the principles that underpin sustainable development in tourism are not necessarily unique to tourism and can be applied to sustainable development in general. A holistic approach needs to be taken to achieve sustainable development. It is necessary for local authorities and environmental agencies to work together with tourism stakeholders to achieve the realisation of principles of sustainability (Slee et al., 1997).

The level of consensus surrounding principles of sustainability is not evident in the interpretation and perceptions of the term sustainable development, within the tourism literature. The principles of sustainability discussed above do not have the inherent vagueness that underpins the many definitions of sustainability. The vagueness within definitions has led to the varying interpretations and perceptions of the terminology. In fact, the principles of sustainability are often lost in the terminology debate and consequently different perceptions of how to achieve development in a

sustainable manner are also debated in the literature. The next section will highlight some of the more commonly expressed sustainability terms and their perceptions found within the literature.

2.4   Sustainability Terminology and Associated Perceptions

Despite the awareness of the concept of sustainability, there are those within the literature who believe that tourism researchers are still coming to terms with the concepts of sustainability and sustainable development (Butler, 1999; Cooper et al., 1993; McKercher, 1993; Stabler, 1997). A number of terms have developed from the general concept of sustainability and there appear to be conflicting viewpoints as to their meaning and usage. The terms 'sustainable development', 'ecologically sustainable development' (ESD), 'sustainable tourism' and 'sustainable tourism development' (STD) are used extensively in the tourism industry and tourism literature, often interchangeably. The following discussion introduces these terms and presents examples of the diverse perceptions and the areas of debate that exist in the tourism literature.

Recognising environmental and social concerns, the WCED (1987, p. 87) identified the need for economic development to be sustainable, describing a new model in which development meets 'the needs of the present without compromising the ability of future generations to meet their own needs.' This definition describes the concept of sustainability that is commonly referred to in the tourism literature and was regarded by some, such as Cooper, Fletcher, Gilbert and Wanhill (1993, p. 86), as the guiding principle for tourism development in the 1990s. The broad and non-specific description of sustainability provided by the WCED has resulted in a diversity of interpretations. In discussing sustainability, Mowforth and Munt (1998, p. 22) assert that it is perceived and interpreted differently between individuals, organisations and social groups who have their own agendas. In other words, the perceptions of sustainable development will be interpreted by individuals according to their personal priorities for development and will be context driven. The open-ended nature of sustainability allows the term to be interpreted with an economic emphasis, which is problematic for those who argue that the definition should encompass the ecological conditions necessary to support life

at a specified level of wellbeing through future generations (Harris & Leiper, 1995, p. xix). Harrison (1996) argues that the WCED's definition with its implied acceptance of economic growth has led to criticism and contends that the assumption of egalitarianism and equality in the needs of present and future generations underlying the definition, is questionable. As will be discussed later, the tension between an ecological and economic focus continues to plague the debate and practice of sustainability.

There are those within the tourism literature who are quite sceptical about the concepts and description of sustainability as espoused by the WCED, due to its broad nature, which promotes agenda-based interpretations. One such viewpoint is put quite strongly by McKercher (1993, p. 135) who asked the question "Can tourism survive 'sustainability'?", and claimed that the inherent vagueness of the term was its greatest weakness. As a result of this perceived vagueness, Archer (1996, p. 8) argues that problems arise with the concept when it comes to defining methods of implementation and reconciling all the interests involved. House (1997, p. 93) goes further to say that at its shallowest, the term sustainability is simply a contemporary 'buzz' word, reflecting concern, but not necessarily action to analyse and address problems of human impact on the environment. According to House (1997), at its most fundamental, the use of the term challenges the foundations of current paradigms of progress in the form of economic growth and future expectation rather than instigating environmental changes. Mowforth and Munt (1998, p. 105) argue strongly that there is no absolute true nature of sustainability and it is not definable except in terms of the context, control and position of those who are defining it. As stated previously, individuals' agendas will lead to various interpretations. In addition, Williams (2001) argues that there is a reliance on anthropocentric definitions of sustainability due to its inherent ambiguity.

The vagueness of the definition of sustainability has resulted in the concept being used in wide ranging contexts, including philosophical, procedural, product and planning contexts (Jafari, 2000). The imprecision of the concept of sustainability allows different interpretations of the terms derived from the concept, giving rise to continued debate over their meaning. **Figure 2.1** outlines the key aspects of the terms which give rise to conflicting viewpoints. These terms, especially those in relation to tourism, and the perceived problems associated with the interpretations, will be discussed in the following section.

Sustainable Development

- Are economic growth & environmental integrity compatible?

Ecologically Sustainable Development

- Environmental conservation focus.
- Ecological considerations Vs economic priorities questioned?
- Where are the social considerations?

Sustainable Tourism

- Viability of tourism over time.
- Tourism centric focus.
- Tourism as a source for economic growth.
- Does economic focus diminish environmental responsibility?

Sustainable Tourism Development

- Social, ecological and economic considerations espoused.
- Reality depends on anthropocentric- biocentric perceptions.

Sustainability Terminology Debate

Figure 2.1   Sustainability terminology issues

2.4.1 *Sustainable Development*

The term 'sustainable development' is used in the Brundtland Report to mean:

A process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional changes are made consistent with future as well as present needs (World Commission on Environment and Development 1987, p. 90).

The concept of sustainable development marked the convergence of economic development and environmentalism (Hardy et al., 2002, p. 475). Although the definition considers ecological, social and economic aspects of sustainability, it is still open to interpretations based on a particular industry agenda. Stabler (1997, p. 14), argues that the generality of the definition is not necessarily a problem, as it covers most eventualities and facilitates adaptability and flexibility. Jafari (2000) concurs with this

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view, arguing that because of the imprecision of the definition which allows a multitude of interpretations, governments and economic sectors have widely accepted the term.

Sustainable development in the tourism industry was discussed by Butler (1993, p. 29) who suggested that it involved:

> tourism which is developed and maintained in an area (community, environment), in such a manner and at such a scale, that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well being of other activities and processes.

The social, ecological and economic aspects of sustainable development in tourism are considered by Butler (1993) in a very specific manner. Six years on from that discussion, Butler (1999, p. 8) remains critical of tourism researchers who use the term sustainable development as being inherently good and appropriate for tourism development without acknowledging the negative impacts from such developments. Butler (1999, p. 16) also believes that one of the notions that is ignored in tourism with the sustainable development debate is the idea of limits or carrying capacity which, if overlooked, leads to any form of tourism becoming unsustainable in a particular destination. In contrast, Ahn, Lee and Shafer (2002, p. 4) point out that carrying capacity whilst being an appealing concept, is not objective in nature and fails to take into account relationships between use and impact. The lack of an agreed definition, according to Butler (1999), adds to the debate about the term.

Weaver and Lawton (1999) claim that the term sustainable development is semantically contradictory, which has lead to confusion and conflicts. Wight (2002) agrees with this position, stating that the term itself is an oxymoron. The word 'sustainable' implies a steady state dynamic and limitations which, it is argued, supports environmental ideals, while the term 'development' implies growth which supports those who believe technology can solve all problems (Weaver & Lawton, 1999, p. 10). Grant (1999) believes there needs to be a separation between the terms 'development' and 'growth' in the whole sustainability debate. The term 'growing' is deemed as a quantitative change whereas development relates to a qualitative change in a system (Grant, 1999, p. 236). Whilst development has traditionally referred to

economic growth, Pearce (1989, p.7) suggested that development was broadened to encompass wider socio-economic concerns. Differing views of development put forward by Leiper (1995, p. 328) included modernisation, distributive justice, socio-economic transformation and development as spatial re-organisation. Perhaps the confusion and different interpretations are a result of the relatively fast pace in which definitions, ideas and concepts of sustainable development emerged after Agenda 21.

There are those who believe there has been an acceptance of the term sustainable development by a broad audience without a real understanding of the implications of the term and a belief that environmental integrity and economic growth can be accommodated and attained simultaneously (Butler, 1999; Weaver & Lawton, 1999, p. 10). Willers (1994, p. 1146) cynically suggests that the term sustainable development was in fact, one of the most insidious manipulative ideas which had been forced upon the population by 'the global corporate-political-media network'.

Often in the context of tourism, interpretations of sustainable development concentrate on the relationship between economics and the environment. For instance, Harris and Leiper (1995, p. 20) interpreted sustainable development to encompass managed economic growth within the context of environmental stewardship which aims to pass on natural resources of no less quality or quantity inherited by the current generation, to future generations. A similar but simplified interpretation is put forward by Holder (1996, p. 147) who believes that sustainable development is concerned with balancing growth through use and conservation of resources where those resources remain intact and available for succeeding generations. According to Williams (2001, p. 363) one of the main criticisms of how sustainability and sustainable development is interpreted concerns an assumption that the natural world exists primarily to meet human needs. In other words, an anthropocentric stance is taken where there is a focus on the economic benefits of resource use. Hunter's (1997) spectrum of world views on sustainable development classifies anthropocentric and biocentric stances from weak to very strong sustainability positions (Figure 2.2).

Sustainability Position	Defining characteristics
Very Weak	*Anthropocentric and utilitarian*: growth oriented and resource exploitive: natural resources utilised at economically optimal rates; continued wellbeing through economic growth and technical innovation.
Weak	*Anthropocentric and utilitarian:* resource conservationist; growth is managed and modified; concern for distribution of development costs and benefits through intra and intergenerational equity.
Strong	*(Eco)systems perspective:* resource preservationist: recognises primary value of maintaining the functional integrity of ecosystems over the above secondary value through resource utilisation.
Very Strong	*Bioethical and eco-centric*: resource preservationist to the point where utilisation of natural resources is minimised; intrinsic value in nature encompassing non-human living organisms and even abiotic elements.

Figure 2.2   Spectrum of world views on sustainable development (Hunter, 1997, p. 853)

Hunter (2002) asserts that whilst the interpretations at the extreme ends of the spectrum, that is the very weak and very strong world views, are often disregarded in the debate over sustainable development, the weak interpretations dominate the government and other policy statements.

Debate remains as to a widely accepted definition of sustainable development. Butler (1996, p. 13) argues that continual attempts to define the term to fit in with everyone's needs have reduced it to become indefinable and meaningless. However, Butler (1996) also believes that the term is worth pursuing for want of a better

alternative. It is recognised however, that sustainable development has become a central issue since threats to the environment by unregulated economic growth were acknowledged (Department of Environment Sport and Territories, 1996; Goodall & Stabler, 1997).

2.4.2   Ecologically Sustainable Development (ESD)

There are those who believe that the open-ended nature of the description of sustainability by the WCED allows the economic aspects of development to be highlighted in the discussion of sustainable development in tourism without consideration of ecological issues (Bouguessa, 1996; Butler, 1993, 1996; McKercher, 1993). The term 'ecologically sustainable development' (ESD) implies that the ecological aspects of development are considered.

The term ESD was adopted by the Australian Commonwealth Government in 1992 with the release of the *National Strategy for Ecologically Sustainable Development*. The strategy defined ESD as:

> Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life, now and in the future, can be increased (Commonwealth of Australia, 1992, p. 4).

This definition implies that under ESD, the tourism industry can in fact serve to enhance the resources upon which it relies and according to McKercher (1993), also implies that the total stock of natural capital assets cannot be diminished over time if we are to have a sustainable future.

The term ESD does appear to be more specific in its nature, with any interpretation clearly requiring ecological considerations to be addressed in any development. However, social, cultural and economic considerations are perhaps less clearly defined and open to a flexible interpretation. There is argument that the use of 'ecological sustainability' and 'development' together can result in conflicts between economic and environmental interests (Roughley, 2000). Roughley (2000) believes that

the two terms need to be distinguished due to the tendency for local government tourism planning initiatives to subjugate the imperative of environmental protection and allow economic considerations to take precedence. Despite this viewpoint, there are those such as Pearce (1995) and Pigram and Wahab (1997, p. 18), who claim that support for ESD is now emerging strongly in the tourism sector with this understanding of balancing environmental concern and tourism development.

2.4.3 Sustainable Tourism

The term 'sustainable tourism' has evolved from the term sustainable development and the tourism industry's need to become sustainable (Jackson & Morpeth, 2000). Although the term is linked to a post Rio framework of sustainable development within the literature, Weaver and Lawton (1999) suggest the implicit debate about the need for tourism to be sustainable has been around since the 1950s and has moved through various stages through to the 1990s where the emergence of sustainability became a dominant paradigm. Just as there has been debate about the term sustainable development, various perceptions of the term sustainable tourism have lead to confusion and complexities in translating the concept of sustainability to tourism.

Lane (1991, p. 2) very specifically referred to sustainable tourism as providing satisfying jobs without dominating the local economy or abusing the natural environment. Although the definition recognises ecological and social considerations, there remain concerns that the term can be more narrowly defined to refer simply to tourism's economic viability over time (Butler, 1993; Jafari, 2000). Jafari contends that tourism, like any other economic activity, competes for scarce natural resources which can be impacted upon, and therefore a broader perspective than ongoing viability is required (Jafari, 2000).

Alternative definitions of the term have more of a technical focus. Buckley (2002), for instance, defines sustainable tourism as 'tourism at any scale with practical and proactive design, engineering, and management to reduce environmental impacts.'

The social and cultural considerations of sustainability and tourism do not appear to have relevance in this definition.

Wight (2002, p. 223) states very clearly that sustainable tourism is only a part of the concept of sustainable development, not its equivalent, and in fact differentiates between the term 'sustainable tourism', and 'tourism as it relates to sustainable development'. According to Wight (2002, p. 223) the former, simply means tourism that exists over time, whilst the latter refers to:

> Tourism which is developed so that the nature, scale, location, and manner of development is appropriate and sustainable over time, and where the environment's ability to support other activities and processes is not impaired, since tourism cannot be isolated from other resource use activities as a tourism – centric approach to sustainability.

This differentiation adds to the confusion and complexities involved with attempts to find an agreed upon definition and use of the term sustainable tourism.

Problems with the inherent meaning of the terms sustainable tourism and sustainable development and their interchangeable usage in the context of tourism, were highlighted earlier by Butler (1996) who strongly suggested that the terms in fact meant two very different things. The description of sustainable development by the WCED (1987) implies development in the present only to such a degree that it does not limit the options for future generations and the environment. Definitions of sustainable tourism, on the other hand, according to Butler (1996, p. 13), often imply little about the environment or sustainable development, focussing on economic aspects. Butler (1996) believes that tourism should move towards the context of sustainable development rather than sustainable tourism. Fyall and Garrod (1997, p. 52) pointed out that sustainable tourism as a concept, still defies uniform understanding and a common working definition. The term sustainable tourism is often used as a general description of the practice of tourism, rather than how tourism development should proceed.

Anthropocentric and biocentric stakeholder perspectives of the term sustainable tourism will continue to lead to disagreements because of a lack of common ground (Weaver & Lawton, 1999). Biocentric perspectives of sustainable tourism advocate

resource preservation and at the far end of the scale, an eco-spirituality platform, whilst anthropocentric perspectives argue for a laissez-faire capitalist approach with conservative resource conservation (Weaver & Lawton, 1999, p. 25). As Weaver and Lawton (1999) attest, the perspectives come from mutually exclusive points of view. It could also be argued that different value systems are involved and are not understood by the different stakeholders.

2.4.4   *Sustainable Tourism Development*

The term 'sustainable tourism development' (STD) is often used to convey a more holistic and less self-interested approach to development within tourism. STD is closely associated with sustainable tourism but more specifically addresses the need to ensure that development in tourism is sustainable. In Australia, the Commonwealth Government adopted STD as a concept in tourism and environmental policies in the early 1990s. *The National Tourism Strategy 1992* stated that STD contributes to people's 'economic, environmental and social well being' (Department of Tourism, 1992, p. 3). *The National Ecotourism Strategy*, which followed two years later, described STD as development which 'is able to be carried out without damaging the long term health and integrity of the natural and cultural environments' (Department of Tourism, 1994, p. 64). Both these interpretations appear to be in keeping with the WCED suggested framework for sustainable development. A more holistic definition, which is adopted for this research, was given by Murphy (1998) who concedes that sustainable development is a complex and multidimensional concept. Murphy (1998) believes that a definition in relation to tourism needs to reflect this complexity and multidimensional nature and proposes the following definition:

> the management of all resources upon which tourism depends in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems (p. 179)

Murphy (1998) argues that this definition reflects the complexity of tourism development of natural resources and the multidimensional concerns that arise with such developments. Although the definition appears to be an all-encompassing one, there is still no widespread acceptance of a single definition.

Confusion arises when developing precise definitions of STD because tourism researchers often use sustainable development, ecologically sustainable development, sustainable tourism, and sustainable tourism development interchangeably without differentiating meanings. Although the idea of STD appears to have achieved global endorsement as a new industry paradigm, Godfrey (1996, p. 60) asserts that this has been achieved at the expense of the term becoming a platitude. Both governments and the tourism industry have adopted the concept of STD using common phrasing and terminology such as 'appropriate', 'responsible' and 'alternative' (Godfrey, 1996, p. 58). STD can refer to 'green products' or 'eco-friendly' tourists or to an overall guiding principle to which all tourism should aspire (Godfrey, 1996, p. 59). The use of these terms has created an industry where the meaning of STD has been blurred. Murphy (1998) argues that greater linkages are required between academic, government and tourism interests in pursuing sustainable tourism development, to alleviate the confusion.

Wall (1997a, p. 485) also attempts to explain why confusion arises in interpreting the terms sustainable development, ecologically sustainable development, sustainable tourism and sustainable tourism development by suggesting it is because humans are largely viewed as distinct from nature. The need to recognise that sustainable development in fact implies that humans and the environment are indivisible and that this should be inherent in any definition is argued by Wall (1997a). This viewpoint is similar to William's (2001, p. 363) position, as mentioned earlier, which argued that too often interpretations are based on the anthropocentric notion that the natural world exists primarily to meet human needs. Thus, the different ideological basis that the interpreter brings to the argument influences the interpretation of the terms. An anthropocentric perspective tends to emphasise resource exploitation for human good, while the biocentric perspective has its primary emphasis on the natural environment itself (Weaver & Lawton, 1999, p. 6) (Figure 2.3).
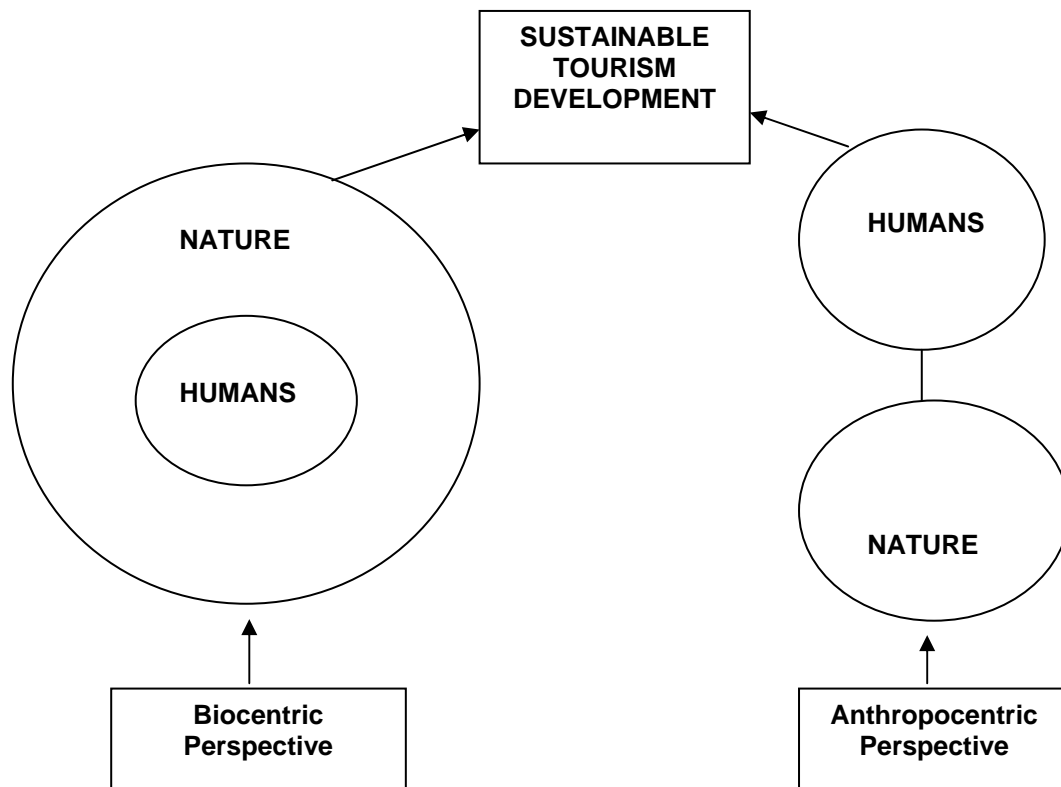
Figure 2.3   Biocentric versus anthropocentric perspectives of sustainable tourism
                   development

The debate about precise definitions and applications of the sustainability terminology used in the tourism literature will undoubtedly continue. It appears that often the principles that should underlie the use of these terms are forgotten. Perhaps it is not necessary to develop a definition of sustainability or other terminology that is absolute or static. As shown in this thesis, an absolute definition will always be open to different interpretations. The literature does not recognise that communities do not operate on definitions. Communities operate on actions and therefore it may be more important to accept the inherent principles of sustainability as absolute and strive to apply them to tourism in these communities.

The problematic nature of the sustainability definitions leads to differing perceptions of sustainability, which is discussed in the following section.

2.5   Perceptions of Sustainability in Tourism Literature

Perceptions of sustainability vary within the tourism literature with researchers often focussing on different elements. The term sustainability when used in relation to environment can encompass ecological, cultural, social and economic aspects. However, more often than not, only one of these aspects provides the central focus for discussion. The following section demonstrates four focus areas - economics, environment, tourism and socio-cultural aspects in relation to sustainability perceptions and agendas within the tourism literature and the tensions they create.

2.5.1   Economic and Environmental Perceptions

Economics and protection of the environment are often cited as being at the heart of the concept of sustainability and are the most common areas of focus found within the tourism sustainability literature.   The Pacific Asia Tourist Association (PATA), who viewed ESD as an essential element in the future direction of the Australian tourism industry if it were to remain profitable, acknowledged the economic implications of sustainability (Pacific Asia Tourism Association, 1992). McIntyre, Hetherington and Inskeep (1993, p. 4) also connect the protection of the environment with achieving successful tourism development, pointing out that tourism must be environmentally sustainable to be economically sustainable.   In fact, Nijkamp and Verdonkschot (1995, p.128) went further to say that tourism and the environment are interdependent and conflicts arise when tourism development is required to meet the demands of increased tourist numbers without diminishing the original attraction. Nijkamp and Verdonkschot (1995, p. 127) acknowledge that problems occur when trying to meet the needs of the host population by improving standards of living, whilst safeguarding the destination environment and cultural heritage.

Janssen, Kiers and Nijkamp (1995, p. 65) link the concept of sustainability with economics but believe that any economic development in tourism should be seen as a matter of quality and not simply quantity.   Under the WCED description of sustainability, the perception is that a fairer distribution of wealth within and among countries and groups in society is required. This issue of equity is reflected in the

principles discussed in Section 2.3. Janssen, Kiers and Nijkamp (1995, p. 67) argue that economic growth resulting from tourism should not be seen as a threat to sustainability, but as the only feasible weapon in the fight against poverty and environmental disasters, particularly in developing countries. Brown (1998) and Mbaiwa (2005) for instance, believe that tourism can be used to fight debt in African countries, by creating economic opportunities whilst conserving habitat and species. However, Mbaiwa (2005) points out that the economic focus of governments often results in a negative cost to the natural resources utilised for tourism and therefore questions the sustainability of such a focus.

Vesenjak (1996) and Bouguessa (1996), who both question the future of tourism, employed an economic focus and conclude that tourism could only continue to be sustainable if it is economically successful. Bouguessa (1996), in particular, believes that sustainable tourism could contribute not only to the well being of populations and tourists, but also to the recovery of local economies. In other words, communities can use it as an economic incentive. According to Hunter's (1997; 2002) world view spectrum (Figure 2.2), this supports a weak sustainability position.

It is clear from the literature that an economic focus that compromises the principles of sustainability will result in conflicting interests and objectives. Development for instance, may be initiated to develop a local economy at the expense of sacrificing aspects of the ecological, social or cultural environment. Thibal (1996) asserts that any tourism development must reconcile these conflicts and be able to transcend individual interests, to achieve sustainability. Jafari (2000) concurs with this view maintaining that successful development must consider the wellbeing of other activities and processes.

There are those who question the motivations behind the quest for sustainable tourism by many communities. For example Goodey (1996), perhaps cynically, believes it to be no more than a quest for economic survival with little concern for the resource implications of a growth in local tourism. Butler (1998) also questions the adoption of the term sustainable tourism by the tourism industry, claiming that it is acceptable for purely economic, public relations and marketing reasons. As McIntyre,

Hetherington and Inskeep (1993, p. 4) stated, sustainable development needs to be based on ecological and socio-cultural as well as economic sustainability.

It should be noted that economics and environment are not mutually exclusive and whilst the debate continues in the literature as to the weighting given to either one or the other, the economic aspects of sustainable development must not be undertaken in isolation from the environmental considerations. When this does occur, tensions can arise and will reflect either anthropocentric or biocentric perspectives.

McKercher (1993) believes that the different perceptions taken in relation to sustainable development have polarised the issue into development and ecology factions. According to McKercher (1993, p. 131) perceptions of the term 'sustainability' are 'used by both the tourism industry and the conservation movement to legitimise and justify their existing activities and policies, although, in many instances they are mutually exclusive'. The development perception, according to McKercher (1993, p. 132) links with economic growth, and argues on a constant wealth concept, where wealth should remain constant or improve between generations. By adopting this perception, natural assets can be used, degraded, or consumed as long as their use is optimised and generates wealth. An ecologically sustainable perception on the other hand, argues that the natural asset base cannot be permitted to decline through time. McKercher (1993, p. 132) argues that this perception takes the view that issues such as species biodiversity, ecosystem integrity, and the threat of irreversibility of impacts, should take precedence in any development decision. An important challenge for the tourism industry in respect to ecological sustainability is to ensure the sustainability of access to its resource base (McKercher, 1998, p. 8). Both the economic and ecological perspectives create room for conflicts to occur when considered in isolation.

Whilst it is argued that most tourism development depends on the natural environment, heritage and culture to provide attractions for tourism development and the associated stakeholders, such as tourism businesses, Ahn, Lee and Schafer (2002, p. 2) argue there is still a lack of empirical evidence that tourism can be sustainable in

nature. They also believe that any sustainable tourism development requires developing harmony between stakeholder groups to develop a desirable and lasting quality of life.

Hunter (1995a) believes that for the long-term best interests of decision makers, local communities, and those involved in the tourism industry, it is necessary to find principles, policies and management tools which allow both the development of tourism as an engine of economic growth and the conservation and /or preservation of environmental resources. The principles of sustainability discussed previously are recognised in the literature, however, it is the application of these principles that remains an issue. The balance between economics and protection of the environment is often at the heart of the concept of sustainability. An economic perception of sustainability may lead to the development of a tourism-centric focus, which will be discussed next.

2.5.2   Tourism-centric focus

Perceptions of sustainability within tourism are often argued to be tourism-centric, ignoring the ecological, social and cultural elements of sustainability. In fact, Hunter (1995b) believes that the perceptions of sustainability, evident in much of the tourism literature, are a cause for concern. The underlying premise behind such perceptions and the consequential development of related principles is overly tourism-centric and parochial. This not only leads to failure in addressing many of the issues critical to the concept of sustainable development but also, as Hunter (1995a, p. 156) asserts, works against it. For example Edwards and Priestley (1996, p. 196) indicate that a clear distinction needs to be made between the sustainability of a particular tourism product and the sustainability of the environment. The two elements, the tourism product and the environment, are viewed as separate entities that should be managed separately. Edwards and Priestley (1996) view the key to sustainability as maintaining the product offered in such a way that it satisfies consumer expectations and therefore ensures that demand levels are maintained on a long-term basis. This view takes a tourist–centric, market oriented stand, where long term tourism activity is seen as achieving sustainability. This view is in direct contrast with McIntyre, Hetherington, and Inskeep (1993) and Nijkamp and Verdonkschot (1995) who assert that tourism development and the environment are interdependent and therefore need to be managed together.

Gossling (2002), in presenting findings of tourism research investigating the impacts of tourism on human and environmental relations, demonstrates that a tourist-centric focus to sustainability in Zanzibar has major implications for the proponents of sustainable tourism development. The marketing of Zanzibar's natural resources by the international tourism industry has resulted in rapid tourism growth and has led to a local government focus on economic growth derived from exploiting the environment. Adoption of a tourist-centric focus by governments and the tourism industry has resulted in major social changes within communities, changed the understanding of the environment by hosts and guests alike, and dissolved the locals' attachment to place (Gossling, 2002).

The tourism-centric paradigm of sustainability and its relationship to tourism is concerned about protecting the immediate resource base that will allow tourism

development to be sustained. The focus for sustainable tourism through maintaining tourism's resource base, Hunter (1995b; 1997) asserts, is often product-focused, ignoring environmental issues. Hunter (1997) critically argues that the dominance of a tourism-centric focus has lead to concerns of sustainable tourism becoming too far removed from the sustainability debate. Milne (1998, p. 37) concurs with these thoughts and claims that the environmental dimension that is central to sustainability has often been downplayed and the tourism-centric focus of economic development leads to unsustainable destination development. The aim of a tourism-centric perspective becomes one of sustaining tourism whereby tourism competes with other economic activities to use natural resources often resulting in a destination's over-dependence on tourism (Sharpley, 2000, p. 9). The costs of such decisions are the ecological and social aspects of sustainability. The social and cultural perceptions of sustainability are considered in the next section.

2.5.3 *Socio-cultural focus*

Economic and ecological aspects are commonly referred to when discussing sustainability and sustainable development in relation to tourism but these elements direct attention to the biophysical resources. The social and cultural elements and associated issues are often missing from the sustainability debate in tourism and both need a higher profile (Butler, 1998; Craik, 1995; Jackson & Morpeth, 2000; Pearce, 1995). Twining-Ward (1999) argues that the focus on ecological aspects of sustainability at the expense of social and cultural elements has led to many of the problems associated with sustainable tourism development. Pearce (1995) goes as far as to propose that cultural exchange is a more acceptable model for resource maintenance, resource wealth and intergenerational equity, than ecological focussed models. The success of achieving sustainable tourism, according to Pearce (1995, p. 144), will only be achieved if attention is directed towards the human resource development needs of tourists, tourism professionals and communities. Pearce's (1995, p. 152) perceptions highlight the tension that exists in the literature when focus is directed towards particular aspects of sustainability.

According to Bramwell and Sharman (2000) the WCED's definition of sustainable development emphasises intra- and inter- generational equity and as such community stakeholders need to be involved in the tourism planning process. However, they also argue that marketing of sustainable tourism will vary from destination to destination and different approaches to achieving sustainable development will need to take place according to specific local circumstances. Community perceptions of sustainable tourism will influence the steps taken and the extent of community participation in the planning process (Bramwell & Sharman, 2000). Bramwell and Sharman (2000) believe that planning is important and this will be discussed further in Section 2.8. They also believe that using a social focus and developing community participation will assist greater understanding of tourism development by communities and result in sustainable outcomes.

Issues surrounding the application of sustainability to tourism and the complexities of community are raised by Jackson and Morpeth (2000), who argue that the concept has been equated almost exclusively with environmental issues. It is their contention that in order to achieve sustainable tourism development, action must be undertaken at the local level which supports Bramwell and Sharman's (2000) arguments. They also believe that social and cultural issues are central elements in successful application of sustainability outcomes. Local authorities and local community need to be responsible for integrating policy action to address environmental, developmental and social issues in accordance with the requirements of *Agenda 21*. *Agenda 21* stipulates that local governments need to involve community in implementation of sustainable development initiatives. According to Jackson and Morpeth (2000), it is vital that sustainability issues surrounding tourism ensure the maintenance of a diverse way of life, local social structures and the viability of local communities. Although supporting the need for social issues to be addressed, Richards and Hall (2000) stipulate that integral to the social aspects, is the ability of communities to achieve economic sustainability. The social benefits to local communities are attained through local employment, reduction in out-migration and prevention of a local old-age demographic structure (Richards & Hall, 2000, p. 299). In other words, there is a direct relationship between the economic and social aspects of sustainability.

Empowerment of community members, especially women, is a critical aspect of sustainable tourism development, according to Scheyvens (1999; 2000). Scheyvens, who (1999) believes that social aspects of sustainable tourism development are often overlooked, advocates that forms of tourism development such as ecotourism, must begin with the needs of local communities. The focus of such developments should be on the social dimensions of the tourism experience as opposed to an environmental and economic impact focus. Gender is a critical consideration for Schevyns (2000), who believes that women in developing countries are often passively involved in sustainable tourism initiatives and their opinions overlooked. Men's voices tend to be heard over women's because of their positions as village heads or chiefs in local communities (Scheyvens, 2000). Women also tend to miss out on employment opportunities because social norms restrict certain activities carried out by women, thus the issue of social equity which is inherent in the concept of sustainability is not achieved (Scheyvens, 2000).

Perhaps controversially, the ideals of social equity as an issue surrounding sustainability in tourism is highlighted by Ryan (2002), who challenges the idea that new forms of tourism should be concerned with sustainability. Ryan (2002) questions the perception of sustainability to retain the status quo and to protect a cultural and physical environment, and asks why the poor of less developed countries should be denied economic and social opportunities at the expense of the concept of sustainability. In other words, protection of natural environments and rural traditions comes at the expense of economic, educational or social opportunities (C. Ryan, 2002, p. 22). Liu (2003) also questions whether sustainable tourism development adequately addresses social equity issues and asserts that an assumption exists in the sustainable tourism debate that any socio-cultural changes produce negative impacts on communities and should be avoided.

Whether the principles of sustainability are advocating retention of the status quo as argued by Ryan (2002) is debatable. What is apparent however is that perceptions of sustainability in relation to tourism are complex and have the potential to create conflicts. A range of stakeholders can influence and be influenced by tourism development using natural resources and working towards sustainable outcomes

becomes more complex when there are such divergent perceptions and particular agendas for interpreting the term (Mowforth & Munt, 1998).

A critical point made by Wall (1995) which is not generally considered in the discussions of sustainability, is that sustainability is not a static term. What is considered sustainable now may not be sustainable in the future due to population changes, emerging technologies and changing tastes (Wall, 1997b, p. 46). The perceptions evident in the tourism literature range from the parochial tourism-centric approaches that Gossling (2002) discusses to the more holistic approaches of Murphy (1998) and it is clear that as a concept, the understanding of sustainability in the tourism debate is still evolving (Wall, 1997b). If Wall's (1997b) point is acknowledged, it will continue to evolve in the future as new considerations arise to meet changes.

2.6   Values

In order to understand perceptions of sustainability it is necessary to understand why these perceptions have emerged. The term 'values' is often associated with natural and cultural resources and is often placed on natural resources, such as rivers, by government and non-government agencies and members of a community. Palmer (1990, p. 3), in discussing Aboriginal culture, believed values are held by people, and determine action in a society when they are shared between members of that society. Palmer (1990) went on to say that in understanding values, explanations can be made as to why people ascribe importance to some things over others.

A more theoretical perspective was given by Rokeach (1972, p. 160) who considered values to be a type of belief linked to an individual's value system and determined a personal behaviour or end-state of existence. In conducting research on the values individuals held for natural resources, Seligman, Syme and Gilchrist (1994, p. 107) adopted Rokeach's perspective and defined the term values 'to refer to general goals and preferences.' Importantly, the values that are constructed by individuals are dependent on the context from which they emerge (Seligman et al., 1994, p. 108) and will influence the decisions made regarding a specific situation.

In the context of tourism, Fennell (2002) discusses the need to understand values in the development of an ecotourism philosophy. He suggests that both ecotourists and ecotour operators have similar values or value systems that are linked to core environmental values. Values assist in the attainment of individual goals, and, within organisations, are able to convey a sense of identity as well as assisting in decision making (Fennell, 2002).

Kitwood (1983, p. 1) discussed the concept of values and suggested that an essential idea, inherent in the use of the term, is that it involves weighing of consideration and choice from alternatives. This viewpoint is important when discussing values in relation to the environment or natural areas. Decision making processes involving natural areas are complex due to the need to arbitrate between differing stakeholder values to reach desirable outcomes, and the need to determine a balance between those values which may be based on different ethical premises (Adger et al., 2003).

Consumptive and non consumptive use values are often ascribed to natural resources, especially those connected to water resources, such as rivers (Loucks & Gladwell, 1999). Values assigned to natural areas include economic, ecological, social, intrinsic, cultural and heritage values. Paehlke (1995, p. 133) believes that sustainability is regarded as the core environmental value adopted by environmentalists and, as an important value, has the ability to influence political decision making. The values that people place on natural resources can influence policy makers in their planning for sustainable outcomes. In other words, values that are assigned to a resource can impact on perceptions of how sustainable outcomes of a resource are achieved. When diverse values are considered in decision making processes, assumptions cannot be made as to which goals or outcomes should prevail (Adger et al., 2003).

Perceptions of sustainability are closely linked to the values that are ascribed to resources by stakeholders. According to Goeldner, Ritchie and McIntosh (2000) values are central to the sustainability debate and when there is incompatibility between values of different stakeholders management becomes complex. Tourism stakeholders for

instance may assign values that pertain to the environment, cultural identity, economic wellbeing, or social stability of a particular area that may differ from other stakeholders (Goeldner et al., 2000). The different values will reflect the way stakeholders pursue the goals of sustainability. Fairweather, Maslon and Simmons (2005 p. 86) argue for instance that people who assign biocentric values to a natural resource tend to focus on protection of the natural resources as opposed to those who assign anthropocentric values and are more likely to focus on the economic and social benefits of that resource. This argument appears in keeping with Hunter's (1997 p. 853) spectrum of world views on sustainable development depicted in Figure 2.2. In relation to tourism, Holden (2005) believes that there is an over emphasis on the anthropocentric or extrinsic values, such as the economic benefits of natural resources, by the tourism sector, and asserts that continued use of nature in a consumptive manner is unsustainable.

Importantly, Goeldner, Ritchie and McIntosh (2000) point to the influence of values in the political arena, reflected in decisions by government leaders. Their standpoint concurs with Paehlke's (1995) view of the political influence of environmental values, and therefore it is important that tourism stakeholders understand the values that are being expressed by the broader community. Goeldner, Ritchie and McIntosh (2000) argue that the tourism sector lacks understanding that values determine sustainable development policies which are developed as part of the political process. Whether these policies develop via consensus or compromise is largely left up to the political entities involved in the process (Goeldner et al., 2000). If the values that tourism stakeholders associate with the goals of sustainable tourism development are to be considered, it is vital that they are actively engaged in the process. It is also vital that the values that non-tourism stakeholders associate with a natural resource are understood and considered in the pursuit of sustainable tourism development outcomes.

2.7   Sustainability and the Lifecycle Concept

An understanding of the lifecycle concept could assist operationalising the concept of sustainability through use of best practice or alternative forms of tourism. Understanding the lifecycle and monitoring stages of development may assist in the implementation of policies or strategies that will prevent unsustainable practices emerging. Within the tourism literature, the linkage between sustainability, the lifecycle, alternative forms of tourism and implementation of best practices is evident (Burton, 1998; Hvenegaard, 1994; Wall, 1997a).

Tourist destinations evolve through several stages of development, which are known as life-stages or a lifecycle (Butler, 1980; Cooper et al., 1993; Gee, Makens, & Choy, 1989). This concept was originally applied to a destination by Butler (1980) who defined six stages of development from inception through to decline or rejuvenation (Figure 2.4).
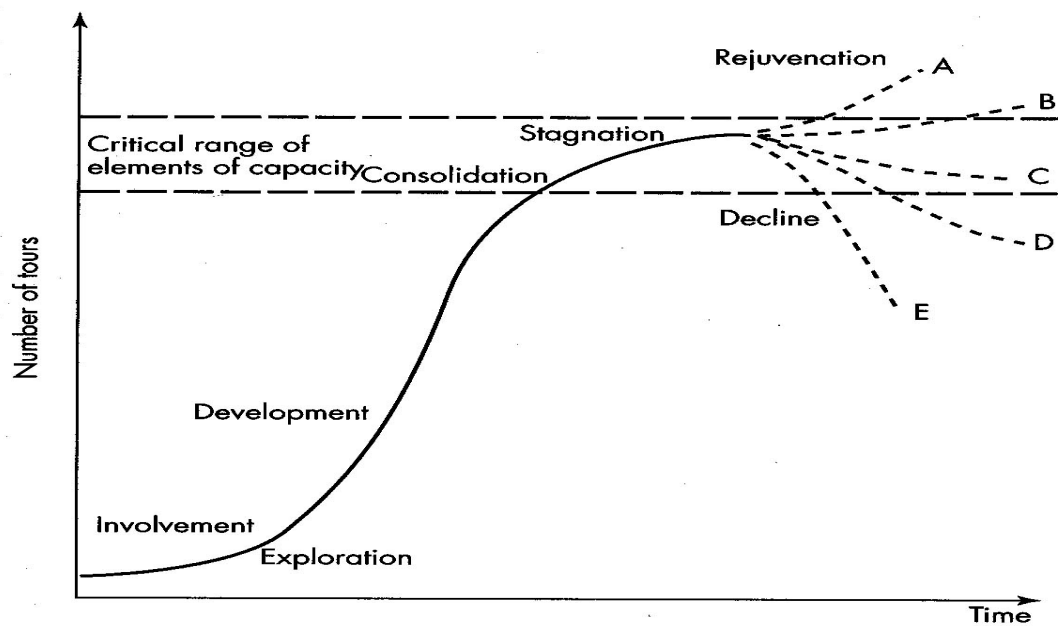
Figure 2.4   Butler's lifecycle model (Butler, 1980, p. 7)

In the decline phase of the cycle, tourist businesses pursue fewer visitors; risk declining profits and experience a deterioration of the associated tourist infrastructure (Slee et al., 1997). If important indicators are not recognised and appropriate strategies implemented, sustainable measures may be jeopardised or forsaken in the attempt to prevent decline.   Burton (1997, p. 357) suggests that tourism can only become sustainable in terms of both economic returns and survival of its resource, if intervention occurs during the destination development process.   Cooper (1997) believes that the link between lifecycle analysis and sustainability lies with the adoption of long-term, as opposed to previous short-term, perspectives.   This new perspective leads to the implementation of a strategic approach, which ensures that tourism becomes a renewable resource at each stage of the tourist area's lifecycle.   Destinations can then deliver control and responsibility that lead to sustainability and avoid potential negative impacts (Cooper, 1997).

Ecotourism in particular has been discussed in terms of the lifecycle concept. Hvenegaard (1994) links Butler's model to ecotourism suggesting that as visitation changes over time, specialist operators will gradually decline and more generalist operators will increase. In fact, Wall (1997a) questions whether ecotourism is nothing more than an early stage of tourism development. Burton (1998) points out that ecotourism businesses are not immune from the competitive processes that drive the cycle. Ecotourism may simply be a passing phase of the growth stage of destinations and will be replaced by more general nature-based tourism as the cycle evolves (Burton, 1998). The question of the sustainability of these destinations as these changes occur may be raised. Findings from three case studies in Australia, conducted by Burton (1998, p. 140) indicated that eco-tour style operators who provide the most sustainable forms of tourism are likely to be most successful at the earlier stages of the cycle where tourism pressures and tourism impacts are low. Genuine ecotourism operators, under pressure from market forces as the destination begins to evolve, may choose to change their product to a lower quality type of tour or go out of business (Burton, 1997). Intervention at the development stage of growth would be required if the most environmentally sustainable tour operators were to be sustained, although Burton (1998) recognises that this would be politically difficult.

Another consideration is in respect to the types of visitors that may arrive as these changes occur and their potential impact on the type and character of the operations. Plog's (1974) lifecycle model is based on the psychographic characteristics of tourists who travel to particular destinations. Three distinct groups of travellers placed along a continuum were identified and labelled as allocentrics, midcentrics, and psychocentrics. Plog (1998) later relabelled the concepts as dependables, centrics and venturers, but retained the characteristics. According to Pearce's (1989) summary of Plog's model, the market for a given destination evolves and the destination appeals to different groups at different times. The allocentrics are associated with new destinations and are adventuresome, self-confident travellers who prefer 'non- touristy' areas. Mill and Morrison (1992; 1998) regard these as innovators in the travel market and best fit those tourists usually associated with ecotourism. Midcentrics from the mass tourist market travel to more developed and mature stage destinations (1992; 1998). Psychocentrics are less adventuresome preferring familiarity in travel

destinations. Plog (1974) believed that when a destination moves towards the psychocentric end of the continuum, it begins to draw on smaller numbers of visitors and moves into decline. The midcentrics and psychocentrics have different expectations and needs to the allocentrics and results in changes to the tourism experience, possibly leading to the emergence and implementation of unsustainable practices by tourism operators.

As enterprising travellers penetrate new and as yet unspoilt areas in their quest for a true ecotourism experience, they become the pioneers of tourism development (Cater & Goodall, 1997) opening up the door to new types of visitors. A recent trend in ecotourism suggests that Plog's (1974) lifecycle concept may indeed be applicable to this industry today. Studies suggest there is a broadening of the clientele for ecotours into the more mainstream market (Lew, 1998). These people are aware of environmental and socio-developmental issues but have greater price sensitivity due to a broader income bracket than is usually associated with ecotourists (Lew, 1998). Competition between operators is likely to increase and an adjustment of products may be necessary. The study indicated that new clientele were less concerned with over-development and the loss of pristine environments and traditional cultures (Lew, 1998), which may lead to new operators using less sustainable practices. This appears to be in keeping with Burton's (1997; 1998) case study findings, as discussed previously, which suggested that as market forces alter, operators are inclined to adopt unsustainable practices in order to compete.

Although there are limitations to the application of the lifecycle concept (Getz, 1992; Leiper, 1995; Prideaux, 1998), its understanding may allow indicators of the stages of development and growth to be identified. This will ensure that proactive intervention measures can be adopted at appropriate stages of development in order that sustainable practices for tourism operators are ongoing (Burton, 1997). However, if the perceptions of sustainable tourism by the various stakeholders involved in the process of developing indicators differ, conflicts may result. This is not to suggest that conflict is necessarily a negative connotation. The issue of conflicts will be discussed in the next section.

The discussion of the concept of sustainability, and sustainability linked to tourism development, demonstrates that debates on definitions, perceptions of terminology, values and links to lifecycle result in a complex web of issues that contribute to the ongoing analysis as to the merits of sustainable tourism development. To add to the complexities involved in understanding sustainable tourism development it is necessary to explore the issues of governance and planning. Both will have significant influence on tourism development outcomes for natural resources in destinations and on the diversity of stakeholders using those natural resources. The importance of governance and planning in relation to sustainable tourism development is discussed in the following section.

2.8   Governance and Planning

The Global Development Research Centre (GDRC) defines governance as a 'complex set of values, norms, processes and institutions by which society manages its development and resolves conflict, formally and informally'. It involves the state, but also civil society at the local, national, regional and global levels (The Global Development Research Centre, 2005). Eckberg and Joas (2004) believe that the definitions of governance reflect changes in the political arena which include alterations to the positions of the nation state, erosion of political power, and changes in the process by which political and non-political actors interact. As a consequence of these changes, there is a horizontal shift of responsibilities from government authorities and those within the public sector sphere, towards non-governmental stakeholders. In fact, Whittaker, Major and Geraghty (2004) argue that the need for governance to include interdependent actors such as individuals, non-government and private organisations, emerged from the inability of governments to meet required social targets. The blurring of boundaries between public and private sector has resulted in the 'emergence of complex networks of agencies and partnerships' (Bramwell & Lane, 2000, p. 2). According to Rhodes (1997, p. 53) the networks are self-organising and continued interactions between members are the result of the need to exchange resources and negotiate shared purposes. The definition of governance by the GDRC reflects the shift in boundaries between public, private and voluntary sectors and stipulates that both state and civil society are responsible for management issues within society.

In recent years, network governance has been applied to natural resource management (NRM) in order to reach an understanding of the complexities involved in sustainable management of resources (Whittaker et al., 2004). Traditional forms of governance, based on the mechanistic view of the world are being challenged in attempts to create greater collaborative dialogue with stakeholders (Connick & Innes, 2003). Network governance, in contrast, focuses on patterns of relations between interdependent actors involved in public policy processes (Whittaker et al., 2004). Carley and Christie (2000) believe that multi-organisational and multi-level approaches to governance are required in order to deal with the environmental challenges facing management of natural resources today. Through a network governance approach, government participates with interdependent agents linked to a system, which includes non-government, private organisations and individuals, to attain goals they would be unable to achieve by working in isolation (Whittaker et al., 2004).

When linked to tourism and tourism's use of the environment, governance is also complex because, 'the issues become entangled in a web of biological, physical, political, financial, and social factors' (Reed, 2000, p. 249). It is important to recognise that ecological and social systems are dynamic in nature and rapid changes can occur within either or both systems over short or long timeframes, thus increasing the complexity for environmental management agencies (Reed, 2000). Effective governance processes need to be in place in order to understand the intricacies of the changes and issues associated with the system. Generally, there is a lack of understanding of the importance of governance in achieving sustainable tourism development and in fact, Trousdale (1999, p. 842) asserts that it is the critical issue in moving development towards sustainability.

Conflict between the stakeholder groups is often a result of the complex interaction of issues, due to their differing values, perceptions, agendas and interests (Jamal & Getz, 2000; Reed, 2000). Rather than being viewed as an obstacle to governance and effective planning, conflict can be productive when there are opportunities for mutual learning (Lovelock, 2002; Reed, 2000; Wolfenden, 2003). In complex systems, conflict provides opportunities for changes and adaptations to the system, which ensures that the system evolves (cf: Chapter 3, Section 3.4.7). Lovelock (2002, p. 26), in fact, suggests that conflict between stakeholders is necessary to ensure

that fundamental principles of sustainable development are realised and the environmental issues connected to ecological preservation are adequately addressed. In order to achieve this end understanding of the components of, and the interconnections of, a particular ecological or social system is required. When an understanding of these systems is limited, conflicts between stakeholders may serve to highlight these components and interconnections which need to be incorporated into planning mechanisms (Lovelock, 2002; Reed, 1999). Effective governance and planning mechanisms will have an important role in achieving sustainable outcomes for the components within a system.

Tourism that uses natural resources for its activities becomes a component of the ecological and social systems which can be regarded as common pool resources (Briassoulis, 2002). Briassoulis (2002, p. 1068) attests that such areas are characterised by 'multiple, overlapping, and potentially conflicting uses and user groups; volatility in uses and institutional arrangements.' Clearly, tourism, which utilises natural resources, does not operate in isolation. Tourism planning therefore becomes essential for these systems and requires understanding of the complexities involved and the ability to ensure collaboration of stakeholders and the identification of shared values (Reed, 2000). Public participation is important in the sustainability quest and requires a multi-level network governance approach, rather than centralised government policy to ensure that all stakeholders are considered (Eckerberg & Joas, 2004). In order to achieve sustainable tourism development, planning must ensure that the wellbeing of the physical and social environment is considered in order for economic wellbeing (Hall, 2000b). There is an important link between planning and governance. Effective governance requires government agencies to take responsibility for planning for tourism and incorporate stakeholder needs and values in policy development. Policies are simply the plan of action that governments adopt (Dowling & Fennell, 2003). Hall (2000b) believes that the nature of tourism and a lack of government agency responsibility leads to ad hoc responses by the public sector to tourism development impacts. A lack of predetermined strategies to meet objectives, according to Hall (2000b, p. 11), is the antithesis of planning.

Importantly, Hall (2000b) distinguishes between the more general meaning of planning, with its emphasis on coming up with a plan, and the tourism planning process

which is more complex than simply making decisions about the preparation of a plan. To Hall (2000b, p. 7), planning is only one part of the overall planning process which involves numerous activities such as bargaining and negotiating, making compromises and choices and involves values and politics. Dowling and Fennell (2003) emphasise that planning relies heavily on values to make predictions about the future through informed decision making. A holistic approach to tourism planning and policy development is required to ensure that all sectors associated with a natural resource are considered and government and non-government agencies incorporate those values into policies.

The discussion by Jamal and Getz (2000) of a Canadian experience of local government attempts to initiate collaborative planning, highlights the complexities involved in the tourism planning process to which Hall (2000b) refers. According to Jamal and Getz (2000), tourism planning is essentially political, with stakeholder needs, values and demands impacting on ecological, economic and socio cultural resources. Issues of adequate stakeholder representation, influence of power, consensus, diversity of stakeholder needs and skill levels, emergent and evolving interests, all added to the complexities involved in the process (Caffyn & Jobbins, 2003; Jamal & Getz, 2000). Ryan (2002) also believes that tourism planning is essential, and must involve communities identifying their vision, conceding that it is a complex process with issues of stakeholder representativeness and consensus not easily overcome.

The complexities involved in achieving effective collaboration and tourism planning is emphasised by Ritchie (2000), who presents the findings of what he calls a 'complex, contentious study' of the collaborative process of incorporating stakeholder interests into tourism policy of a well known Canadian National Park. The study was undertaken at a cost of $2.4 million (CDN) by the Canadian government due to increasing public concerns for the wellbeing of a Canadian National Park icon, Banff National Park, which was under pressure from increasing tourism. The study required establishment of expert panels, facilitators and the preparation of guidelines, and coordination between all of the stakeholder groups. The study ultimately resulted in 500 recommendations. The essence of the study was the initial desire to obtain a common stakeholder vision for Banff National Park, which could provide the focus or framework for the development of agreed planning strategies. Ritchie (2000), although

acknowledging the complexities, believes the process of actively engaging stakeholders in decision-making about tourism development is beneficial for tourism and other stakeholders and to the environmental resource that is being used for tourism.

Ritchie (2000) may be correct, but Caffyn and Jobbins (2003) have highlighted the difficulties of instigating similar programs in non-western countries where there is an absence of democratic process and an overwhelming control of power by the state. Caffyn and Jobbins (2003) studied the implications of governance systems in Morocco and Tunisia on coastal tourism, where pressure exists to exploit tourism by the government to achieve much needed economic development. Their study found that governance structures discouraged stakeholder participation, and the governments were unable to deal with complex issues due to the top-down, command style of government structures in place (Caffyn & Jobbins, 2003). Whether discussing effective governance either in developing or developed countries, the important point is that there needs to be political will to ensure that effective governance structures are in place before stakeholder interests can be incorporated into tourism policy and planning.

An overview of the Australian state and federal tourism organisations and the governance structures by Hall (2000a), is critical of the lack of collaboration and coordination that is undertaken by these organisations, which it can be argued, has major implications for sustainable tourism development. Hall (2000a), who argues that public and private sector interest groups representing a diversity of stakeholders have a crucial role in tourism policy and planning, believes that the Australian approach to tourism largely focuses on tourism industry stakeholders. It is Hall's (2000a, p. 153) contention that although there is a need for government and tourism industry coordination, a wider cross-section of stakeholders is required so that narrow policy development can be avoided and greater responsiveness to their environments is achieved. In Australia, coordination between government agencies is in itself complex and requires vertical and horizontal coordination. Caffyn and Jobbins (2003, p. 226) advocate an integrated catchment management approach to achieving effective governance of tourism development, and believe that vertical and horizontal integration of state policies and interventions is required in tourism planning. Good governance requires partnerships based on public interest rather than market interest and

collaboration involving all stakeholders, not just those within the tourism industry (Hall, 2000a).

Although complex, governance and planning programs surrounding tourism that have been relatively successful are discussed by Jamal and Getz (2000) and Ritchie (2000). Another mechanism for effective governance is that of the use of Local Agenda 21s, which Sancassiani (2005) recommends. A Local Agenda 21 (LA21), as an approach, was developed after the Rio Earth Summit and provides local communities with a mechanism for community planning for sustainability (United Nations Environmental Program, 2003). The UNEP (United Nations Environmental Program, 2003, p. 12) advocates the use of LA21s to achieve sustainable tourism development to ensure that tourism planning and development addresses the issues of economic, social and environmental impacts of tourism at the local scale. They also ensure that tourism development is placed in the context of sustainable development; and perhaps most importantly, they ensure environmental and community interests as well as tourism stakeholders are heard. Sancassiani's (2005, p. 197) study of the use of a Local Agenda 21 in Italy highlighted several key advantages which include the:

- coordination and integration of policies and institutions involved in management of natural resources;

- identification, monitoring, and enhancement of existing projects using good practice and thus developing local knowledge and skills;

- introduction of change and innovation to the participation process which begins at the beginning of the process, as compared to traditional methods for civil participation; and

- promotion of higher exchanges of ideas within and between local authorities and other stakeholder groups.

Up until 2003, the UNEP had only been able to identify a handful of destinations that had developed tourism strategies linked to a Local Agenda 21 approach and believed that one of the reasons for this was the lack of involvement in sustainability issues by tourist destinations (United Nations Environmental Program, 2003). However, the UNEP acknowledged the difficulties in identifying communities that were taking a more strategic approach to sustainable tourism development.

As observed from the above discussion on governance and planning, the quest to achieve effective governance and tourism planning in order to achieve the objectives of sustainable tourism development is a complex one. Whilst the importance of incorporating the diversity of stakeholders in the planning process is recognised (Bramwell & Lane, 2000), ensuring that the different stakeholder perceptions and values are translated to tourism policy will be a challenge.

2.9   Conclusion

This chapter has argued that sustainability is a complex concept which, when linked to tourism, is defined, perceived and interpreted in numerous ways. Sustainable development, sustainable tourism, ecologically sustainable development and sustainable tourism development are some of the terms used within the tourism literature, often interchangeably. As result of the different definitions, interpretations and perceptions of each of these terms, confusion and conflicts arise when attempting to operationalise the concept. The complex nature of defining and interpreting sustainability terminology is linked not only to the ambiguity of the term sustainable development but to the differing ideologies of those trying to define and interpret the terms (Holden, 2000). As a result, Holden (2000) argues, it is meaningless to try to find common definitions.

However, it is important to recognise these perceptions in order to understand the conflicts that occur between different stakeholders of a natural resource used for tourism. In addition, the differing perceptions and interpretations will reflect the values that a stakeholder assigns to a natural resource, such as economic, social, intrinsic, aesthetic, cultural or ecological values. As noted by Goeldener, Ritchie and McIntosh (2000) the tourism sector lacks understanding of the influence of values in determining sustainable development policies and this is an issue that needs to be addressed. There is also a lack of understanding that terms such as sustainable tourism, and sustainable tourism development are value-laden which must be recognised (Butler, 1999; Hunter, 2002).

The concept of a destination life-cycle is also an important consideration in terms of sustainable outcomes for tourism. Griffen (2002) concedes that arguments stating that tourism is unsustainable because of the environmental and cultural impacts which render destinations less appealing, are difficult to challenge. Destinations that reach a less appealing stage would be in the decline stage of Butler's (1980) lifecycle model. It is estimated by Griffin (2002) that the greatest increase in tourist numbers will occur over the next twenty years which will result in a number of challenges. For instance, decisions will need to be made as to whether destinations allow further development to cater for this growth and risk losing appeal through environmental impacts and threats to other values, which may result in a move into a decline stage. Being able to understand and identify important issues, as these changes occur, may be critical in ensuring achievement of sustainable outcomes for the systems in which tourism operates.

Added to the complexity of sustainable tourism development is the need for effective planning and governance mechanisms to translate principles of sustainability into an agreed outcome. Trousdale (1999) believes bridging the gap between the doctrine of sustainability and real action is increasingly difficult due to the inadequacies of governance structures. Unfortunately, as Griffen (2002) asserts, when it comes to natural resource planning, trade-offs are often made between one dimension of sustainability over another. For instance social and environmental dimensions may be traded in return for economic benefits. These trade-offs are dependent on the interpretations by governments as to the perceived long term benefit for the community, which Griffen (2002) perhaps cynically asserts, translates to votes in the next election. Tourism development of natural resources needs to be holistic in nature, and integrated into the planning and governance processes (Sharpley, 2000). Tourism should not be considered in isolation and a collaborative approach to planning will ensure beneficial outcomes for all stakeholders (Bramwell & Sharman, 1999).

The next chapter will explore the need for tourism to be considered in a new theoretical framework, namely a complex systems framework, to achieve greater understanding of the complexities of sustainable tourism development. Within the tourism literature, there has been a call for tourism research to move from a predominantly reductionist perspective of the world, to a complex perspective (Farrell

& Twining-Ward, 2004; Faulkner & Russell, 1997; Hunter, 2002; McKercher, 1999). Sharpley (2000) believes that attempts to view tourism holistically to date, have concentrated on the tourism system itself. If tourism is to result in sustainable outcomes for natural resources, new ways of viewing the world are required (Hunter, 2002). A complex systems perspective, which views tourism as a complex, uncertain, unpredictable system and views the world in a similar fashion, may provide greater understanding of how to achieve sustainable tourism outcomes (Farrell & Twining-Ward, 2004).

Chapter 3 will firstly discuss a systems approach to tourism and then will discuss the emerging science of complexity related to tourism.

CHAPTER 3

COMPLEX SYSTEMS: A TOOL FOR UNDERSTANDING SUSTAINABLE TOURISM DEVELOPMENT

The study of complexity offers an opportunity to stand back and consider the global interactions of fundamental units...to create a synthesis that crosses the borders of scientific disciplines, to see the grand vision of nature. (Baruch Blumberg, Nobel Laureate 1995)

3.1 Introduction

A world view which perceives and explains phenomena through a reductionist approach, that is, by breaking down and analysing components to explain phenomena, is being challenged by many within the scientific community (Waldrop, 1992). The world in which we live is a complex and evolving system in which natural resources are experiencing rapid changes, including climate change, resource depletion and degradation, along with increased competition from various sectors within the community, such as tourism (Connick & Innes, 2003; Farrell & Twining-Ward, 2004). Understanding the changes occurring to our natural resources; the complexity of problems as a result of these changes; and issues surrounding sustainability, requires a paradigm shift in the way we think about and understand the diversity of systems that operate within that complex world (Connick & Innes, 2003; Coveney & Highfield, 1995; Waldrop, 1992). These systems include social and ecological systems. Senge (1999, p. 6), believes it is society's inability to understand and manage complex systems that is leading to social, ecological and institutional breakdowns. A move away from the current reductionist view of understanding the world is required if we are to understand complex systems. Complexity thinking may provide that paradigm shift.

Complex systems science is a new and emerging science which has its basis in the way nature and the universe are viewed (Anderla, Dunning, & Forge, 1997; Stacey, 1996; Waldrop, 1992). The knowledge and understanding of the processes inherent in behaviours of organisms and ecosystems has been adapted to explain the processes which operate in organisations and economic systems (Price & Akhlaghi, 1999, p. 163)

and other natural and biophysical systems. Complex systems science views the world in non-linear terms and attempts to explain novel behaviour patterns, which emerge from interactions of the parts within the system. Importantly, complexity thinking removes the duality notion between nature and humans which is evident in mechanistic thinking and instead, views humans as part of nature (Waldrop, 1992). Without the notion of duality, Waldrop (1992) argues, the exploitative nature of resource use is also avoided because a complex systems approach stresses the need to accommodate both nature and human activity as a whole. The notion of duality appears to underlie the debate on sustainability as discussed in Chapter 2.

The tremendous growth of the study of complex systems science and its concepts, is influencing a range of disciplines from astronomy and biology to physics and finance (Ziemelis, 2001). Complex systems science research is also attempting to understand phenomena in the social sciences, such as why political systems collapse or why ancient civilisations suddenly disappeared (Lewin, 1992; Waldrop, 1992). Complex systems approaches are increasingly being utilised to work towards sustainable outcomes in divergent fields ranging from health care (Arndt & Bigelow, 2000) to natural resource management (Frame & Taylor, 2005; Nelson & Pettit, 2004; Pollock & Whitelaw, 2005). There has also been a call for complex systems to be used as a possible tool for understanding tourism phenomena in order to move away from the reductionist approach that is evident in much of tourism research to date (Farrell & Twining-Ward, 2004, 2005; McKercher, 1999).

As the previous chapter discussed, the concepts of sustainability and sustainable development are complex in nature and the principles behind them have been widely accepted as a pathway to address natural resource impacts from exploitation and degradation (Farrell & Twining-Ward, 2004; Hunter, 2002). However, Hunter (2002) argues that the current reductionist approach to viewing the world has led to interpretations of sustainable development being highly focused and sector specific, resulting in narrow perspectives. It is timely therefore, to explore complex systems science as a possible tool for understanding in the discipline of tourism, and more specifically, sustainable tourism development in specific destinations. As a framework, complex systems science allows holistic understanding of complex systems, recognising the unpredictable and non-linear nature of the interactions that occur within the system

(Byrne, 1998). A complex systems perspective may serve as a useful tool to explain and understand why sustainable tourism development outcomes have been difficult to deliver.

This chapter briefly discusses general systems theory and how this has been applied to understanding tourism. Complexity and complex systems will then be discussed along with how this can be applied to study of tourism.

3.2   Systems Thinking

Systems thinking emerged from biologist Ludwig von Bertalanffy's proposal in the 1940s that elements within a system are influenced by internal and external interactions, making them, essentially, open systems (Heylighen, 1998; Heylighen & Joslyn, 1992). The basic premise of systems thinking is that individual elements do not exist in isolation and systems can acquire new properties through emergence as a result of the occurrence of interactions (Checkland, 1999; Ford, Armandi, & Heaton, 1988). According to Sophocleous (2003), systems theory seeks to identify and explain patterns of behaviour through the study of interrelationships. It is a shift in thinking from viewing parts to viewing wholes and offers a way of understanding behavioural patterns (Senge, 1990). Systems thinking is a way of understanding how things work. In other words, as Reid (2003, p. 55) states, it allows 'understanding of the organisation of a phenomenon, rather than just its substance.' Senge (1990, p. 68) describes it as a framework which assists in viewing a complex world as a whole rather than in smaller parts. Systems thinking can be viewed as a framework for viewing interrelationships and is best summed up in the statement 'the whole is more than the sum of its parts' (Cilliers, 1998, p.19; Senge, 1990). It is therefore essential in any investigation of systems, to consider the larger context and to explain the system as a totality (Magnusen, 1977). Systems thinking has been developed as a conceptual framework that enables complex patterns within the world to be viewed more clearly and to assist with implementation of effective changes (Senge, 1990).

The systems approach assists identification of patterns of behaviour in organisations and the interrelationships that form as a result of these patterns (Bellinger,

2000a; Stacey, 1996). Systems consist of members, or agents, who interact with one another in a non-linear form to adopt strategies and rules of interaction, out of which order emerges (Price & Akhlaghi, 1999). Essentially, systems thinking moves away from the cause-effect linear thinking to view the interrelationships that occur in a non-linear fashion (Senge, 1990). Bellinger (2000b, p. 1) defines a system as '…an entity which maintains its existence through the mutual interaction of its parts.' This definition highlights the importance of interactions between members within a system and it is these interactions and interrelationships that were the focus of this research.

3.3   Tourism as a System

The concept of a systems approach for tourism emerged from general systems theory which became an accepted model for organisations and management (Kast & Rosenzweig, 1977). Tourism has been explained via numerous systems perspectives. Mill and Morrison (1985; 1998) argued that tourism should not be referred to as an industry, but as a system, due to the interrelationships between the many components. According to Mill and Morrison's (1998) marketing based model, there are four parts of the tourism system which consist of the destination, marketing, demand and travel. Leiper (1990; 1995) concurs with Mill and Morrison's (1985; 1998) belief that tourism should be viewed as a system and not as an industry, although he highlights different focal aspects of the tourism system. Leiper (1990; 1995) developed a geographical based model and argues that there are five aspects of the tourism system: a generating region, an industry, a destination region, a transit route and tourists. Both Mill and Morrison (1998) and Leiper (2003), view tourism in terms of an open system which operates in a dynamic environment as opposed to a closed system where no interaction with the external environment takes place. A systems approach of viewing tourism acknowledges its holistic nature. As Mill and Morrison (1998, p. 3) state 'the tourism system is like a spider's web, touch one part and reverberations are felt throughout the system.' Tourism does not operate in isolation and can be influenced and impacted upon, both positively and negatively, by the external environment. Importantly, Mill and Morrison (1998, p. 4) point out that tourism interacts with numerous stakeholders whose goals and interests may not always be compatible.

A number of other authors adopted alternative approaches to viewing tourism as a system. For instance, Pearce (1989) discussed tourism development in terms of its component parts to build a big picture (attractions, services and facilities, and transport). Gunn (1994) distinguished between supply and demand aspects of tourism and focussed upon attractions, transportation, information, promotion and services. All authors considered different aspects of the tourism system to explain tourism phenomena and contribute to the study of tourism.

Carlsen (1998) also argues strongly for a systems approach to enable a greater understanding of tourism as it becomes more complex, emphasising the need to consider the social and environmental aspects which interact with the tourism sector. As Reid (2003) contends, many of the problems faced by the tourism industry in the past have resulted from a failure to recognise tourism as a naturally occurring system. Analysis of tourism in the past has taken a reductionist approach, whereby the component parts, such as the economic (demand and supply), geographic or social parts of the tourism system provide the focus (Carlsen, 1998; Reid, 2003). This leads to a partial understanding of tourism. A systems approach provides a more holistic understanding of tourism which is important in an era where sustainability is linked with new forms of tourism (Carlsen, 1998).

Within the literature there is support for systems thinking as an alternative paradigm view to simplistic reductionist perspectives taken in regard to tourism. However, there are those who argue that systems thinking still takes a reductionist approach and that the future lies in complex systems science, which focuses on different elements within the system (Farrell & Twining-Ward, 2005; Stacey, Griffen, & Shaw, 2000). Tourism in a complex system is viewed as a part of a number of interrelated systems and sub-systems, external to the tourism system, which exhibits a number of behaviours. The systems models proposed by Mill and Morrison (1985; 1998) and Leiper (1990; 2003) for instance, although being open systems, focus on tourism components, whilst a complex systems approach to tourism enables a more holistic understanding of the relationships and behaviours external to the tourism system that have an influence (Reid, 2003). Mill and Morrison's model (Figure 3.1), for example, links the tourism product, promotion of travel, the travel purchase and the shape of

travel.   The focus of the model is on tourism components, not the interrelated components of the whole system in which tourism operates.
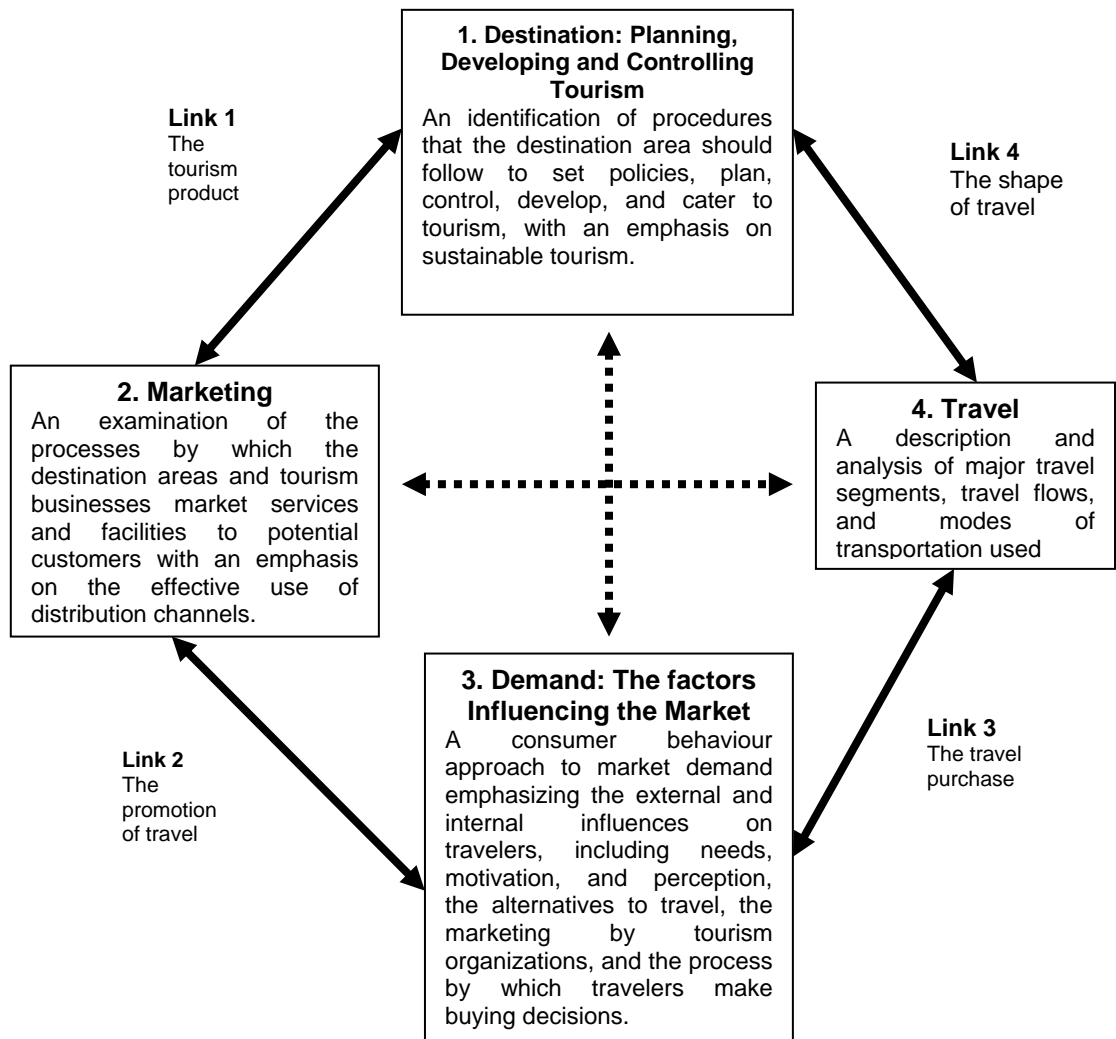
Figure 3.1   Mill and Morrison's tourism system (Mill & Morrison, 1998, p. 7)

McKercher (1999, p. 426) contends that many tourism systems models display an underlying assumption that tourism is a linear and deterministic activity which operates in a predictable environment and can be controlled and managed through planning. In contrast, a complex systems approach assumes that tourism operates in a dynamic and often unpredictable environment, out of which emerge new behaviours and self-organisation. A complex systems framework allows understanding of the values and perceptions that influence and shape tourism by concentrating on the underlying behaviours and interrelationships of different systems. Walker, Greiner, Mc Donald and Lyne (1999) believe that viewing tourism as a complex system and understanding the forces that shape it, will enable sustainable tourism development to occur. A complex systems perspective will also allow greater understanding of the environmental issues that are associated with tourism's use of natural resources by understanding the links between human and natural systems through non-linear methods (Farrell & Twining-Ward, 2004).

A summary of concepts in complexity thinking that are applicable to understanding tourism are summarised in Table 3.1. Faulkner and Russell (1997, p. 99) identified the first four concepts in complexity and chaos theory that they viewed as being of particular interest to tourism, however there are other important concepts that can assist understanding of tourism phenomena as illustrated in Table 3.1. The characteristics of a complex systems view of the world along with complexity concepts will be discussed in the following section.

Table 3.1   *Concepts of Complex Systems and Chaos Theory Related to Tourism* (Coveney & Highfield, 1995; Farrell & Twining-Ward, 2004; Faulkner & Russell, 1997; Saunier & Meganck, 2004)

Concept	Tourism element / example
Bottom-up synthesis: individual agents driven by simple rules of transaction give rise to complex, dynamic systems.	Regulator-regulatee activities of tourism operators using a natural resource (eg. national parks) result in government regulation to manage tourism. Public and private sector relationship established.
Butterfly Effect: initial small random change or perturbation induces a chain reaction that precipitates a dramatic event or shift of considerable magnitude.	Petrol price increases, result in tourists foregoing travel to long-distance destinations and travel to local destinations instead. Collapse of one destination may result, whilst increasing tourism in an unprepared destination.
Lock-in effect: where accidents of history have a lasting effect long after the conditions that influenced their initial impact have subsided or where innovations have a lasting effect despite being superseded by new technology eg QWERTY keyboard.	A tourism destination may get locked-in to a particular market segment and find it difficult to diversify because of a particular reputation. Eg Destinations with winter market such as snow fields unable to attract summer market.
Edge of chaos (phase shift): a state of tenuous equilibrium whereby small changes (mutations) involving agents may be enough to precipitate evolutionary change in the system through mutual adaptation of its constituents.	Phase shifts in the lifecycle of destinations Displacement of railway-based system of tourist services by car-based network
Self-organisation and Emergent behaviours the ability of systems to change internal structure spontaneously to adapt to a changing environment. System properties that are not evident from those of the parts.	Single operators in a given destination, spontaneously joining together to form an association to promote their destination as a result of changes to their environment. Eg. Petrol price increases.
Positive and Negative Feedback Mechanisms ongoing processes become factors in modifying or changing that process. The original process is reinforced in positive feedback and suppressed in negative feedback	Positive feedback: Tourism growth in a destination. As tourist numbers increase, perceived economic benefits result in increased in investment. – begins a cyclic flow. Negative Feedback: Dampening economy, leads to less tourist numbers. A glut of accommodation providers may see some businesses close.
Attractors A way to describe long term behaviour of a system. Attractors can be in the form of fixed point, cyclic or strange attractors. Strange attractors relate to a chaotic state.	Policy and planning mechanisms that may or may not be in place at a destination influence the state of tourism.

3.4   Complex Systems

Complex systems science has moved forward from systems thinking. Stacey, Griffen and Shaw (2000, p. 59) believe the weakness of systems thinking is that it fails to adequately explain the role of freedom of individuals and the patterns of behaviour which bring about fundamental changes to an organisation. An underlying theory of causality still exists in systems thinking, whereby explanations of behaviour and sources

of novelty are located outside the system (Stacey et al., 2000). In other words, systems thinking suggests that external influences alone bring about changes, rather than from self-organisation from within the system. Complex systems thinking attempts to explain patterns of behaviour, taking into account individual freedom, through viewing the connections between diversity, conflict and creativity from within the system (Stacey et al., 2000, p. 83). The diversity and conflict within a system is a vital component of the system which allows the capacity for spontaneous novelty or self-organisation (Stacey et al., 2000). In essence, 'creativity and destruction, order and disorder, are inextricably linked to the creative process' (Stacey et al., 2000). This aspect sets complexity thinking apart from systems thinking.

This new science is in stark contrast to the Newtonian scientific model which has prevailed for the past 300 years and has led to a mechanistic explanation for phenomena. In Newtonian thinking, systems were structurally simple, thus a lineal relationship of cause-effect existed, and tended towards equilibrium (Faulkner & Russell, 1997). Complex systems thinking on the other hand, suggests systems are inherently complex, have non-linear interactions and do not display equilibrium characteristics. Complex systems operate over time and scale, are dynamic in nature, unpredictable, and fluctuate through periods of turbulence and stability (Farrell & Twining-Ward, 2005) (cf: Figure 3.2). While there are periods of stability within a system, stability is never permanent due to the unpredictable outcomes of underlying patterns of behaviour.

States of Turbulence

Scale

Periods of Stability

Time
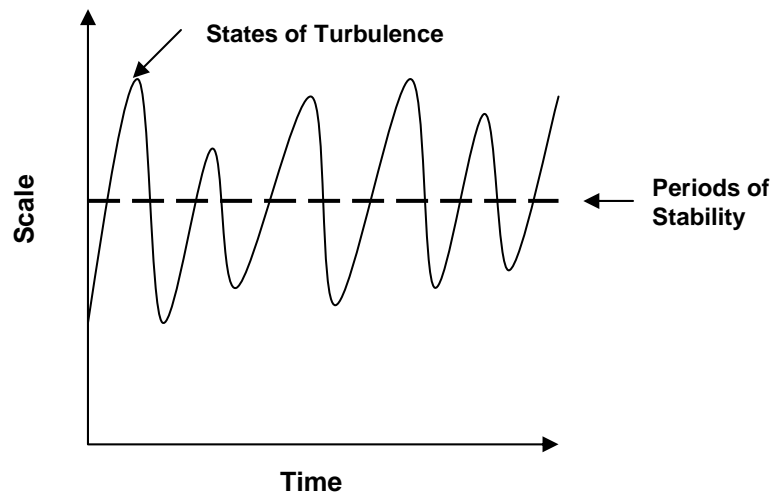
Figure 3.2 Unpredictable nature of complex systems

The view of the world that suggests that systems (economic, health, ecological, tourism) that experience disturbances or perturbations will always return to an equilibrium state has predominantly guided natural and social science research, which includes tourism research (Farrell & Twining-Ward, 2005).

As a result of Newtonian thinking, a reductionist approach to science has prevailed in the scientific community, whereby complex phenomena are explained by being broken down into the simplest components (Waldrop, 1992). The relationship between the components has been understood in terms of working like clockwork mechanisms (Waldrop, 1992). In other words, it is believed that the whole can be more easily understood completely if one understands its parts and the nature of their sum (Anderla et al., 1997). By breaking down the component parts, linear thinking leads to predictive outcomes (Byrne, 1998). For example in the equation $a + b = c$, the interaction of a and b will always result in c. However, as Burns (1998) points out, the real world does not operate in this way, behaviours are not predictable, nor do they produce lineal type outcomes. Causation is complex in social systems and outcomes of interactions may be the result of multiple causes which when combined, may not necessarily be the 'sum of the separate effects' (Byrne, 1998, p. 20). Factors influencing interactions are able to reinforce or cancel out each other in non-linear ways and therefore outcomes to the system are not simply lineal in nature. A complex system cannot be reduced to its basic components, not because they do not exist within the

system, but because important relational information may be lost in the process (Cilliers, 1998, p. 10).

For example, under a reductionist approach, the explanation of the concept of a storm could be approached by breaking the storm down to its various individual components such as the low-pressure systems, lightening, thunder, cloud formation, water particles, and so on, and trying to understand each component. A complex systems approach, on the other hand, would take a holistic view and explain the concept of a storm by explaining the interrelationships of the individual components within the total system (i.e. the storm). To put it another way, each of the individual components of a storm in themselves, do not make a storm. It is the unique and complex interrelationship of all the components that result in a storm and through looking at only the individual components, the relational information is lost. Each component of the storm has an effect on the other components but taken individually, they may produce some other phenomena, but not necessarily a storm.

3.4.1   Defining Complex Systems

Complex system science does not have an all encompassing, agreed upon definition, despite attempts to do so within the literature. As Ziemelis (2001, p. 241) points out, the term has been used to refer to systems at the edge of chaos; systems as a whole which can be viewed as more than the sum of their parts; and to complex properties within systems that are intermediate between perfect order and perfect disorder.

To avoid the difficulties in defining complexity science, Saunier and Meganck (2004) instead define complex systems rather than define complexity science itself. Their definition states that complex systems are:

> Systems that interact non-linearly with their environment and their components have properties of self-organization that make them non-predictable beyond a certain temporal window (Saunier & Meganck, 2004, p. 78)

A perhaps simpler definition is given by Stacey (1996) who defines complex systems as:

> the study of systems consisting of large numbers of agents who interact with each other to produce adaptive survival strategies for themselves and hence for the system, or parts thereof, that they belong to. Their system in turn interacts with others, making up a larger suprasystem in which they are agents that coevolve together (1996, p. 19)

Although both definitions intimate the self-organisational ability of systems to evolve, Saunier and Meganick's (2004) definition more accurately alludes to the non-predictable characteristics of complex systems and the importance of time.

Saunier and Meganck (2004) also differentiate between the terms complex systems and complex adaptive systems, although these two are often used interchangeably within the literature. Complex adaptive systems are defined as:

> A form of system containing many autonomous agents who self-organize in a coevolutionary way to optimize their separate values (Saunier & Meganck, 2004, p. 78)

The focus of the term complex adaptive systems, as defined by Saunier and Meganck (2004) is on the agents within the system and their ability to evolve, rather than on the complex system as a whole. However both terms refer to the interdependent and integrated parts (or agents) of the system which have the ability to evolve. In Farrell and Twining-Ward's (2004) view, a complex adaptive systems way of viewing the world is desirable in order to understand sustainability in relation to tourism. According to Farrell and Twining (2005 p. 110), sustainable development needs to be viewed in terms of a complex system, adapting to the specific characteristics of a location, in particular to the goals and values of local communities.

Whilst it is acknowledged in the literature that there is no simple definition for complex science (S. Johnson, 2001; Ziemelis, 2001), the above definitions are useful from the perspective of the research project that was undertaken for this thesis.

3.4.2 *Characteristics of Complex Systems*

Defining the concept of complexity is not easy and like the concept of sustainability, there is no one agreed upon definition. However, there is an agreement that complexity concerns the structure and order of systems (Lewin, 1992). It is more pertinent to be able to recognise certain characteristics of complex systems. Complex systems:

i)   consist of a large number of elements or agents whereby conventional reductionist analysis ceases to assist in the understanding of the system;

ii)   contain elements which interact in a dynamic manner and are characterised by perpetual novelty and self-organisation;

iii)   have the ability to influence and be influenced by other elements and are multi-levelled and hierarchical in nature;

iv)   are non-linear in nature and small inputs into the system have the ability to produce dramatic changes;

v)   contain individuals whose interactions have a small range of influence and are sensitive dependent (this does not preclude wide-ranging influence);

vi)   are influenced by feedback loops or recursivity (feedback can be in the form of negative or positive feedback);

vii)   are open systems;

viii)   operate under conditions far from equilibrium (equilibrium implies a system that is unchanged over time and is not a desirable state);

ix)   contain elements that have 'knowledge' of the system at a local level; and

x)   have a history (they evolve through time and their past contributes to present behaviour (Cilliers, 1998; Coveney & Highfield, 1995; Geldof, 1995; Prigogine & Stengers, 1985; Waldrop, 1992).

The characteristics of complex systems described above provide a useful framework in which to view a particular system. Figure 3.3 presents a diagrammatic view of the characteristics of complex systems and emphasises that scale, related to size or levels and time, are important features of such a system. The diagram illustrates that a complex system involves many components that are interacting dynamically and that these interactions result in self-organisation and emergent behaviours, which allows the system to evolve. Chaos is an important aspect of the complex system which influences changes in the system. Importantly, the diagram also illustrates that common behaviours can be exhibited across different systems within the complex system. This aspect of complex systems provides the focus for this research, which identifies the interrelationships between different agents (stakeholders) of a complex system (Swan River). A complexity framework allows the identification of a set of characteristics that are evident in most natural or social systems as well as helping to explain behaviours within a system (Byrne, 1998).

Characteristics of Complex Systems

A 'complex' system

Complex Systems

Involve:

Many Components

Dynamically Interacting

and giving rise to

A Number of Levels or Scales

which exhibit

Common Behaviors

Emergent behavior that cannot be simply inferred from the behavior of the components

Size Scale

Emergence

Hierarchies

Self-Organization

Control Structures

Composites
- Substructure
- Decomposability

A 'simple' system

Tradisciplinary Concepts
Across Types of Systems, Across Scales, and thus Across Disciplines

Chaos
Fine Scales Influence Large Scale Behavior

Evolution

Time Scale

Figure 3.3   Characteristics of complex systems (Boschetti, 2003)

3.4.3   *Complicated Versus Complex Systems*

As Chapter 2 demonstrated, the use of, and interpretation of particular terminology, such as sustainability and sustainable development, can lead to confusion and different perceptions by those who use the terms. Therefore, it is necessary to understand and clarify how certain terminology is used. In discussing complex systems, it is important to clarify the difference between the terms complicated systems as opposed to complex systems to avoid confusion. Often the terms complicated and complex are used interchangeably in everyday language, however, when used in relation to complex systems, different characteristics are considered. Both systems may consist of a large number of parts. However, a system that is able to be described in totality, in terms of its individual components, is regarded as complicated (Cilliers, 1998, p.iix). For example, a computer and a helicopter are both complicated systems rather than complex systems. Both consist of interconnecting parts which can be analysed and understood by breaking them down into the individual components. When reassembled, these components are recognised as a computer and a helicopter and as

such, are regarded as complicated systems. In other words, an exact description of the system is able to be given, that is, a computer or a helicopter, from analysing the individual components. In a complicated system, the relationships between each of the individual components that make up the system do not alter over time. Changes such as removal, malfunction, damage, etc. to an individual component, may lead to death of the total system. A simple example is when a microchip malfunctions in a computer, the remaining individual components cannot adapt or change to ensure that the system continues to function as a computer.

A complex system differs from a complicated system in that any analysis of the individual components which interact among and between the system and its environment, is not fully understood as a whole (Cilliers, 1998). Common complex systems include the weather, the brain, a developing embryo, as well as ecological and social systems. Within such complex systems, relationships between the components have the ability to change and alter over time through a process of emergence and self-organisation. Components that interact in an ecological system such as a forest include all the flora and fauna of that forest. By considering only one component of that forest such as an individual tree, a picture of the forest and all the interactions that take place within that forest system as a whole is not easily understood. Components in a forest system are constantly changing and adapting to the environment. These changes may be seasonal and occur locally within the system, or they may be longer term under the influence of climate change and occur regionally. In either scenario the forest system as a whole continues to function.

Complex systems experience changing environments which may place great demands on the resources of a system. In order to cope with these demands, the system must have two important capabilities: it must be able to store information concerning the environment for future use; and it must be able to adapt its structure when necessary (Cilliers, 1998, p. 10). The ability to adapt to changing environments lies in the systems' capacity to self-organise, a behaviour which is discussed in the following section.

3.4.4   Self-organisation and Emergence

Self-organisation is defined by Cilliers (1998, p. 90) as:

a property of complex systems which enables them to develop or change internal structure spontaneously and adaptively in order to cope with, or manipulate, their environment.

Self-organisation and emergent behaviour that results from the interaction of individual agents is the cornerstone of complex systems thinking (Coveney & Highfield, 1995). Self-organisation leads to emergent behaviours which brings about stability within a system and is generated from a bottom-up approach leading to a greater sophistication at a higher level in a systems hierarchy (S. Johnson, 2001; Lewin, 1992). Johnson (2001, p.18) explains that within systems, members on one level have the ability to produce behaviour that lies one level above them. (cf: Figure 3.3) Individual interaction on an organised scale leads to a higher collective intelligence. Examples range from ants creating complex colonies; people in urban areas creating neighbourhoods and simple pattern-recognition software which learns to recommend books to individual people (S. Johnson, 2001).

A unique characteristic of complex systems is that the interactions which produce coherent patterns of behaviour occur without any overarching plan and require a critical degree of diversity between agents (Stacey et al., 2000, p. 8). In a tourism setting for instance, normal everyday interactions and relationships occur between members of the complex system who are diverse in nature. The emergent coherence that results from the interactions, or ensuing relationships, may produce creative ideas or behaviours amongst the members, such as members discussing the need to work together to solve a perceived problem with a business within the system. Conversely, destructive behaviours could result from the emergent coherence, such as members blaming a particular member of the system for a problem, creating disunity within the system, which may see the business close. Either way, the emergent coherence is able to occur as an emergent pattern, without a pre-planned decision by any of the members.

Prigogine and Stengers (1985) argued that order and organisation can arise spontaneously from chaos and disorder through self-organisation. The emergent behaviour arises not because of the properties of the individual components of the system, but rather from the complex patterns of interaction that occurs between those components (Cilliers, 1998). Importantly, the individual components within the system operate on local information and general principles but can influence behaviour on a grander scale. History, or memories within the system, are essential and play an important role within the system. In fact, without memory, the self-organising system will simply mirror the environment in which it operates (Cilliers, 1998; Prigogine & Stengers, 1985). As Cilliers (1998) points out, this does not imply that there is some internal structure that controls the behaviour of the system. External influences and the history of the system alter the relationship between the individual components of the system. Unpredictable changes that occur in the environment cannot be contained within a rigid programme that controls the system. The internal structure is able to adapt to a changing environment without the influence of an external designer or internal control mechanism through the complex interaction of the individual components (Cilliers, 1998).

Cilliers (1998, p. 90) provides a simple example of self-organisation in the scenario of a school of fish living in a dam. The external environment which influences the welfare of the fish consists of the water temperature, water salinity and turbidity, food availability, the amount of light and oxygen, seasonality, and so on. As changes occur in these external features, the school of fish will adjust to suit the new conditions, despite the fact that each individual fish can only look after itself. The school of fish, viewed as a system, self-organises to ensure that optimum conditions are reached between the system and the environment. Adaptations are made based on sensitivity to changing conditions based on past experiences. No external force decides for the school of fish what should happen, nor does each individual fish understand the complexity of the changing conditions. The emergent behaviour is the result of the interaction between the various components of the system and the environment.

The concept of Butler's (1980) lifecycle model, discussed in Section 2.7 of Chapter 2, may also be viewed in terms of self-organisation and emergent behaviours which result in changes to a destination. Hovinen (2002) and Russell and Faulkner

(1999) were able to apply and adapt the lifecycle model using a complex systems framework to explain unpredictable changes to destinations in the mature stages of the destination lifecycle model. Specifically, Russell and Faulkner (1999) attempt to explain a major shift in tourism development on the Gold Coast in Queensland, Australia, as a result of entrepreneurial activities at the maturity stage of the destination lifecycle model. In this stage, Butler's (1980) model indicates that destinations may enter a period of stagnation and will either decline or be rejuvenated. The Gold Coast experienced a major shift in tourism development over a 30 year period, from the 1960s to the 1990s after seventy years as a tourist destination, as a result of entrepreneurs taking advantage of external changes in the environment. Globally, these external changes included a booming global economy, rapid advances in communication and in air and land travel whilst at the same time there was a sense of global security (Russell & Faulkner, 1999, p.419). At a local scale, impetus for shifts included greater government/private sector interaction, increased infrastructure and the perception of an ideal natural environment and climate (Russell & Faulkner, 1999). Entrepreneurs adapted to external changes in the environmental conditions, which enabled the Gold Coast to remain a premium tourist destination. The behavioural and destination outcomes could not be predicted and occurred without any overarching plan or central guidance.

Russell and Faulkner (1999, p. 422) point out that the periods of change that occurred on the Gold Coast, involved entrepreneurs 'capitalising and creating chaos in the process of achieving their goals.' Fluctuations in tourism occurred during this period of change. The concept of chaos is intrinsically linked to the periods of emergence and self-organisation, which as Figure 3.3 illustrates, is a characteristic of a complex system and will be discussed in the next section.

3.4.5   Chaos Theory

Chaos theory, a component of complex systems science, emerged from observations that unpredictable behaviour occurred in non-linear dynamic systems. The word 'chaos' used in everyday language has connotations of extreme disorder. As

Bryne (1998, p. 5) points out, when used in the scientific sense, chaos is actually a precursor of order, not its antithesis.

The term chaos is used to 'describe a state in which behaviour is sensitive to all tiny changes in control parameters, and such sensitivity leads to the complete loss of recognisable patterns' (Stacey, 1996, p. 94). Chaos theory proposes that organisms in nature operate in a zone, identified as the edge of chaos, where they react and adapt to their surrounds and form new and novel patterns of behaviour (Waldrop, 1992). The edge of chaos is an area where there is no central control, only self-governing boundaries or values, which results in creativity (Byrne, 1998, p. 26). The example of fish adapting the changes to the environment in periods of fluctuations illustrates this point (Section 3.4.4), as does the example of entrepreneurial activity on the Gold Coast, discussed in the previous section. Chaos essentially appreciates that turbulence is a feature of systems, unlike reductionist perceptions that systems are stable and move towards equilibrium (Russell & Faulkner, 1999).

The edge of chaos is essentially a transitional zone of instability between order and chaos (Stacey, 1996) and is an important concept in complex systems thinking. This transitional zone is dynamic in nature and, in terms of organisations, for example, occurs when certain parameters exist, such as 'critical rates of information flow, degrees of connectivity, and diversity between agents' (Stacey et al., 2000, p. 146). In this transitional zone, management does not control agents within an organisation, but instead interact with each other to produce emergent novel behaviours. Stacey (1996) explains the edge of chaos in the example of organisations that compete with each other, in what he terms a fitness landscape, constantly implementing or refining new strategies to maximise their survival in a competitive environment. Small changes in the environment can lead to turbulence or chaos, and result in creative adaptation in order to adjust to the changes (Russell & Faulkner, 1999).

The order that emerges from chaos is generally described in terms of strange attractors and Lorenz (1993) states that they lie at the heart of a chaotic system. Saunier and Meganck (2004, p.61) define attractors as:

A point to which a system tends to move, a goal, either deliberate or constrained by system parameters.

The influence of an attractor has the ability to push the direction of a system into a new order that can include death, which as Saunier and Meganck (2004, p. 39) point out, would be regarded as the ultimate in stability. The three types of attractors that exist are fixed point, cyclic and strange attractors. Fixed point attractors keep a system at a constant stable point, a cyclic attractor, as the name suggests keeps a system in a cyclic state whilst a strange attractor keeps a system in a turbulent or chaotic state (Saunier & Meganck, 2004). A simple example of a strange attractor in a natural system such as the global weather system is the climate. The climate serves to influence patterns within the global weather system, often pushing the weather system to what appears to be periods of constant chaos. Arndt and Bigalow (2000), believe that the concept of strange attractors can be used to understand the dynamics of social systems, such as the health care system, which often have patterns of a constant state of chaos and unpredictability. Saunier and Meganck (2004) believe that the concept of a 'political will', however defined, may also be regarded as a strange attractor that influences environmental governance of systems. In other words, strange attractors serve to guide a system, whether natural or social, in a turbulent manner at a particular point in time. For tourism it may be the influence of government decision making that keeps the system in a state of continued fluctuation. The use of a complex systems framework in social systems may give insight into possible strange attractors influencing the system. An understanding of these strange attractors may lead to an understanding of underlying dynamics in a system and ultimately lead to intervention within the system to ensure that particular organisations function more effectively within a turbulent environment (Arndt & Bigelow, 2000). Insights into strange attractors may assist future decision making regarding a particular system. This research seeks to achieve important insights and identification of possible strange attractors that may influence sustainable tourism development outcomes of the Swan River.

Patterns which are attributable to strange attractors are deterministic in nature and are able to define the system's behaviour (Dolan et al., 2003). In chaotic systems, the behaviour tends to be unforeseeable but leads to self-organisation within the system. Dolan, Garcia and Auerbach (2003) agree with Stacey, Griffen and Shaw's (2000) premise that organisations should not avoid chaos, but in fact should recognise that

chaos allows a system to reach a state where creativity, innovation and development occurs through the existence of an attractor. In effect, it is important that systems be in a constant process of change, to prevent death of the system.

Several concepts that are linked to chaos and need to be understood within complex systems are the butterfly effect, positive and negative feedback mechanisms and conflict. These concepts will be discussed next.

3.4.6 Butterfly Effect and Feedback Mechanisms

Non-linear systems are characterised by small changes within one level of organisation within a system, resulting in larger changes at the same or different levels of the organisation and are typical of real world situations (Coveney & Highfield, 1995). Changes in a system are often referred to as being the result of the 'butterfly effect' or 'butterfly attractor' (Byrne, 1998). The term butterfly effect was coined by Lorenz, a meteorologist who was modelling weather systems through mathematical equations when he noticed unpredictable patterns emerging which resembled butterfly wings (Stewart, 1989). This gave rise to the phrase that when 'a butterfly flaps its wings over the Amazon rain forest it sets in motion events that lead to a storm over Chicago' (Lewin, 1992, p. 11). The term serves to explain that in complex systems, the cumulative effect of a small, undetectable change in the system, may produce a significant and measurable change over time which diverges from what would have originally occurred without the change (Stewart, 1989, p.141). To put it another way, the same small change if repeated over and over, may result in completely different outcomes to a system (Lewin, 1992). The butterfly effect is used to explain that everything is connected and that complex systems are extremely sensitive to small perturbations (Waldrop, 1992). As a result of small changes, a system may move or grow until its future is unpredictable or chaotic (Waldrop, 1992, p. 66).

Systems are subject to positive and negative feedback mechanisms. These terms are not used in the sense of everyday language of positive and negative reinforcement, but in terms of destabilising reinforcement. In other words, positive feedback may not lead to optimum or indeed better systems. A classic example described by Waldrop

(1992, p. 34) is of the keyboard with the QWERTY configuration to slow typists down to avoid jamming of the levers. This particular keyboard was developed by an engineer and mass produced by an individual company. Large numbers of typists began using the system hence more companies began to offer the QWERTY keyboard, leading to more and more typists using the system, and so on. The result is a lock-in effect of a system that is not necessarily the best system due to the positive feedback mechanisms. Keyboards with different configurations, which may be more efficient, find it difficult to compete with the established market of the QWERTY keyboard.

Positive and negative feedback mechanisms can be found in social systems, such as tourism destinations. Positive feedback can be responsible for growth-oriented development in tourism destinations which may result in negative outcomes for the destination (Farrell & Twining-Ward, 2004). For example, Gossling (2002) describes the self-reinforcing process of tourism development in developing countries which leads to fundamental changes to communities and the natural environment which are detrimental to the goals of sustainable development. Specifically, Gossling (2002) described the transformation of Zanzibar in Tanzania as a result of western tourists travelling to the destination to experience the culture and natural attractions of the destination. The tourism experience itself creates a desire to travel to other destinations, to experience locations with natural areas that are perceived to be untouched. Gossling (2002, p. 553) describes the result as a 'decontextualization of the relationships individuals have with the local society and nature.'

Negative feedback mechanisms can also be described in terms of tourism development of destinations. Slowed economic conditions may result in a diminished cyclic flow of growth in a destination, which in turn may lead to declining investments. The result of the negative feedback may be a destination experiencing structural entropy in the form of abandoned or aging sites (Farrell & Twining-Ward, 2004).

Senge (1990) believes that the inability of a system to take notice of feedback leads to the collapse of the system itself. Many systems are not aware of the gradual changes to their environment. When they eventually do try to respond, it may be too late. This is illustrated in the parable of the frog. If a frog is placed in a pot of boiling

water, it will immediately try to jump out. If the same frog is placed in a pot of cold water, and the temperature is gradually increased over time, the frog will become sleepier and sleepier and will not attempt to jump out of the pot. The frog is geared to react to sudden changes in the environment not gradual changes. According to Senge (1990), many organisations, are like the frog, they are not geared to react to gradual changes and consequently are not open to feedback which occurs in their environment, and when they eventually try to respond to changes, it is too late and failure occurs.

3.4.7   Role of Conflict

A key concept of the complex systems science is that conflict is a necessary component of the system. Conflict is defined by Saunier and Meganck (2004, p. 79) as:

> A condition where two or more parties having differing interests or perspectives that require resolution to achieve an end.

It is the conflict and the subsequent behaviours that arise between agents that give rise to creative processes. The resultant activities produce novelty and order to the local system, which in turn affects the whole system (Stacey et al., 2000). Diversity in thinking and necessary conflicts within an organisation, allow it to cope with external changes by producing new ideas and options which ensure the survival of the organisation   (Pasquale, 1990; Stacey, 1996).   Pasquale (1990) points out that organisations that avoid conflicts often stagnate, whilst those that experience internal tension and conflict are able to better adapt to their surrounding environment and move forward in a productive way.   Organisations which experience disorder, and as a consequence unpredictability, are able to be more flexible and responsive to changes in their environment and therefore will not become trapped in an untenable situation (Stacey, 1996, p. 85).   This research set out to identify underlying values, and perceptions and issues associated with a natural resource that influences the system and sustainable tourism development outcomes of that resource. There was an assumption made by the researcher that conflict surrounding the values and perceptions identified from the findings will provide important knowledge regarding the system. Possible measures such as intervention or ideas on how best to utilise those conflicts could then be made.

Whilst complex systems science is a new and emerging science, it is being accepted and adopted across many disciplines, including physics, biophysics, mathematics, ecology, astronomy, economics and the social sciences (Byrne, 1998; Coveney & Highfield, 1995; Waldrop, 1992). In a complex world, it provides a new way of thinking about that world and a new way of understanding the behaviours and dynamics of systems which surround us every day.

The following table, presented by Russell and Faulkner (1999, p. 414) summarises the characteristics of both complex and reductionist models.

Table 3.2 *Characteristics of Reductionist and Complex Models* (Russell & Faulkner, 1999, p. 414)

Cartesian- Newtonian Model	Complexity-Chaos Model
Based on 19th century Newtonian physics (deterministic, clockwork model)	Based on biological model of living systems (structure, patterns, self-organization)
Systems seen as structurally simple, with a tendency towards linear or quasi-linear relationships between variables	Systems viewed as inherently complex, with a tendency towards non-linear relationships being more prevalent
Systems tend towards equilibrium and are driven by negative feedback	Systems are inherently unstable and positive feedback-driven processes are more common
Individual differences, externalities, and exogenous influences that create deviations from the norm are exceptional, noise generating factors	Individual differences and random externalities provide the driving force for variety, adaptation, and complexity

3.5   Conclusion

This chapter has argued that current tourism systems approaches to understanding tourism retain a reductionist perspective. It is argued that a new world view is required to understand the unpredictable world in which tourism operates. Importantly, complexity thinking as a world view sees humans as a part of nature not apart from nature and therefore notions of duality are removed and exploitation of resources is avoided (Waldrop, 1992). Tourism development of natural resources should be viewed in terms of accommodating both nature and human activity, rather than being exploitive in nature.

Complexity and chaos theory offer a new paradigm for viewing and understanding tourism phenomena (Faulkner & Russell, 1997; McKercher, 1999; Russell & Faulkner, 1999). Complex systems involve underlying behaviours that influence the system. Viewing tourism in terms of complex systems thinking provides opportunities to identify underlying behaviours that may influence sustainable tourism development outcomes.   For instance, issues and attitudes linking the various components of the system may be identified which influence and impact on the system. These issues and attitudes have the capacity to influence tourism outcomes, and may

need to be addressed to work towards sustainable tourism development outcomes. The reductionist approach used to explain tourist behaviour and tourism development patterns has failed to develop an understanding of the dynamics of change that occurs in tourism, or the complex interactions that influence sustainable tourism development outcomes (Farrell & Twining-Ward, 2004; Russell & Faulkner, 1999, p 411). Much of tourism thinking retains a reductionist world view, whereby principles of stability and equilibrium exist and assumes that management actions can be accurately controlled and predicted (Farrell & Twining-Ward, 2004, p. 284).

The assumption behind complexity thinking is that tourism operates in a complex system where unpredictable outcomes result from the dynamic interactions of other components within the system (Figure 3.4). Management actions cannot anticipate or control behaviours, due to the unpredictable nature of the system.

A complex system

Includes tourism, community, government, non –government & natural environment systems (eg climate, ecology) dynamically interacting.

Size, Scale & Levels

Emergent Behaviour

Hierarchies

Chaos -Periods of turbulence & self -organisation

Self-organisation within the system

Control Structures

Evolutionary changes

Many components dynamically interacting with tourism

A simple system *
Individual components interacting

Exhibit Common Behaviours
Across types of systems, across scales and disciplines

Time

Figure 3.4   A complex system in which tourism operates (Adapted from: Boschetti, 2003)

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The complex system that tourism operates within can be viewed as multi-levelled, consisting of systems within systems and is hierarchical in nature. As Figure 3.4 suggests, tourism viewed in terms of complex systems, is influenced by a diversity of dynamically interacting systems, which evolve over time and across scales. As systems evolve and self-organise, tourism also self-organises and evolves to produce emergent behaviours, which will ensure survival of the components.

Tourism systems, like other systems, experience turbulence due to changes in their environment. Tourism systems models that concentrate on the tourism components do not fully understand the influence of complex interactions of a complex system. McKercher (1999) argues that previous tourism systems models present linear, deterministic activity which is able to be controlled by planners and can be understood through analysing the component parts. Systems models that exist within the tourism literature, fail to consider the complex interrelationships between the tourism businesses themselves, the external organisations that can impact on these businesses, and the dynamic nature of tourism (McKercher, 1999). McKercher (1999, p 427) also points out that tourism destinations are similar in nature to ecological communities in that they consist of keystone species on which tourism depends, such as the primary attractions or resources which are the motivating elements drawing tourists.

Whilst not talking specifically about complex systems, Carlsen (1998) and Hall (2000b) agree that the lineal approach of the past to analyse social systems cannot adequately explain or describe the complex interactions that occur with these systems. Tourism, as a social system, is complex in nature, and cannot be fully understood through simple linear analysis. At a practical level, Hall (2000b) suggests that inadequate defining of linkages between the components of a system hinder effective planning, which is a key element for sustainable development. A complex systems perspective addresses this concern by identifying underlying behaviours and linkages influencing the system. For instance, strange attractors and conflicts which have the ability to influence the complex system in which tourism operates can be identified by taking a complex systems perspective and be considered in planning and decision making processes. A strange attractor may be in the form of the underlying values that people associate with a natural resource. Importantly, Hall (2000b) states that values are formed within the social processes of systems and are integral to tourism planning.

Underlying values that people hold for a natural environment have the ability to influence outcomes of a system by influence planning strategies. As such, they need to be identified, understood and considered when planning for tourism. A complex systems perspective allows the identification of underlying values of the various components of the system and connections to be made to create an understanding of the system. In other words complex systems perspectives differ from systems models by explaining phenomena in terms of certain behaviours across the system, such as strange attractors, self-organisation, conflict and feedback mechanisms rather than focussing on individual components.

Complex systems science enables explanations of tourism phenomena through identification of patterns of behaviour; to date, there has been limited application of it as a tourism framework. Faulkner and Russell (1997), utilise a complex systems framework to reinterpret Butler's (1980) well-.known destination life-cycle model to illustrate the model in terms of the edge of chaos. Faulkner and Russell's (1997, p. 100) reinterpretation of Butler's (1980) model, demonstrated how each phase of the lifecycle represented a period of instability and the final stage resembled the edge of chaos where transitional changes resulted in new outcomes. Although Faulkner and Russell (1997, p. 101) advocate a new paradigm for tourism research, they emphasise the point that there is room for a diversity in perspectives in tourism research and paradigms should be utilised according to their specific situation.

A call for change in tourism research approaches is evident in the literature. The question remains as to whether tourism can be studied in terms of complexity thinking. It is argued in this thesis that concepts of complexity are applicable to understanding tourism, and will assist in greater understanding of sustainable tourism development. Most importantly, a complex systems perspective views the world in terms of tourism as a part of natural systems not as a separate component operating in isolation.

The following chapter will present the methodological framework that was used to undertake this research. The chapter argues that a qualitative framework complements the complex systems perspective, by allowing emergent properties to be identified, which would not emerge through a quantitative approach. The concept of

emergence in qualitative research sits comfortably with the concept of emergence in complex systems science. The chapter also discusses the philosophical position of the researcher, to enable the reader to understand the underlying thoughts behind this research process.

CHAPTER 4
METHODOLOGY

4.1   Introduction

From the outset of this research it was important to operate within a methodological paradigm that complemented the complex systems framework as outlined in the previous chapter, whilst being true to the researcher's own beliefs or world view. This research began with the researcher's understanding that the social world had become increasingly complex and at the same time, it appeared that there was increasing need for activities such as tourism to connect people with the natural environment. There was also the belief that to understand the complexities involved in human interaction with a natural environment, it was necessary, as Holliday (2002, p. 7) suggests, to examine the subjective qualities that govern human behaviour. Statistical assessment of human interaction with the natural environment might be able to produce cause-effect relationships at a particular setting, but would not give rich insights into the different behaviours. Research, which begins with the belief that the world can be viewed as a complex system, requires a range of standpoints in order to gain an in-depth understanding of the system. In fact Hall (2000b) has called for more inter-disciplinary approaches to tourism research to ensure sustainable tourism outcomes whilst others have called for an inter-disciplinary approach to tourism research in general (Jennings, 2001; Leiper, 2003; Weaver & Opperman, 2000).

Complexity theory requires a methodology that will allow for a holistic research approach to give a greater understanding of the complex system under question. This research was primarily qualitative in nature allowing rich data to be collected and rich insights into the complex system under question.

Qualitative methodology and the associated paradigms will be discussed in this chapter in terms of their appropriateness for use in conjunction with a complex systems

framework. The final part of this chapter will report on the case study methods utilised for the Swan River in Perth Western Australia.

4.2 Qualitative Methodology and Perspectives

Qualitative research is based on certain foundations or criteria, which sets it apart from quantitative research (Sarantakos, 1998). Quantitative methodology within the social sciences has its basis in positivism and sets out to establish a general cause-effect relationship to solving a social problem with the linking of abstract ideas of the relationship to precise measurements of the social world (Neuman, 1997, p 67). This is more closely associated with the reductionist approach to scientific thinking as outlined in Chapter 3. In keeping with the ideas of complex systems, it was not the intent of this research to establish a cause-effect relationship between the stakeholders, who were connected to a natural resource, and their perceptions of sustainable tourism development practices. Nor was the purpose to quantify the attitudes and values of tourism development of the Swan River. Qualitative research can be undertaken from a number of perspectives, all of which have merits. Patton (1990) emphasises the point that there is no one way to conduct qualitative enquiry and the researcher must decide on what is most appropriate for the particular social phenomena being studied. For this research, the primary research philosophy came from the perspective of pragmatism, which is discussed in the next section.

4.2.1 Pragmatism Philosophy

Patton (1990) argued, it should not be the total adherence to one paradigm perspective that guides research, but rather the methodological appropriateness that guides the quality of the research. That is, social science research should not be restricted to two paradigm dictated choices: logical-positivism or phenomenology. Creative and practical responses are established via using variations, combinations, and adaptations of paradigms and using mixed methods (R. B. Johnson & Onwuegbuzie, 2004; Patton, 1990, p. 39). In a complex system, where there is a great deal of unpredictability, a combination of perspectives may be an advantage. This view is consistent with the philosophy of pragmatism.

Pragmatism is based on the research philosophy that emphasises practical applicability and consequences of the content of a concept (Mintz, 2004). The philosophy grew in the late nineteenth century out of the need to provide alternative frameworks to foundationalism, which emphasised that knowledge existed because of innate and indubitable beliefs (Mintz, 2004). Classical pragmatists include an early twentieth century academic William James, and an early twentieth century educator, John Dewey (Diesing, 1991; R. B. Johnson & Onwuegbuzie, 2004). Both were interested in examining consequences of ideas and focussed their research on how philosophical positions could help decide on actions which could assist understanding of real world phenomena (R. B. Johnson & Onwuegbuzie, 2004, p. 17). Pragmatic research advocates behaviour that is dictated more by practical consequences than by theory or principles, although neither of these are dismissed (Mintz, 2004). According to Diesing (1991) pragmatists see science as a process of learning how to learn by reflecting on processes which help understand social problems in the world.

A pragmatist does not believe there is an ideal of perfect knowledge that will solve a social problem in its entirety and rejects notions of rigid canons and dogmatic beliefs (Diesing, 1991; Mintz, 2004). There are no a priori notions of absolute truths (Mintz, 2004). In other words, within a pragmatic research philosophy, the search for truth is not static and final but is dynamic in nature and constantly changing. Pragmatists emphasise indeterminacy, rather than deterministic notions, believing chance to be a feature of the world (Mintz, 2004). In the search for understanding and solutions to social problems, more problems arise, which in turn require new questions to be asked and new approaches to be taken. As a result, change, development and novelty are the rule as opposed to some overarching grand law governing actions (Mintz, 2004, p. 5). Pragmatism, therefore, sits comfortably with the indeterministic characteristics of complex systems which are dynamic in nature and have the ability to self-organise through emergent behaviours.

Mintz (2004) believes that the philosophy of pragmatism can be applied to help solve real environmental issues through what is termed 'environmental pragmatism'. Social justice and achievement of social ends are at the heart of environmental pragmatism, which emphasises that humans should not be viewed as separate from

nature but are embedded at every point within nature (Mintz, 2004). The interconnectedness between humans and nature is, again, consistent with a complex systems framework.

Choosing an optimum mix of methods is an appropriate approach to take to understand social problems (Diesing, 1991; R. B. Johnson & Onwuegbuzie, 2004). Complex systems involve interconnections of great complexity, in which there may never be a 'one-size-fits-all' set of solutions to a problem. In fact, through the 'butterfly effect' as identified by Lorenz (1993), a solution in one part of the system, may lead to a greater problem in another part of the system. Johnson and Onbwuegbuzie (2004), who support a pragmatic philosophy, argue that a mixed method research approach allows for the best opportunities to answer research questions.

Taking a more holistic approach, a pragmatic paradigm allows for the construction of good research design to come from the subject matter and the problem within the social setting, rather than from the ideal of a perfect knowledge based on one paradigm (Diesing, 1991). Pragmatism as a world view fits in with the complex systems science thinking of understanding the whole.

4.3   Characteristics of Qualitative Research

The social science researcher using qualitative research constructs the world via different perceptions of reality based on abstract principles or beliefs about the world (Denzin & Lincoln, 1998). The beliefs, or paradigms, serve to influence the research process, including how data is gathered and analysed and therefore are important considerations in the development of the research project. Qualitative research is understood and operates in the context of the process of communication, of which it is a part (Sarantakos, 1998, p. 52). It is able to capture data on the perceptions of respondents in the context of their setting, through a process of attentiveness and empathetic understanding (Miles & Huberman, 1994, p. 6). An important objective of qualitative research is to allow description of social realities from the perspective of those being studied, rather than from the researcher's perspective (Chadwick, Bahr, & Albrecht, 1984, p. 206).

Qualitative methodology is utilised to facilitate gathering of detailed data, generally from small numbers of people, through the interaction of the researcher with respondents (Veal, 1997). Explanation and understanding of behaviours emerge throughout the research process, allowing the researcher to consider additional factors. Such a flexible approach is suited to this research because of the need to qualify people's attitudes and values towards the Swan River as a natural resource; their understanding of that resource; and their perceptions of sustainable tourism development, rather than to determine a quantitative measurement of their attitudes and understanding.

Important aspects of qualitative methodology for this research which helped shape the research process are described in the following sections.

4.3.1 Interpretive Characteristics

An interpretive paradigm allows social reality to be constructed via an understanding of an individual's or group's actions and interactions in a natural setting (Neuman, 1997). This aspect of qualitative research recognises that researchers are not completely objective; they have their own convictions and conceptual orientations, as do their respondents (Miles & Huberman, 1994, p. 8). A subjective relationship is established between the researcher and the respondent in an interpretive paradigm (Jennings, 2001). The researcher, whilst bringing with them their own personal experiences, and acknowledging them, as Patton (1990, p. 41) suggests, is able to take a neutral, non-judgemental stance toward whatever content may emerge. According to Jennings (2001, p. 441), an interpretive paradigm also acknowledges that the individual or group is empowered through their own actions rather than being controlled by a regulative process without their own power. Fundamental to the interpretive paradigm, is that the researcher aims to build an empathetic understanding of feelings and world views held by individuals or groups rather than testing rules to explain behaviours (Neuman, 1997, p. 73).

The intent of this research was to 'get inside' the tourist operators' and key stakeholders' feelings and discover the ways in which they viewed their world in the context of the Swan River. In addition, the intent was to achieve an empathetic understanding of the issues and attitudes which may influence sustainable tourism development outcomes of the river. In other words, the researcher attempted to construct reality through the interpretation of the stakeholders' view of the world. A complex systems perspective incorporated stakeholders who were not directly focused on tourism, but were important agents connected to the river, who could influence outcomes to sustainable tourism development and the complex system of the river. A holistic understanding of stakeholders' reality within the complex system was required and an interpretive paradigm was appropriate.

4.3.2 *Naturalistic Characteristics*

Naturalism entails the quest to capture the nature of social phenomena within a social context (Hammersley, 2002). In naturalistic enquiry, the perception of reality lies in natural, physical or geographical settings, and is conducted through intense and/or prolonged contact in the 'field'. Data is collected in the real world rather than in an experimental setting (Jennings, 2001, p. 38) and authenticity is realised by focusing on what participants say during interviews and conversations (Holliday, 2002, p. 19). The researcher's role in this setting, is to gain a 'holistic' overview of the context under study and not manipulate the research setting (Miles & Huberman, 1994; Sarantakos, 1998). Hammersley (2002, p. 67) is cautious of naturalistic research when conducted by ethnographers, due to concerns that the approach often results in researchers constructing reality by creating a social world, rather than representing some independent reality. Hammersley (2002) believes this outcome results in conflicts with relativism and realism within a naturalist enquiry. A relativist ontology implies that there are multiple realities in the social setting, including those of the researcher, whereas realism implies there is a reality independent of the researcher and whose nature can be known (Denzin & Lincoln, 1998; Hammersley, 2002).

In a complex system, it could be argued there are multiple realities within the system which need to be understood. This research acknowledges the researcher's

belief that the world is a complex system, and within the social setting, multiple realities do exist. The researcher brings their own subjective beliefs to the research and therefore cannot claim to have 'the' only understanding of the phenomena in question. Another researcher with different world views could legitimately claim to have a completely different understanding of the same social reality. This research, although not taking an ethnographic approach, was undertaken in the belief of the researcher that reality does lie out in the social setting, rather than in some falsely constructed reality, and therefore, appropriate methods to ensure that social phenomena was captured in the field, were developed.

Holliday (2002) highlights the point that progressivists criticise naturalistic research because of the inherent cultural and ideological influences of the researcher. However, by incorporating other aspects of qualitative methodology into the research, such as reflexivity, these concerns can be addressed.

4.3.3   Reflexivity

Reflexivity involves the researcher seriously immersing themselves in the research (Sadler, 2002). Reflective qualitative research ensures that aspects of social reality are reflected and contemplated critically by the researcher (Jennings, 2001; Neuman, 1997; Sarantakos, 1998). The research is able to reflect everyday life of individuals or groups, and able to produce an enlightened understanding of aspects relevant to the research topic. As Sadler (2002) points out, often important information gathered in the research process is ignored when it conflicts with an already held hypothesis. Incorporating reflexivity in the research process requires the researcher to closely monitor and reflect on the findings and acknowledge the subjective nature of the research.

Reflexivity is an essential element in any discourse according to Marcus (1998) and the need for self-critique allows the values and impact of the researcher to be acknowledged within the system. As part of the research, the researcher becomes an agent of the system and may influence other agents within the system itself through the questioning process which identifies issues about the system.

Importantly, in qualitative research, meanings are considered to be a reflection of, and are understood in terms of, the social context in which they were developed (Sarantakos, 1998, p. 51). Reflexivity requires researchers to identify relationships with participants whilst engaged in the research process and ensures that the researcher's role is also acknowledged (Jennings, 2001). It is through reflexivity that a flexible approach is undertaken within the research process, so that adjustments can be made to the research instrument to cater for changing circumstances and contexts (Sarantakos, 1998). A reflective research process is required when researching complex systems within the social sciences, to ensure that insights from meanings which emerge from the system are understood within the context of the phenomena being researched.

4.3.4 Phenomenology

When viewing and trying to understand a complex system, it is important that the agents or members within the system are understood. In order to understand the agents, it is necessary to look at the perceptions of the world from their perspective; how they perceive other agents and interpret their actions; and how agents make sense of events that occur in their world. Phenomenological inquiry is grounded in the social meanings that agents use to explain their world (Jennings, 2001, p. 159). Through this form of inquiry, theories and constructs are not the focus for the researcher (Fischer & Wertz, 2002). The most important aspect of phenomenology is to know what people experience and through that experience, how they interpret the world (Patton, 1990, p. 70). Fischer and Wertz (2002) argue that empirical phenomenology studies actual events that occur. Researchers need to provide colleagues with the data and steps of analysis that led to their findings, to see whether similar findings result. This is an important element and is explored further in section 4.6 which discusses generalisability and validity.

The interpretive, naturalistic, reflective and phenomenological characteristics that have been described above, allow description from the respondents' perspectives and as such, were viewed as important guidelines for this particular research to maximise a meaningful outcome to the research aims and objectives. Taken from a

pragmatic basis, the researcher has used aspects of these characteristics of qualitative methodology deemed important to the research, rather than adopt in totality one particular standpoint.

4.4   Methods

The methods utilised in qualitative research are oriented towards exploration and discovery (Denzin & Lincoln, 1994; Patton, 1990). Through the use of qualitative methods, it was possible to delve more deeply into people's ideas and opinions as they emerged throughout the research process than would be possible by adopting a quantitative perspective. A holistic picture was built of stakeholder perceptions and issues surrounding sustainable tourism development; values associated with the Swan River; and the level and means of stakeholder communication with each other. This holistic picture enabled the research objectives to be met.

The following section discusses the methods used in the research deemed appropriate for the particular phenomena being studied and appropriate in the context of complexity. The section begins with an analysis of the case study approach which was undertaken and continues with an outline of the data collection and analysis methods. Discussion of the issues surrounding validity and limitations conclude the chapter.

4.4.1 Case Study

Case studies have been used extensively in social science research but are often considered an inferior and weak method lacking sufficient precision, objectivity and rigour within the positivist community which focuses on quantitative methods (Sarantakos, 1998; Yin, 1994). However, in contrast, there is strong support for both single and multiple case study research to provide relevant, timely and significant research using qualitative methodology (Hammersley, Gomm, & Foster, 2002; Stake, 2000a; Yin, 1994).

Case studies are increasingly used as a research method for purposes of exploration, especially in attempts to gain information in settings that are complex in nature and do not claim to have generalisability, or attempt to quantify results (Hammersley & Gomm, 2002; Sarantakos, 1998; Yin, 1994). The aim of case studies in qualitative research is for open and flexible research of social phenomena as interpreted by respondents, which fits comfortably with the criteria of qualitative methodology (Sarantakos, 1998), and with the open nature of complex systems. The purpose of conducting a case study is not to obtain definitive answers to a problem and, in fact, may lead to more questions for further research (Donmoyer, 2002). Within a complex systems framework, it is more than feasible to suggest that outcomes to the research objectives will result in more questions than answers.

Stake (2000a) believes it is useful to determine the purpose of using a case study in research and identifies three broad types of study: intrinsic, instrumental and collective case studies. Intrinsic case studies are undertaken because of the particularity and ordinariness of the case itself or some intrinsic interest of the case, rather than to come to some understanding of the case or generate theory building, which may of course result. The case may be a person or an institution and the researcher attempts to allow the stories of those living the case to be heard (Stake, 2000a).

When a researcher is trying to provide insight into a particular issue, an instrumental case study is undertaken. Stake (2000a) explains that the case itself is not chosen because of some particular intrinsic value and is secondary to the quest of the

researcher's attempt to understand some particular external interest. In depth scrutiny of the case, its context and activities, is important in developing an understanding of the external interest. Stake (2000a) emphasises that the researcher's interests include both particular and more general interests and there is no definitive line that distinguishes between an intrinsic and instrumental case study.

A researcher undertakes a collective case study when there is less intrinsic interest in a case and the purpose is to explore a phenomenon, a population or general condition (Stake, 2000a, p. 437). In this type of research, several case studies are chosen, which may or may not have similar characteristics, in order to understand or develop better theories in relation to a larger collection of cases (Stake, 2000a, p. 437).

A case study (in keeping with a pragmatic philosophy) was deemed by the researcher to be the most appropriate means of exploring the research question of how a complex systems perspective would enable understanding of sustainable tourism development. In terms of Stake's (2000a) differentiation of case studies, and for the purposes of this research, the case would be regarded as an instrumental case study. The case of the Swan River, although having intrinsic qualities, was chosen in order to develop greater understanding of an external interest, that is, the interest in complex systems and sustainable tourism development. Added to these reasons for choice, the river was also very topical within the community, media and government, providing an opportunity for the research to build on the heightened interest.

Importantly, in the context of a complex system perspective, a case study enables retention of holistic and meaningful characteristics of the setting (Yin, 1994). As Stake argues (2000a), a case is a complex entity, characterised by diverse contexts, including physical, economic, ethical, aesthetic contexts as well as many subsystems. Although this research is viewing the case from a complex systems perspective, the researcher acknowledges that only a sample of the complexities of the case can be explored.

Yin (1994, p. 1) supports the idea that a case study is preferable when a research attempts to explore 'why' and 'how' questions and when the focus is on a contemporary

phenomenon within a real life setting. The case study used for this research allowed the study of a specific system, which displayed the characteristics of complexity within a definable, although 'fuzzy' boundary. In other words, a case study allows a core research setting to be studied which focuses on understanding the dynamics which may be present within that particular setting (Eisenhardt, 2002).

Holliday (2002, p. 38) believes five important criteria relevant for choice of a research setting are:

1. The setting must have a sense of boundedness;

2. The setting should provide a variety of relevant, interconnected data;

3. There should be sufficient richness;

4. The setting should be sufficiently small; and

5. There should be access.

This research concentrated on an urban river, with stakeholders who were connected to the river and each other in various ways. Although boundaries were not absolute, a sense of boundedness was obtained in terms of stakeholder connection with the river and geographical boundaries. These boundaries are presented in Chapter 5. Richness of data was obtained through personal interviews with stakeholders and secondary data collection. Boundaries were drawn to ensure that the setting was sufficiently small to prevent the research becoming too unwieldy. Stakeholders were accessed over a designated timeframe. It is important to point out that the natural resource, that is, the river, was an important component of the complex system being researched and as such, also required understanding. These above criteria ensured that a core setting connected to the research question could be explored.

A case study tends to employ strategies which are either exploratory or descriptive in nature, however Yin (1994) believes that limits should not be placed on case studies and claims that some of the best case studies have been both exploratory and descriptive. This research involved exploration of the use of a complex systems perspective in a particular setting and results of the research have led to some important

issues that were raised by respondents. Therefore there is also an element of description in the research findings.

The perceived lack of rigour of case studies, noted previously, is a valid concern. In this case study, all attempts have been made to ensure that all evidence has been reported fairly, with researcher bias acknowledged. The data collection, sampling, analysis, and limitations section of this chapter address concerns with rigour.

4.4.2 Sampling Procedures and Target Population

Sampling procedures employed in this research involved purposeful sampling, a process that is in keeping with the interpretive paradigm. Purposeful sampling, according to Patton (1990, p. 169), allows information-rich cases to be chosen from which the researcher can learn about the issues central to the purpose of the research. Lincoln and Guba (1985) argued that this method was also able to take account of local conditions, mutual shapings and values and therefore is a favourable sampling method. It is acknowledged that within the context of this case study, the researcher is unable to observe everything within the complex system. Purposeful rather than random sampling, ensures that variations within the phenomena, in this research within the complex system, are understood and phenomena crucial to the validity of ideas being tested are chosen (Maxwell, 2002).

Critical case sampling, a particular strategy for selecting purposeful samples (Patton, 1990), was utilised in this research. Key stakeholders connected to the river were identified and became the focus of the case study. Before being selected, respondents were required to display critical criteria considered to be relevant to the research question. Stakeholders were required to have direct links to, or influence on, the Swan River and potential influence on tourism development. Five main stakeholder groups were identified as a key target population.

These were:

- Group 1- Tourism operators who utilised the river for business purposes. These include charter boat operators, restaurant operators and scenic tour operators.

- Group 2- Government agencies that have management jurisdiction over activities directly related to and/or conducted on the Swan River. These included local and state government agencies.

- Group 3- Non-government agencies that have interests with the ecology, cultural heritage and social aspects of the Swan River.

- Group 4- Local community members who engage in environmental, social and recreational activities on the Swan River or its foreshore.

- Group 5- Tourists, who were engaged in an activity, whether passive or active, either on the river or its foreshore, or were proposing to participate in an activity connected to the river. The reason why tourists were regarded as a separate stakeholder group for the purpose of this research will be explained in Section 4.4.3.2.

Snowball sampling was also employed in the research, whereby members of one particular stakeholder group identified other potential participants. In a complex system it is often difficult to identify all respondents who have connections and snowball sampling is a valid strategy in identifying these respondents (Jennings, 2001; Sarantakos, 1998). This technique ensured that network connections which are not understood by the researcher are considered in the research.

On the basis of the selection criteria, forty eight stakeholders from the first four stakeholder groups and one hundred and twenty five from the fifth stakeholder group were included in the research (cf: Section 5.8). Sample size often creates concerns for qualitative researchers, and as Patton states, 'there are no rules for sample size in qualitative inquiry.' For purposeful sampling, Jennings (2001) believes that the researcher who is immersed in the research has no pre-determined number of respondents in mind, but continues until there is redundancy in regard to data.

Interviews with the first four stakeholder groups through an iterative process continued until it was evident that no new themes were emerging. In the case of the fifth stakeholder group, a predetermined number of respondents were chosen, which befitted the quantitative method used.

The eventual sampling unit represented a broad cross-section of stakeholders, from each of the stakeholder groups, who were connected to the river and each other in diverse ways. This diversity allowed different perspectives about the Swan River to be heard. Representatives from the first four stakeholder groups were able to provide in-depth information connected to the research question and objectives whilst the fifth stakeholder group, tourists, were involved by participating in a survey, which explored themes connected to the research question. Methods used will be discussed in the next section on data collection.

4.4.3   Data Collection Methods

4.4.3.1 Overview of Methods

In-depth interviews were the primary method of data collection for this research which allowed rich data to be collected whilst enabling the researcher to respond to answers and verify responses.   The researcher acknowledges that fully structured interviews ensure that bias is reduced, however, as Sarantakos (1998) states, flexibility is severely restricted or is absent and misinterpretations may arise due to the limited response categories.   Additional questions can be included in the semi-structured process in response to the emergence of new information that is considered relevant to the research question.

An interview guide or interview protocol (Guilfoyle & Hill, 2002) was employed for the interviews, which ensured that similar information was obtained from all the stakeholders in order that analytical comparisons could be made (Appendix 1). The advantage of the interview guide was to ensure that the best use of the time available for each interview was made and all relevant topics were covered as stated by both Patton and Veal (1990; 1997).   Jennings (2001, p. 165) proposes that semi-structured interviews are fluid in nature. The wording or sequencing of questions may be adjusted, as required, for each interview to ensure respondents have a clear understanding of each question and to allow the interviewer's thought processes to be explored. The interview protocol ensured that the research objectives were met. It is important to note, however, that additional questions did arise during some individual stakeholder interviews to clarify points made by the interviewee, and were not necessarily included in subsequent interviews because they were not deemed relevant. Those points that were deemed relevant were then included in subsequent interviews.

Another important advantage of qualitative research and the use of semi-structured interviews is that the researcher is able to build a relationship with the respondent (Jennings, 2001). The data collection methods are designed not to restrict the process but rather encourage openness and build a level of trust between the researcher and the respondent.   At the beginning of each interview, therefore, the

research project was explained thoroughly to respondents and questions or concerns raised in regard to an initial information contact letter, were addressed.

4.4.3.2 The Interview Process

Stakeholders initially identified through purposeful sampling were sent a letter of introduction and a briefing note about the research which outlined their involvement in the research (Appendix 2). Additional stakeholders, who were later identified through the snowballing process, were also sent the same letter and briefing note. The forty eight interviews were conducted over a six month timeframe from the end of April to the end of October 2004 and ranged from forty minutes to two hours in duration. The time of year was an important consideration for conducting the interviews. Tourist operators in particular are busiest during the summer months, therefore to ensure minimum disruption and to maximise willingness to participate, winter was deemed an appropriate time of year to conduct interviews. Interviews were conducted in the interviewees' workplace or an agreed upon social setting, which is vital in an interpretive paradigm. In some instances this entailed their place of residence.

Accuracy in data collection is vital to the research process and this was ensured by tape recording each interview. Respondents were asked if they were willing to be taped prior to the interview to ensure accurate reporting of results. According to Silverman (2000), the importance of tape recordings lies in the belief that whilst our memories allow us to summarise what people have said, it is not possible to remember the detail of what was said nor the nuances, such as pauses, overlaps and the emotion involved in the conversation. All respondents agreed to the procedure, although some were hesitant in the beginning fearing that information could be used against them at some later stage. Another potential problem with this technique is that respondents may be inhibited in their responses. Therefore it was extremely important to ensure that respondents felt relaxed and comfortable with the whole process to lessen the likelihood that this would occur.

To protect the privacy of individual stakeholders and to allay their fears, codes were developed to identify each individual stakeholder interview on the tapes and subsequent individual transcripts. These codes were based on the stakeholder group to

which individuals belonged and the activity for which they were associated. For instance, TO stands for stakeholders belonging to the tourism operators' stakeholder group and BO stands for a boat operator. A stakeholder who had the code TO2BO could be identified as interview two, tourism charter boat operator. This allowed differentiation between the different types of tourism operators (Appendix 3). Government, non-government organisations, and community groups were coded to identify the organisation, but not the individual. Each of the interviewees agreed prior to the commencement of the interviews, to their particular organisation being identified in the research.

Close contact with the stakeholder's own social setting enabled indirect observations to be made prior to, and throughout the interview and were regarded as an important strategy for data collection. Indirect observations complemented the semi-structured interviews and assisted in the building of a holistic picture of the various stakeholders. Field notes taken from these observations included aspects about the interview, which were considered relevant to building a stakeholder perspective. Observations included the respondent's demeanour throughout the interview, the level of external distractions such as phone calls or staff interruptions, the perceived level of openness of responses to questions, and the gender and approximate age of the respondent. Field notes were written immediately following the interview.

During the six month interview process, three identified stakeholders who were contacted declined to participate. Two of these respondents were tourism operators, one of whom stated that they did not have the time to participate, despite offers to conduct the interview at some later date, and the other believing that they could not contribute to the discussion of tourism development on the river. The third stakeholder belonged to a cycling group who conducted bike rides around the river, but again, they did not believe they could contribute to a discussion on tourism development on the river. These responses were interesting in themselves, especially the two tourism operators who although having direct connections to the river, declined stating that their business 'really doesn't have anything to do with the river'. This finding is discussed further in Chapter 7.

In conjunction with the semi-structured in-depth interviews, data from a structured questionnaire survey of tourists was utilised for the case study. Despite the naturalistic/interpretive paradigm dominance used in the Swan River case study, the researcher believes that mixed methods are appropriate in order to gain access to the tourist stakeholder group. Lincoln and Guba (2000b) argue that commensurability, that is, whether the researcher manages to proportion the paradigms in the research process to prevent bias, is an area of conflict for qualitative research, particularly on a philosophical level when researchers try to mix paradigms. However, they also argue that mixed strategies are useful and on occasions make good sense when collecting data from particular respondents (Lincoln & Guba, 2000b, p.169).

The choice by the researcher to use data collected from the questionnaires instead of using in-depth interviews, emerged from the knowledge that tourists are on holiday, usually with the aim of relaxing. As such, any interaction which may impinge on their experience in a negative manner needed to be minimised. Questionnaires generally can be completed in a short timeframe and provide quantitative information about the demographics, activities, and attitudes of a particular population (Veal, 1997). The questionnaires, which were interviewer completed, each took between six to eight minutes to administer and consisted predominately of closed questions, with one open-ended question. (Appendix 4)

The questionnaire was designed and developed by university students, in conjunction with the researcher, as part of a tourism research unit project. The student project aimed to identify tourists' values of the Swan River and their understanding of sustainable tourism development. A written background briefing of the Swan River was given to all students who participated in the survey to assist with the design of the questionnaire. (Appendix 5)

Twenty five students participated and administered the survey which was conducted over a four week period from August to October 2004 at two designated locations within the case study area. All students were trained in how to conduct surveys, administer questionnaires, and how to limit bias. Students were also involved in pilot testing the questionnaire prior to entering the field. In addition, a conscious

effort was taken to ensure that local businesses, which tourists may have been visiting or about to visit when approached by students would not be affected. All businesses were contacted requesting feedback, prior to the students conducting the survey. Permission was granted by the overall managers of the sites in the two locations and questionnaires were sent for feedback.

4.4.3.3 Data Triangulation and Secondary Data

Throughout the research process, the collection of secondary data relevant to the research was also valuable and was used as a form of data triangulation. Data triangulation was used to obtain richness and depth to the research which could not be obtained from conducting semi-structured interviews alone and is regarded as a useful tool (Jennings, 2001; Richardson, 2003). As stated previously, the Swan River was considered as an important aspect of the research. It was beyond the scope of this research to conduct an ecological survey of the river; however, the ecology was an important consideration of the river. Secondary data were collected about the ecology of the Swan River from relevant government authorities such as the Swan River Trust who have a major role in management of the total river system, and the Department of Conservation and Land Management, who are responsible for two major marine parks within the Swan River. Data was collected from government documents, including annual reports, management strategies and survey reports.

Information on the river's ecology was supplemented by additional information considered as important to the river's management and potentially impacting on tourism development. Secondary data was used to gain an understanding of the social, cultural and governance context of the Swan River. This information included government policies; proposed local government developments, government reports, surveys and brochures; and non-government data sources including historical documents, books, reports and media articles. The use of secondary data enabled a holistic overview to be formed, and in some instances served to clarify information gathered from the respondents.

4.5   Data Analysis

Although much of complex systems research involves mathematical modelling, the purpose of this research was to determine the value of a complex systems perspective as a tool for understanding sustainable tourism development in a qualitative framework. In qualitative data analysis, the aim is fundamentally about detection, in order to define, categorise, theorise, explain, explore or map out findings (Ritchie & Spencer, 2002, p. 309). Analysis of data for a case study must be appropriate and uniquely adequate for the particular phenomena being studied (Denzin & Lincoln, 2000, p. 371). Several approaches were undertaken to ensure that the case study analysis was adequate and would represent the individuals involved in the study whilst remaining in keeping with a complex systems framework.

A contact summary sheet, as proposed by Miles and Huberman (1994), was developed for each stakeholder interviewed. This sheet summarised the field notes and responses to the questions on the interview guide in order to give a brief overview of the thoughts of the respondent. Details about time and length of interviews, gender and disposition of operators were included on the contact summary sheet.

Transcripts of the respondents' natural language, taken from the tape recordings, formed the basis of analysis for this research. Silverman (2000) suggests that using transcripts is not just about collating data, but is a form of data analysis. Immersing oneself in the transcripts, reading the text as presented by the respondent allows the researcher to make sense of the social world as perceived by the respondent (Silverman, 2000). Ryan and Bernard (2003) support Silverman's (2000) ideas of text and differentiate between the linguistic and sociological tradition of viewing text. The linguistic tradition views text as an object of analysis itself and is more in keeping with positivist ideals. A sociological tradition, on the other hand, views text as the 'window into the human experience' (G. W. Ryan & Bernard, 2003, p. 259) and thus is more in line with interpretive traditions.

Transcripts were used in a number of different ways. Firstly, key words within the text were highlighted in the context of paragraphs to determine if patterns were

emerging across the various stakeholders. Secondly, memoing, or coding notes, which are ideas or thoughts about coding and serve to put meanings into context (Bryman & Burgess, 1994; Jennings, 2001), were made on the transcription records. The purpose of memoing was to identify attitudes and issues that were reflective of why respondents held particular views and to establish patterns. Thirdly, broad themes identified throughout the actual interview process were then substantiated after reading the individual transcripts. Themes, according to Ryan and Bernard (2003), tend to be abstract in nature and can be identified in all stages of the data collection process. The literature review also assisted in identifying themes that were relevant to the research objectives.

NUD*IST 6 software, which is able to work with text-based data (Jennings, 2001), was viewed as a useful tool to assist in the organisation of data to contribute to effective analysis through the coding of transcripts. Codes are simply labels for categorising primary patterns and assigning units of meaning to the descriptive information compiled during study (Coffey & Atkinson, 1996; Denzin & Lincoln, 1994; Miles & Huberman, 1994; Patton, 1990). Codes identified within the transcripts helped to reduce the data into more meaningful units. Coding of the text was undertaken on a paragraph by paragraph basis. Ryan and Bernard (2003, p. 274) believe that coding is the 'heart and soul' of analysing whole text and allows the researcher to make judgements about the meaning that is contained within the text. Six broad themes (known as tree nodes in NUD*IST 6) emerged from the analysis and 190 sub-themes were attached to these themes. As Lincoln and Guba (1985) and Strauss (1987) suggest, the process of coding and recoding can be finalised when the categories are saturated, incidents can be readily classified, and sufficient repetition or regularities occur in the data.

Consistent with Ryan and Bernard's (2003) discussion on textual analysis, themes emerged prior to, during and after the data collection period. Themes prior to data collection were gleaned from the literature, and government and newspaper reports which highlighted the Swan River. As the themes developed during and after data collection from the transcripts, sub-themes were also identified. Identification of emerging themes from the data enabled comparisons and contrasts to be established

between each set of data. Comparisons and contrasts are important to test the conclusions that are eventually drawn (Sarantakos, 1998, p. 324).

To assist in the identification of patterns after using NUD*IST 6 software to code text, data was organised into a series of matrices that involved reducing data in a systematic way. Matrices are simply a set of defined rows and columns which display data in two lists (Miles & Huberman, 1994). Sarantakos (1998) points out that matrices allow the researcher to obtain an overview of the data related to focal points which have emerged during the collection of data, thus giving a holistic picture. Miles and Huberman (1994, p. 239) believe that matrices are beneficial because they require a focus on the research questions and identification of what portions of the data are needed to answer them; they require a full analysis without ignoring relevant information; and they focus and organise information coherently.

Analysis of the tourist questionnaire involved coding each of the questions and using the Statistical Package for the Social Sciences, more commonly known as SPSS. The sample number of 125 respondents is not deemed to have statistical significance and the information was not used to make generalisations to other populations of tourists. However, the aim of conducting the surveys was to gain an insight into activities tourists were engaged in whilst visiting the river and the attitudes of tourists to sustainability issues as well as their values for the river. The information collated was used to identify areas of correlation with the perceptions of the stakeholders involved in in-depth interviews.

4.6   Limitations

The qualitative research undertaken for this case study, brings with it limitations that have been acknowledged and addressed. Four main limitations affecting this Swan River research are generalisability, ethical issues, accuracy in reporting and validity.

4.6.1   Generalisability

In qualitative research, a small proportion of the population is interviewed and although more in-depth information may be found, it is not regarded as representative of the larger population. The issue of generalisability within qualitative research may be viewed as a limitation to some researchers (Lincoln & Guba, 2000a; Miles & Huberman, 1994; Sarantakos, 1998), but the outcomes produced from the in-depth data are able to give important insight into people's perceptions, values and attitudes and provides a possible understanding of the viewpoints within a particular social setting. Lincoln and Guba (2000a) argue that criticism from those who cite the lack of generalisation as a limitation of qualitative research has its basis in determinism, which is influenced by Newtonian thinking. As explained in Chapter 3, science has its basis in Newtonian thinking, which views the world as a machine-like system, governed by natural laws. The world, according to this deterministic thinking, is governed by some grand formula which applies to every particle of the universe (Lincoln & Guba, 2000a, p. 30). The quest of most scientific research is about prediction and control which are based on natural laws or nomic generalisations (Lincoln & Guba, 2000a). According to Stake (2000b), the search for laws that revolve around order is not restricted to the scientific research but is within humanist research. Generalisations which are translated from the laws are characterised by universality and are not restricted to time and space. Lincoln and Guba (2000a, p. 28) argue that although the notion of generalisations may be appealing, they can empower particular groups within society by presuming what is good for one is good for all.

Lincoln and Guba (2000a) go on to assert that generalisations are not found everywhere in nature but are formed via the researcher's own experiences which are limited in nature. The experiences it is argued, cannot deal with 'each and all' of the

members of a 'class, kind or order' (Lincoln & Guba, 2000a, p. 30). Complexity thinking has evolved precisely because of the awareness that some behaviours or phenomena within natural systems could not be explained by the predominant generalisations in the sciences that are based on reductionist thinking. As described in the previous chapter, there is a move away from determinism within the sciences and new paradigms are emerging that reflect indeterminism. Generalisability relies on determinism and Lincoln and Guba (2000a) propose that new paradigms mean that the possibility of generalisations are questionable and, in fact, become probabilistic.

Stake (2000b) presents a new form of generalisability, not based on scientific induction, termed naturalistic generalisation. The important aspect of studying a particular case lies in the in-depth and thorough understanding of the particularity of that case. The naturalistic generalisations are applied from the knowledge of how and why things are in a particular setting and how people feel about them. Predictions are not the aim of the study, although Stake (2000b) believes that generalisations can lead to propositions. Denzin and Lincoln (2000, p. 370) on reflecting on the arguments surrounding generalisability, support the notion that 'to study the particular is to study the general' and believe the researcher will be able to generalise subjectively.

This case study of the Swan River is based on the stakeholders who were regarded as key components of the complex system of the river. The study recognises that findings are specific to the particular location and research sample unit, although in accordance with Stake (2000b) and Denzin and Lincoln's (2000) arguments, subjective broader implications will be discussed in the final discussion and conclusion chapter.

Maxwell (2002) discusses generalisability in terms of the internal and external generalisability. Internal generalisability reflects observations and knowledge gained from respondents and events that were directly involved in the study, and to persons, events, and settings that were not directly observed or interviewed. External generalisability refers to the generalising to other communities, groups or institutions (Maxwell, 2002). Internal generalisation is regarded as more important for the qualitative researcher (Maxwell, 2002).

This Swan River case study, involved direct observations throughout the study, but there were also indirect observations that helped shape the researcher's views. These included the researcher's personal experiences whilst engaging in activities on the Swan River. Although not directly involved in the study, indirect observations of community members who picnicked, visited cafes along the river, or those who walked or cycled along the river foreshore all contributed to the researcher's own perceptions of the river and the way it was used. As part of the reflective process, this is an important acknowledgement of possible bias that may be evident in the research. This subjectivity, however, is a natural and perhaps necessary part of the evaluation of the research limitations, and according to Sadler (2002), does not require an apology.

4.6.2   Ethics

Problems surrounding ethics was another possible limitation of the research due to the close contact the researcher had with the respondents and the interactive nature of the research that aimed to glean personal opinions and perceptions. The issues of privacy and betrayal of trust is a real possibility when researchers invade the 'personal space' of respondents. Veal (1997) cites honesty and respect for rights of individuals as universal principles of ethics which when adopted in research, should minimise the occurrence of problems. When conducting interviews or making contact with respondents, both honesty and respect for rights of individuals was a priority. The privacy of individuals' identities was maintained throughout the research period and was protected by using codes, which have been discussed earlier in this chapter. Interview tapes were labelled according to the pre-determined codes, and are currently stored in a lockable filing cabinet. The research proposal was subject to an Ethics Committee approval process, whereby ethical procedures were stipulated and followed throughout the research process with procedures implemented to protect the anonymity of individual respondents. It was through this process that problems of ethics were minimised.

4.6.3   Accuracy of Reporting

Accuracy in reporting may be viewed as a limitation during interviews because of the conversational nature of this method. Often, a wealth of in-depth data is collected from respondents and important details potentially, may be missed. The technique of tape recording respondents is one way of ensuring that data collected is accurate and that significant points raised by respondents will be included word for word. Reliance on note taking for instance, may not be as accurate and key information may be missed due to researcher bias. It is vital that respondents are not misinterpreted and the cyclical nature of the interpretive paradigm (cf: Figure 1.4, Chapter 1) allows the researcher to verify or clarify responses contributing to the accuracy of data collection. Accuracy in reporting is closely linked to validity of data.

4.6.4   Validity

Validity is an essential element in social research and according to Lincoln and Denzin (1998) is the only means for truth from text to be heard and represent the social world being studied. The term validity in qualitative research differs from its use in quantitative research where it has a technical focus. In qualitative research, validity is used in reference to the descriptions and explanations given by the researcher and whether the explanations fit the descriptions (Janesick, 2000, p. 393). Sarantakos (1998, p. 78) states that:

> …validity means the ability to produce findings that are in agreement with theoretical or conceptual values; in other words to produce accurate results and to measure what is supposed to be measured.

This is achieved in qualitative research through employment of accurate data collection techniques and analysis.

Interpretation of the data is an important aspect of the analysis as it attaches significance to what was found, drawing conclusions and building linkages. As Patton (1990, p. 423) ascertains, interpretation must be in the context of the data and interpretive explanation emphasises 'why' rather than causal determination. The interpretation therefore needs validation in order to be deemed credible. However, it is

important to remember that there are numerous ways to interpret an event or social setting in qualitative research (Janesick, 2000).

Trustworthiness, which assists in validating methods and interpretations, is an important aspect of the interpretation and Denzin and Lincoln (1994, p. 508) suggest this consists of four components: dependability, credibility, transferability, and confirmability. The validity of the data is therefore discussed in the context of these four criteria.

4.6.4.1 Dependability

Dependable data is the primary aspect of validity and forms the basis for interpreting respondents' views of the world. Maxwell (2002) uses the term 'descriptive validity' to refer to the accurate reporting of what the researcher has heard and seen, as well as to those issues of omission. A textual transcript, for instance, cannot feature aspects of the respondent's speech such as pitch, which may alert the researcher to emotions about a particular aspect of the discussion. These speech intonations can be very important in the interpretation of the respondent's perspectives.

The use of a cassette tape recorder as the primary tool of data collection provided reliable and dependable data resulting in reducing researcher bias that may have occurred from noting what was thought to be relevant or important to the research question. Taping also captured the emotive speech used by respondents ensuring misinterpretations of relevant dialogue was minimised. Field notes supported the data gained through tapes, by building a holistic picture of each individual interview. The notes included the respondent's speech patterns, whether or not they were passionate about their views or displayed feelings of anger or frustration as they spoke.

The process of transcribing the data and checking and re-reading transcripts produced accurate data to enable the drawing of conclusions. Tapes were listened to several times before, during, and after transcriptions were made. The interview guide also served as a means of obtaining reliable data as all respondents were given the

opportunity to provide responses to the same questions, thereby providing consistency in the data collection. The transcription process, the use of interview guides and field notes, assisted in producing dependable data and descriptive data validation.

4.6.4.2 Credibility

Researchers have the ability to influence the responses of those involved in a research study, especially in an interview situation which is essentially a social construct (Maxwell, 2002; Miles & Huberman, 1994). Interpretive research is based on the premise that understanding of the phenomena being studied is derived from an emic perspective, that is, from the perspective of the respondent, not from an etic or researcher's perspective. Measures need to be implemented by researchers to ensure that the interview process is conducive to providing a situation where the respondent is the focus.

At the beginning of each interview undertaken for the Swan River case study, it was necessary to ensure that respondents felt comfortable and were reassured that the process was not about making judgements related to their activities, attitudes or opinions. Initial contact via the introductory letter and a follow up phone call emphasised that the study was interested in the respondents' perspective of tourism and the river. On initial contact, several respondents made statements such as 'I don't think I know enough about the river' or 'I'm not sure if I can contribute very much'. Respondents were told that they had been chosen because of their particular connection to the river and that all opinions were relevant and of interest.

Building an initial rapport with the respondent prior to the commencement of the interview was very important in creating a 'safe' setting to produce openness to the process. Although for some cases this took a great deal of hard work, for the most part respondents reacted warmly and appeared relaxed and comfortable. Throughout the interviews, it was necessary not to influence or pre-empt responses in any way or contribute personal opinions which may have influenced answers.

Maxwell (2002) cautiously points out that it is important to understand that inferences drawn from the respondent's interview are derived from a social relationship developed at a particular, brief period of time and are therefore valid for that particular timeframe. Lincoln and Denzin (2000, p. 1058) agree with Maxwell (2002) believing that although the issue of representation will not disappear, 'all texts are socially, historically, politically, and culturally located.' Other aspects of the respondents' perspectives may not have been expressed during the interview, and therefore care must be taken not to make false inferences. In contrast, Janesick (2000) argues that the time spent in the particular setting enables the researcher to capture and interpret the meaning to each individual being interviewed. In terms of the discussion of the findings in Chapters 6 to 9, the accounts rely on the language of the respondents which is fundamental to the interpretive process (Maxwell, 2002) and adds to the credibility of the data.

Credibility of the data was enhanced through the use of field notes about the social setting at the time of the interview and were written immediately following each interview. The respondents' state of mind prior to and post interview were important details used to build holistic pictures about the respondents' perspectives which also served to contribute to credible data. For instance, one respondent who was contacted prior to the interview angrily discussed other operators and government agencies with which they had conflict. The operator also stated that they were struggling financially and it appeared that the conflicts resulted in the operator's current financial position. As the researcher, it was important to understand possible biases this particular respondent may have when interviewed.

These techniques minimised researcher bias and contributed towards establishing credible data.

4.6.4.3 Transferability

Transferability refers to the recognition by the researcher of how representative the findings are in similar contexts, that is, if the conclusions drawn from this case study could be transferred to other contexts or case study settings (Miles & Huberman, 1994). Transferability of findings must be understood within this context.

In this instance, transferability refers to whether or not conclusions about the Swan River sample unit could be transferred to operators at another similar site. Although Patton (1990) argued that evaluators must be careful to limit conclusions to the contexts for which data is applicable, Lincoln and Guba (1985, p. 125) stipulated that the degree of transferability is a direct function of the similarity between two contexts. Replication of this research could be possible at another similar destination by utilising the same methods and establishing a similar purposeful sample of stakeholders. It is likely or is assumed, however, that different perceptions and different issues would be highlighted at the other site.

Transferability can also be validated through comparison with other qualitative research findings at similar sites. To date, a similar tourism research project, which involves stakeholders connected to an urban river and utilises a complexity framework has not been conducted.

4.6.4.4 Confirmability

Identifying trends and patterns which appeared in the data, and secondly, establishing similarities and differences between the sets of data, were two measures used to validate the data, confirming that information was reported as objectively as possible. Miles and Huberman (1994) suggest both methods are a means of ensuring quality and validity of the researcher's conclusions as well as allowing replicability of the findings.

Re-entering the field to clarify aspects of the identified trends and patterns and verifying conclusions drawn from previous field data with respondents, confirmed the

interpretations and therefore validated the conclusions drawn. Feedback to possible conclusions that were being drawn from the initial data was also obtained in subsequent field trips. Sarantakos (1998) refers to communicative validation in which additional questioning of the respondents occurs. The semi-structured nature of the interview provided a flexible framework for this to occur and allowed instigation of additional questions to encourage expansion or clarification of statements or issues raised. This occurred throughout the interviews conducted during the six month interview period.

Maxwell (2002) argues that qualitative research differs from quantitative research in that threats to validity cannot be eliminated within the research design process because of its inductive nature. Instead, threats to validity are generally dealt with after making accounts of findings. However, validity in relation to credibility, dependability, transferability and confirmability for this Swan River study, were considered prior to, and during, data collection to minimise the limitations that could be inferred from the research process.

4.7   Conclusion

This chapter has presented the philosophy and methodology that has guided the implementation of a complex systems framework in this research. The underlying philosophy of pragmatism which guided the research process assumes that there is no perfect knowledge to solve social problems and recognises that truth is dynamic and constantly changing. As such, pragmatic research fits comfortably with complexity thinking which views the world in terms of dynamic and evolving complex systems. Pragmatic research is dictated predominantly by practical consequences rather than by theory or principles and views science in terms of learning how to learn by reflecting on processes that assist understanding of social problems of the world.

The predominant use of a qualitative paradigm was deemed appropriate to understand the underlying characteristics of the complex system of the Swan River. The interpretive characteristics of qualitative research allowed the social reality from the respondents' perspectives to be heard.

This research used a case study approach which aimed to understand social phenomena as interpreted by respondents. The case study concentrated on an urban river which is viewed as a complex system and used purposeful and snowball sampling to select key stakeholders connected to the river. Five main stakeholder groups were used as the target population and included: tourism operators, government agencies, non-government agencies, local community and tourists. Forty eight stakeholders from each of the first four groups and one hundred and twenty five from the tourist group were included in the research.

Semi-structured in-depth interviews, using an interview guide, was the method used to obtain data from tourism, government, non-government and community stakeholders. Interviews were conducted over a six month period, during the low peak tourist season, in either the respondents' workplaces or an agreed upon social settings and ranged from forty minutes to one hour duration.

Quantitative methods were in the form of a survey to obtain data from the tourist stakeholder group. One hundred and twenty five interviewer completed questionnaires consisting predominantly of closed questions were conducted with tourists.

Data triangulation in the form of secondary data collection was deemed an important part of the research process to obtain greater depth and understanding of the complex system of the Swan River than could be obtained by conducting semi-structured in-depth interviews alone. Information about the river's history, ecology, and social, cultural and governance context was gained through reading government and non-government documents, reports and media articles.

Analysis consisted of coding transcripts which were taken from tape recordings of interviews with respondents. Memoing and coding notes were made on the transcripts using NUD*IST 6 software to reduce the data into meaningful units. Themes and sub-themes emerged from the analysis, which formed the basis for this thesis. The themes and sub-themes were organised into a series of matrices in order to

compare and contrast respondents' themes. The Statistical Package for the Social Sciences, (SPSS), was used to analyse the tourist questionnaire. The aim of the tourist survey was to gain insight into their attitudes towards the river and to sustainability issues connected to the river in order to correlate perceptions of stakeholders involved in the in-depth interviews.

Finally, issues associated with generalisability, ethics, accuracy in reporting and validity which are often regarded as limitations of the qualitative research process were discussed.

Chapter 5 presents an overview of the case study location of the Swan River and the respondents chosen for this research.

CHAPTER 5

CASE STUDY - THE SWAN RIVER

Beauty is fragile. So many of our precious possessions have just come to pieces in our hands. We did not intend to break them, but we were clumsy or careless or had our minds on something else, and where there used to be a lovely and singular treasure, there are now only the shattered fragments. One of the beauties of Perth was the Swan River and its foreshores.

Sir Paul Hasluck, Governor General of Australia. 1969 to 1974

5.1   Introduction

This case study focuses on the Swan River, an urban river which can be regarded as a complex system consisting of diverse interconnecting environmental and social systems. The Swan River flows through Perth, the capital of Western Australia. The river is part of the larger Swan and Canning River system comprising a catchment area of 124 000 square kilometres (Swan River Trust, 2001b) (Figure 5.1). As part of the State's 175th Anniversary celebrations on January 2004, the Swan River was formally recognised by the State Government as a natural heritage icon (Department of Premier and Cabinet, 2004). The river was the State's first icon to be named by the government, suggesting its importance to the community.

As Chapter 3 noted, one of the important characteristics of a complex system is that it has a history which influences behaviours (Cilliers, 1998; Coveney & Highfield, 1995). Therefore, to understand the complexity of the Swan River system and place the river in context, it is necessary to briefly outline its history, describe the river's landscape features and give an overview of the governance of the river. This chapter will then present an overview of the case study area and the stakeholders who were included in the research. The lifecycle stage of the research area will be then be discussed to assist the reader's understanding of the location.
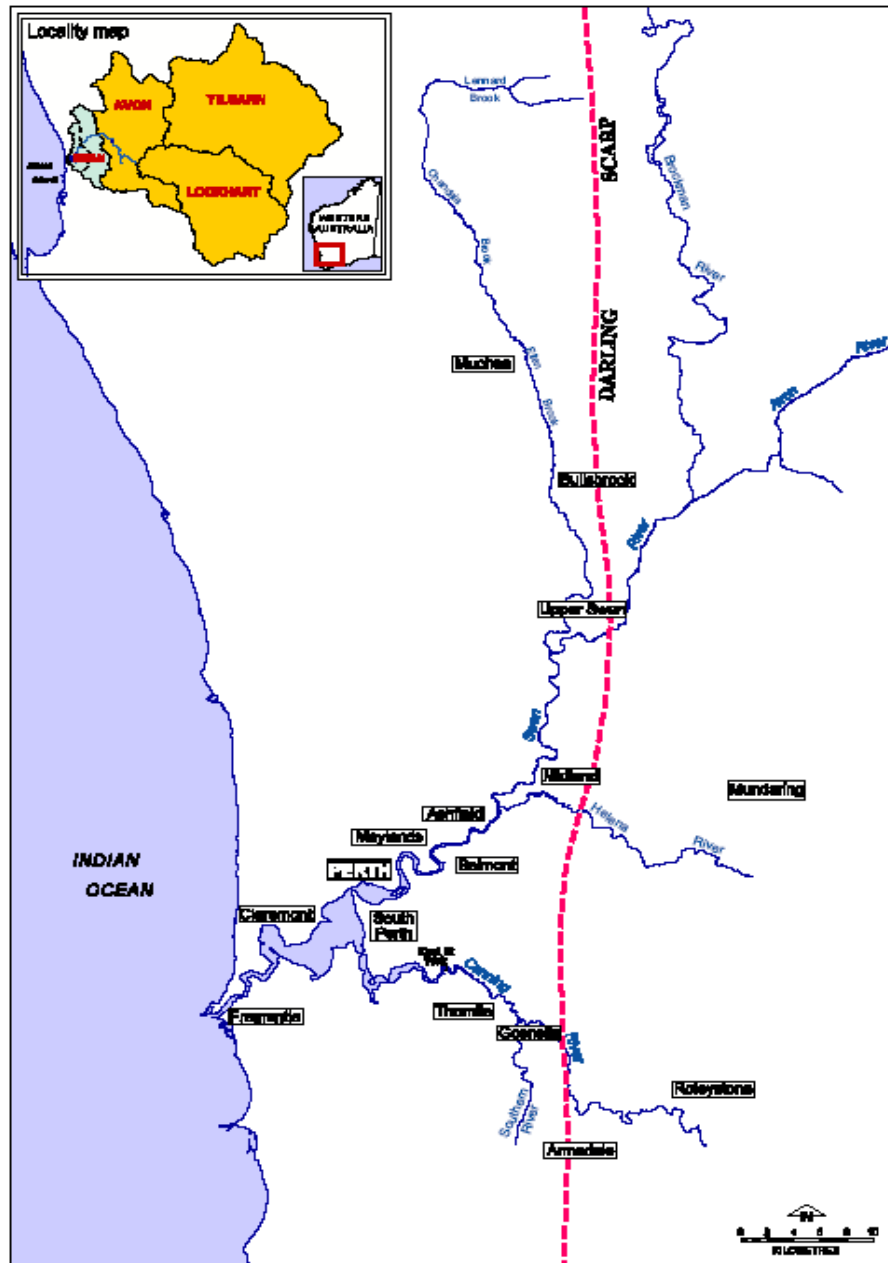
Figure 5.1   Swan River catchment (Swan River Trust, 2001b)

5.2   Indigenous Significance of the Swan River

The Swan River has significant cultural and spiritual values to the local Nyungar population. The name Nyungar refers to the Aboriginal people of the south west of Western Australia, and archaeological evidence suggests that these people have occupied the Swan River area for over 40,000 years (Jones, 1997, p. 135).

According to Hallam (1987, p. 21), accounts from early exploration from the 1600s through to the 1800s, and from subsequent settlers, indicate that the wider and upper reaches of the Swan River were utilised extensively by Aboriginal groups. Although the early Dutch explorers did not encounter Aborigines, the expedition party recorded sighting footprints, smoke from campfires and evidence of other activities (Hallam, 1987). The French found similar evidence of Aboriginal settlements (Hallam, 1987). When Captain James Stirling arrived in 1827, the party soon encountered various groups of Aborigines along the foreshore of the river. The Mooro tribe utilised the river and Yellagonga, the Mooro chief, was reputed to have greeted Stirling in 1829 when the first battalion set up camp on the banks of the river near the present day site of Perth. The site chosen by Stirling was an important hunting and fishing ground and a strategic position for Yellagonga (Hallam, 1987). At first, encounters between Stirling's group and the Aborigines were friendly but European settlement soon brought serious conflict between the two groups as European activities began to impinge on the Aboriginal lifestyle and vice versa.

The river's natural resources provided Aborigines with an abundance of food, such as fish, shell fish, frogs and turtles, and the freshwater springs along the river's edge provided ample drinking water (Chalmers, 1997). Along the river were also important sites for conducting corroborrees, which were sacred or festive assemblies, and other ceremonies (Jones, 1997, p. 136). These sites are of spiritual significance to the Nyungar people today. Probably one of the most important spiritual connections with the river is that of the Waugul, which is regarded by the Aboriginal people as the principal creator being. According to Chalmers (1997), the Waugul means 'living water' and is represented in the form of a water snake with considerable powers associated with the river. In Aboriginal Dreamtime, the Waugul was responsible for creating the rivers of the southwest of Western Australia, including the Swan River. Sites where it rested along the river are considered sacred and should not be disturbed (Jones, 1997). Strict codes of ethics surround the sacred sites and Nyungars believe that if these codes are not adhered to, and the sites are not treated with great respect, people will become ill or sick (Chalmers, 1997).

The Swan River also provided social and economic significance to the Aboriginal people. Certain areas were used as meeting places when the inland and coastal Nyungars met and economic exchanges would take place (Chalmers, 1997).

The significance of the Swan River to the present day Nyungar community plays an important consideration in its management.

5.3   European History

The Dutch Explorer Willem De Vlamingh discovered the Swan River in 1697 whilst on an expedition exploring the 'Southland' with the aim of establishing a settlement (Appleyard & Manford, 1980). The naming of the river by De Vlamingh resulted from the numerous black swans (*Cygnus atratus*) observed on the river that had not been seen previously by the expedition party. However, the Dutch were not impressed by the area, noting the hot dry climate, sand dunes and limestone outcrops and forsook the opportunity to claim the settlement (Appleyard & Manford, 1980, p. 18). More than a century later, in 1801, the French also explored the actual river area like the Dutch before them, but also did not claim the area for settlement (Hallam, 1987). It was not until 1829, well over a century after the Dutch had first landed, and after a previous exploratory expedition in 1827 by the British, that the Swan River colony was officially founded by Captain James Stirling as part of British colonisation (Berryman, 2002). It is important to note that in addition to the river, the name 'The Swan River' initially incorporated the off-shore islands and the surrounding coast at the time of colonisation. The Swan River estuary played an integral role in establishing the colony, and Stirling reported that there would be an abundance of good soil for agriculture and fresh water for the prospective colony (Berryman, 2002; Le Page, 1986). Stirling depicted the area as possessing all the ingredients necessary to become a major British settlement and a naval port (Appleyard & Manford, 1980). According to Berryman (2002), however, it was not the prospect of good agricultural land that influenced establishment of the colony, but rather the need to forestall the French from establishing a penal colony at Shark Bay further north.

Stirling chose the northern bank of what is now known as Perth Waters for the site of the colony. The site was to become the future city of Perth because of the

perceived qualities of the area such as its natural attractiveness (Chalmers, 1997). However, the site chosen for the settlement was not particularly good because most of the coastal plain on which the settlement would develop was sand, rather than soil, which Stirling had previously reported (Berryman, 2002). The upper reaches of the river were more suitable for agricultural pursuits and remain so today.

From the very beginning of European settlement, public access was a crucial consideration for development of the colony, which may explain the present day community's attitude to public areas such as the Swan River foreshore. In a letter to Stirling from the Colonial Secretary in 1828, it was evident that public access was to be of importance:

> You will, from the commencement of the undertaking, be observant of the necessity of marking out, and reserving for Public purposes, all those peculiar positions within, or in the vicinity of the projected Town, which, from natural advantages, or otherwise, will probably be essential to the future welfare of the Settlement (National Archives of Australia, n.d).

During early settlement, the river played an important role as a transport route, both in terms of providing a means for communication along the river and trade (Chalmers, 1997). Obtaining riverfront properties was important for early settlers due to the river's role as a communication and trade link. River frontages were rationed to maximise the number of owners who could utilise the river (Markey, 1977) and this, essentially, influenced the present day road layouts of the inner city suburbs fronting the river.

The opinions of the early colonists varied greatly, with many viewing the Swan River settlement enthusiastically, whilst others viewed the area as a sandy wasteland where no settlement would be possible (Berryman, 2002, p. 39).

5.4   Modifications to the Swan River

Modifications to the river began from early European settlement. The rivers, estuaries, lakes and swamps were features most affected by European occupation, with 1501 acres of wetlands being reclaimed along the shores of the Swan and Canning Rivers (Seddon, 1972). Perhaps the most significant initial change, was the removal of a limestone bar at the mouth of the Swan River, which obstructed the passage of ships (Le Page, 1986). The removal of the limestone bar in 1896, by chiselling and blasting the limestone, permanently altered the river's ecology by allowing tidal influence further into the upper reaches of the river. Dredging of a 130m (metre) wide and 9m deep channel from the mouth of the river to Perth Waters, the site of present day Perth, began in the early 1890s to allow vessels to utilise the river safely (Le Page, 1986). Further dredging took place in 1914 and 1922 (Riggert, 1978). Significant reclamation of the Perth foreshore was also undertaken at the same time to make use of the dredged material.

In 1925, the Government of the day introduced the Swan River Improvement Bill to:

> ...authorise the reclamation of land along the shores of the Swan River in the vicinity of East Perth, Maylands, Burswood Island, Victoria Park, and South Perth, the improvement of the river channel near such shores, and the construction of roads along the river front of such reclaimed land (Le Page, 1986, p. 415).

Riggert (1978, p.28) states that the work was implemented in order to improve river flow, eliminate a mosquito problem and to canalise the river. Reclamation work continued on numerous projects in more recent times, including the building and extension of major arterial bridges and recreational areas.

Modification of the river also took the form of building limestone walls along sections of the natural river banks. As Riggert (1978, p. 30) states, the idea of aesthetics of the river was to 'clean up' the natural river banks, some of which were thick with

reeds, by building straight or freeform limestone walls. Neither the river's natural bends or features, nor the wind and wave action, were considered when designing the limestone walls.

It was interesting to note that in Riggert's (1978) opinion, public perceptions of the aesthetics of the river had changed by the early 1970s. At the time of writing, Riggert believed that the public wanted greater emphasis on retaining the remaining natural features of the river and would oppose reclamation and modification of the river from its natural state.

5.5   The Physical Environment

5.5.1   Landscape.

In order to understand the river environment, it is necessary to have a basic knowledge of the landform and geology that influence the river's environment (Thurlow, Chambers, & Klemm, 1986). The events that shaped the Swan Coastal Plain occurred over the last two million years when sea level fluctuations caused significant changes to the coastline. The Coastal Plain is over 100 000 years old and the surface sediments comprise mainly sand with poor nutrient binding ability (Swan River Trust, 2001b, p. 3). The two main structural features of the Swan River region are the Darling Scarp and the Swan Coastal Plain.

1) The Darling Scarp is a faulted scarp separating the sediments of the Perth Basin and the Darling Plateau, consisting of 2 500 million year old fractured granites and gneiss (Swan Catchment Council, 2004). The Scarp consists of a narrow, highly dissected strip of country (altitude: 80-200m above sea level) forming the foothills of the Darling Plateau, that slopes westward and is characterised by a residual laterite on the surface. At the foot of the Scarp lies the Pinjarra Plain or Guildford Formation which is an area of unconsolidated alluvium at an altitude of 40m above sea level.

2) The Swan Coastal Plain is built up from foothill, lake, river and estuarine deposits laid down at the west of the scarp. Sand dune systems, beaches and estuaries were produced with the fluctuating sea levels. These sand dune systems consist of:

a) The Spearwood Dune System – an aeolian or a coastal limestone formation, overlain by variable depths of yellow and siliceous sand; and

b) The Bassendean Dune System - a coastal sand plain formation consisting of a series of low hills of highly permeable bleached (or white) siliceous sand, interspersed with extensive areas of poorly drained soils or seasonally waterlogged flats (Riggert, 1978, p.8; Swan River Trust, 2001a, p. 1).

The Swan River stretches some 67 kilometres from Walyunga National Park in the northeast and flows westward to the Indian Ocean through the Swan Coastal Plain. The Plain is largely flat but undulating due to north-south trending sand dunes between the Indian Ocean and the Darling Scarp (Riggert, 1978, p. 3). In discussing the Swan River, Seddon (1972) argued that the sense of place created by the river was important and showed clearly in the way the community felt and used the landscape. The river system landscape today reflects the values of past and present communities and Chalmers (1997) believes that the 'sense of place' has been altered dramatically by urban development.

5.5.2   *Climate*

Perth's climate is described as Mediterranean with average summer and winter temperatures of 24º C (Celcius) and 13ºC respectively (Swan Catchment Council, 2004). Average rainfall varies from 800mm (millimetres) along the coastal boundary of Perth to 1000mm at the eastern boundary located on the Darling Scarp (Swan Catchment Council, 2004). Wet winters and dry summers are characteristics of a Mediterranean type climate, which not only influences the flow of water in the river systems but more importantly, the quality of the water.

Long term climate variability, associated with climate change has resulted in changes to the surrounding hinterland of the city and it is estimated that there will be a

reduction of rainfall in Perth by 10 to 30 percent alongside increasing frequency of days over 40°C (Swan Catchment Council, 2004). These changes will impact on the river system, through reduced stream flows, with the potential for significant changes to the ecology of the river.

5.5.3 Hydrology

The Swan-Canning River system occupies an area of 53 square kilometres and includes the tidal portions of tributary rivers and estuarine basins (Swan Catchment Council, 2004, p. 52). The Swan River is a part of an unusual estuarine system characterised by a distinct seasonal pattern of fresh water meeting tidal sea water, making parts of the river fresh in winter and brackish or marine in summer (Riggert, 1978; Swan River Trust, 2000e; Thurlow et al., 1986). The Swan River normally has increased water flows in winter, due to increases in run-off, preventing sea water moving further up the estuary during the tidal movements. Salinity levels tend to be lower during these months with the upper estuary remaining fresh during the winter months.

An influential feature of the river during the spring and summer months as runoff decreases is the presence of a salt wedge or halocline (Riggert, 1978). The sea water moving upstream is denser than the fresh water moving down stream, creating a layer effect or salt wedge (Swan River Trust, 2000e) (Figure 5.2).
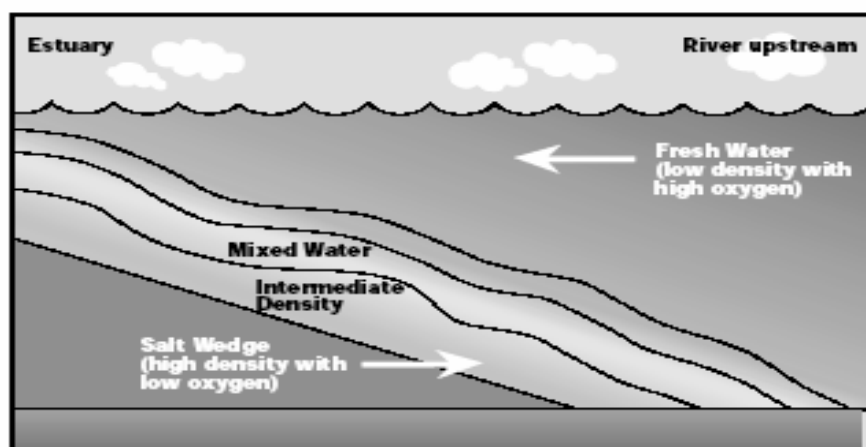
Salt wedge diagram showing the movement and gradual mixing that occurs as the salt wedge moves up the river.

Figure 5.2   Salt wedge characteristic of the Swan River (Swan River Trust, 2000f)

The salt wedge is highly mobile and moves with the tides and gradients in atmospheric pressure. Strong winter flows push the wedge downstream and as flows decrease, the wedge moves upstream some 60 kilometres from the river mouth (Swan River Trust, 2000d). The wedge can prevent oxygenation of the deeper waters, resulting in anoxia and as a consequence, the invertebrates that live in the estuary floor die, fish mortality may occur and hydrogen sulphide gas is produced (Swan River Trust, 2000d, 2000e; Thurlow et al., 1986).

Hydrological changes to the river are also influenced by water temperature that varies in the estuary with seasonal changes and the depth of the water. Temperatures of the water range from $13^{O}C$ to $16^{O}C$ in winter and in summer from $23^{O}C$ to $26^{O}C$ (Swan River Trust, 2000e). The seasonal changes in the river system can create conditions, which are suitable for producing rapid algae growth, resulting in algal blooms. Conditions that are attributable to algae blooms include a combination of increased nutrient levels, changes in water temperature, salinity levels, light and pH. The increased nutrient levels are derived from numerous sources, including natural build up of decaying matter on the estuary bed, urban run off, industrial effluent, land clearing and fertiliser application (Swan River Trust, 2000c). The Swan River is particularly susceptible to algal blooms because of its open, sunny, slow moving shallow nature and the poor nutrient binding properties of the sandy soils (Swan River Trust, 2000e).

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Whilst algal blooms are a natural feature of the river, over time, excessive blooms and their subsequent collapse result in decreased diversity within the ecosystem which becomes more sensitive to changes (Swan River Trust, 1999). By the early 1990s, it was recognised that the river was under stress and community attention was focussed on the river's health (Swan River Trust, 2001b, p.1). The increased occurrence of phytoplankton bloom activity indicated advancing eutrophication due largely to human activity (Swan River Trust, 2001b).

5.5.4 Ecology of the Swan River

The Swan estuary is home to diverse species of aquatic flora and fauna. It is not intended to discuss these species in detail, instead, a brief overview of the system is provided to give the reader a picture of the type of system that is the focus for this research.

A rich biodiversity is supported within the Swan estuary habitats (Swan Catchment Council, 2004). As noted in Section 5.5.3, significant seasonal changes occur within the estuary. The flora and fauna adapt to the seasonal changes in various ways, some are able to tolerate extreme conditions, whilst others migrate to different sections of the river (Swan River Trust, 2002, p.1). For instance, the meadow like seagrass, *Halophila ovalis*, grows actively during favourable conditions, and dies back when conditions are unfavourable. Species found in the river such as the Black Bream, *Acanthoagrus butcheri,* and dolphins, *Tursiops truncatus*, migrate either upstream or downstream to suitable conditions.

Three types of broad flora and fauna communities inhabit the Swan estuary and its foreshores.

1. The freshwater community: During winter and spring, the freshwater washed downstream carries freshwater fish, algae and other living organisms. These organisms survive only for limited periods while the system remains fresh and therefore numbers are generally limited (Swan River Trust, 1999, p.20). According to Thurlow, Chambers and Klemm (1986, p. 78), there are only four indigenous species of

freshwater fish in the Swan River system: the western minnow *Galaxias occidentalis ,* the freshwater cobbler, *Tandanus bostocki,* the nightfish, *Bostockia porosa*, and the western pygmy perch, *Edelia vittate*.

2.   The estuarine community: During spring and summer when the river is brackish to saline, the dominant organisms are those that can tolerate a range of salinities and these include molluscs, invertebrates and smaller fish which tend to be prolific during these times (Swan River Trust, 1999).   Common species of fish in the Swan River include the yellow-eye mullet, *Aldrichella forsteri*, the sea mullet, *Mugil cephalus*, the Perth herring, *Nematalosa vlaminghi,* and the cobbler, *Cnidoglanis macrocephalus*.   Prawns include king prawn, *Penaeus latisulctus,* and school prawn, *Metapenaeus dalli* (Department of Conservation and Land Management, 1999).

Foreshore plants along the estuary include reeds such as *Juncus kraussii*, which grow along narrow bands of the lower estuary, and the most common riverside tree is the she-oak, *Casuarina obesa* (Riggert, 1978). Seagrass, such as *Halophila ovalis*, play a vital role in the ecology of the river providing habitat and food sources for many of the species in the river, including microscopic organisms (Department of Conservation and Land Management, 1999, p. 12)

3.   The marine community: High salinity conditions almost similar to the ocean are prevalent during summer and autumn in the lower reaches of the river and species which tolerate these conditions become established, leaving the system during winter (Swan River Trust, 1999). Fish such as Tailor, *Pomatomus saltator*, and Mulloway, *Argyrosomus hololepidotus*, are in this category. Marine plants such as macroalgae die when salinity falls in winter.

Aquatic habitats of the Swan estuary support a diverse bird life, including significant populations of migratory birds. Sections of the Swan River have been designated as marine parks in order to conserve areas of high conservation value. The Swan Estuary Marine Park encompasses 190 hectares of the river and provides important habitats for terrestrial and aquatic species with perhaps the most significant being the migratory waders. Reciprocal agreements between Australia and Japan,

Japan-Australia Migratory Birds Agreements (JAMBA), and Australian and China, China-Australia Migratory Bird Agreements (CAMBA), have been instigated to ensure that these areas are retained as conservation sites (Department of Conservation and Land Management, 1999). Significant changes to bird numbers have occurred since the 1980s, when numbers were in excess of 11000, to more recent times when numbers seldom exceed 500 (Department of Conservation and Land Management, 1999, p. 15). Although there has been no conclusive reason for the decline, it is speculated that habitat destruction, disturbances from dogs and human activity has contributed to the decline (Department of Conservation and Land Management, 1999).

The Swan River ecology has undergone significant changes since European settlement and many species have declined in numbers including the Black Swan, *Cygnus atratus*, from which the river was named. Much of the original riparian vegetation that provided habitats has also disappeared. Management of the river therefore has become a major issue and the next section presents an overview of river governance.

5.6   Governance of the River

The Swan River is managed by a complex governance system. Seventeen state government agencies, with additional statutory authorities, and sixteen local government agencies have governance responsibilities for the Swan River, guided by legislation. Numerous State and Federal legislation guide the various government agencies in the management of the river and add to its complex governance structure (cf: Appendix 6). In 1988, the Western Australian government adopted an overall framework for the river in the form of the *Swan River Management Strategy* to:

> ensure that land use and development on and adjacent to the river maintains or enhances the quality and amenity of the river environment (Western Australian Planning Commission, 2002, p. 1);

> and to

> balance competing demands for use and development with the need to conserve and enhance the functional healthy river environment for the present and future generations (Western Australian Planning Commission, 2002, p. 1).

The Swan River Trust (SRT), was established in 1989, and is constituted under the *Swan River Trust Act 1988*. The SRT is regarded as the coordinating management agency for the river. The main role of the SRT is to ensure balanced river use and protection, through offering advice regarding development applications within its management area, and by restoring degraded environments of both the Swan and Canning River system. In order to achieve its aims, the SRT coordinates people from the community, state and local government agencies in their varying roles.

The Swan and Canning River system is regarded by the state government as a vitally important natural resource with important values for the Perth Region (Swan River Trust, 2000a). Environmental, economic, social and indigenous values are all attributed to the river (Swan Catchment Council, 2004; Swan River Trust, 2001a, 2004a). Increased development pressure on the river by the early 1990s and recognition that the system was under stress, led the state government to gazette an Environmental Protection Policy (EPP) for both the Swan and Canning Rivers (Swan River Trust, 2004a). This meant that the river system would be protected and managed under a legislative framework in the form of the *Environmental Protection (Swan and Canning Rivers) Policy 1998*. Key government policies have been implemented to ensure that the values of the river are protected. For instance, in recognising the deteriorating health of the river and increasing concern from the community, the state government initiated the Swan-Canning Cleanup Program in 1994. An Action Plan followed in 1999, which was implemented and coordinated by the Swan River Trust. It involved local and state government bodies, research organisations, business and community groups.

In response to the EPP, an environmental management framework, known as *Riverplan* was developed by the SRT to strengthen the strategic direction of the management of the Swan and Canning River system. Up until August 2004, there had been no overall management strategy for the Swan River. The development of *Riverplan* involved extensive stakeholder consultation prior to its final release in August 2004 and was deemed an important addition to previous government policies. The document aimed to improve overall coordination of the management of the river system. Consultation and final release of *Riverplan* occurred during the research period

of this thesis and therefore research respondents were asked to comment on the document. The findings, to be discussed in Chapter 8, indicate that despite extensive consultation, many stakeholders were not aware of the *Riverplan* document or the consultation process. Riverplan identified key issues and pressures related to the river, as can be seen in Tables 5.1 and 5.2.

Although tourism development was not identified as a specific issue or pressure, as can be viewed in the tables, many of the identified issues and pressures have the potential to either impact on future tourism development or relate to present tourism activities. For example, issues of sedimentation, erosion and altered river flows, have the potential to impact on charter boat operations by reducing transportation access to sections of the river, and pressures such as boat wash and wake and discharge of ballast waste from vessels, related specifically to tourism activities. Stakeholders interviewed in this case study identified many similar issues which were perceived to be management and planning issues that needed to be addressed.

Table 5.1 *Key Issues Relating to the Swan and Canning River System* (Swan River Trust, 2004a, p.1)

• Algal Blooms and eutrophication	• Environmental Water Requirements
• Loss of riparian vegetation and wetlands	• Recognition of Aboriginal and other cultural values
• Loss of biological linkages and species diversity and abundance	• Competition and predation from exotic species
• Sedimentation and erosion	• Disturbance of habitat
• Salinisation	• Noise, visual and odour problems
• Chemical and biological contamination	• Acid sulphate soils
• Seasonal inundation	• Litter
• Altered river flows	• Lack of provision for public access
• Maintenance of landscape amenity	

Table 5.2 *Key Pressures Affecting the Swan and Canning River System* (Swan River Trust, 2004a, p. 2)

• Urban, industrial and agricultural runoff	• Filling and reclamation of land
• Irrigation drainage	• Historical land use
• Industrial wastewater	• Urban, industrial and agricultural development
• Soil loss from farmland, roadsides and stream banks	• Recreational activities
• Damaging or clearing native vegetation	• Fishing
• Use of pesticides	• Discharge of ballast waste from vessels
• Livestock grazing	• Boating and associated activities
• Introduction of exotic flora and fauna	• Antifoulants
• Mining operations or excavation	• Groundwater contamination eg septic tanks
• Dredging	• Over abstraction
• Boat wash and wake	

In response to increased concerns related to the catchment of the Swan River, the Swan Catchment Council (SCC) released *The Swan Region Strategy for Natural Resource Management in 2004*. The Swan Catchment Council is an independent organisation, which coordinates natural resource management activities, and liaises with government agencies and other organisations to address community needs. This

strategy focused on broader natural resource management issues and aimed to provide an integrated planning framework for the Swan Region's natural resources (Swan Catchment Council, 2004). Two key pressures on the river were identified in the Swan Region Strategy document: incompatible planning and development, and inappropriate land and water management practices (Swan Catchment Council, 2004, p. 62). These pressures have implications for the governance of the river and the activities that occur on and around the river foreshore. The complex nature of the governance structure was a key issue that arose from this research and will be discussed in Chapter 9.

Local concern for the Swan River was highlighted prior to and during the research period of this thesis, following a number of significant algal blooms on the river. Media reports suggested that the river was in crisis, and letters to the editor not only indicated community concern for the health of the river, but the importance of the river to the Perth community (Appendix 7). *Riverplan* suggests that there needs to be an integrated effort in management of the river with government, community and industry groups all contributing to preserving the integrity of the river (Swan River Trust, 2004b). Findings of this research are in accordance with this idea, with respondents arguing that a holistic approach to the river's management is required.

The Indigenous and European history of the river, the ecological and governance systems of the Swan River, along with current social and economic associations of the river, all influence the complex system of the river. They can be viewed as interconnected component systems. Understanding that the river is a complex system, in which each component can influence another component system, is important to the ongoing management of the complex system. Without understanding the linkages between the components, decisions may be made which result in unforeseen negative outcomes to the system. This research increased understanding of the Swan River complex system by identifying important issues linking the components of the system, which have the potential to influence each of the other components, the river, and also influence sustainable tourism development outcomes.

5.7   Case Study Overview

From the outset of this research, it was evident that an emotional connection with the Swan River exists amongst the broader Perth community as Section 5.6 intimated. The state government was under pressure from community leaders who were asking questions about the management of the river and there was a high level of concern expressed in the media at threats to the river's condition.   In addition, the importance of the river to tourism is evident in the numerous tourism brochures, post cards and operators' marketing strategies that focus on the Swan River.   When respondents were initially contacted for the interviews, mention of the Swan River immediately evoked a response that indicated that the river was important to them. It is evident from these initial observations that Perth's community has a very strong attachment to the river. Therefore, the river provided an opportunity to conduct a case study.

The following sections present an overview of the case study area used for this research and an overview of the stakeholders included in the study.

5.7.1   Perth Water – Perth City Foreshore

In 1997, The Swan River Trust produced the *Swan River System Landscape Description* in which twenty-three separate landscape precincts along the river system were identified, one of which was Perth Water. In 2002, the State's *Swan and Canning Precinct Planning Project* consolidated these landscape precincts into eight major planning precincts. Perth Water was considered a major planning precinct (cf: Figure 1.2).

The Perth Water precinct of the Swan River is regarded as one of the dominant landscape features of the city of Perth, providing opportunities for recreational, commercial and transport activities (Chalmers, 1997). The City of Perth is situated on the northern banks of the Swan River and the City of South Perth is situated on the river's southern banks. The Swan River foreshore, within the City of Perth, was chosen

as the central area for this research in order to maintain an urban river focus and provide a boundary for the research (Figure 5.3) (cf: Photo1 and 2).
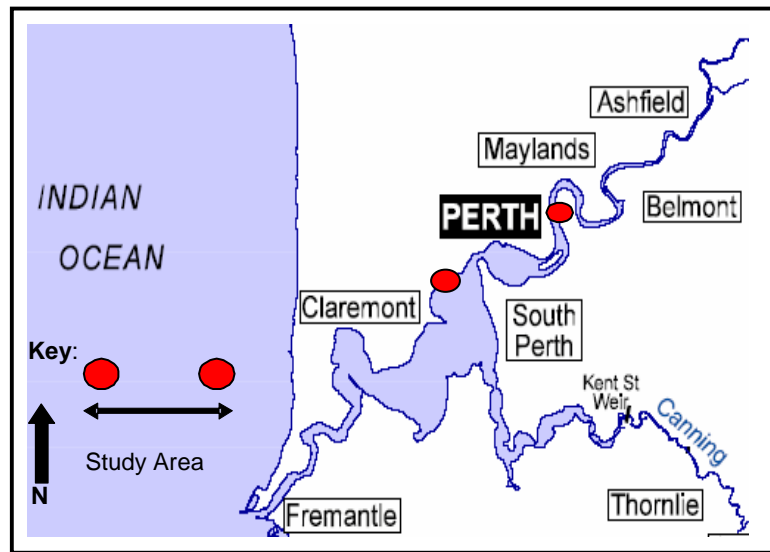
Figure 5.3   Swan River case study area

These boundaries were identified given limitations of time, finances and personnel which would have been required if the whole of the river outside the Perth city area was to be included in the study. The city foreshore is linear and flat in nature and is an area marked in history. It has been dredged and infilled on several occasions since European settlement. A limestone retention wall exists along the foreshore area, which Chalmers (1997) argues acts as a visual barrier and limits access to the water. Riverside Drive, a major arterial road only metres from the river's edge, runs almost the total length of the Central Business District, restricting use of the river's foreshore and separating the city from the river (Chalmers, 1997; Hames Sharley, 1998).   The roadway runs between two major crossings along the river linking northern and southern locations of Perth, known as the Causeway and Narrows Bridges, the latter forming part of the Kwinana Freeway. In addition, a large grassed area between the city and Riverside Drive also forms an extensive artificial barrier between the city and the river.

Photo 1 Perth Waters and Barrack Square tourism precinct - Perth, Western Australia

Photo 2 Barrack Square tourism precinct – Perth, Western Australia

Historically, Perth Water was an important meeting place for the Indigenous inhabitants and has great cultural and spiritual significance to the local Nyungar community (Swan Catchment Council, 2004) as described in Section 5.2.

The northern foreshore, with Barrack Square as a central focus, is a key tourism node along the Swan River where tourists, tourism operators and the community interact. Therefore it provided an opportunistic area to conduct this research. All tourism operators involved in the research were connected to this area through a business operating directly from Barrack Square or indirectly by connecting their operation with tourism operators, such as charter boat operators. Tourists were interviewed in this Perth Water area, specifically at the Barrack Square location on the northern foreshore and at the Mend St jetty located directly opposite Barrack Square on the southern foreshore in South Perth.

5.7.2   Barrack Square

Historically, the Barrack Street jetty situated on the Perth Waters section of the Swan River, was the first jetty that operated in Perth in the 1800s (Chalmers, 1997). In 1905, the Barrack Square precinct served as a river port becoming a hub for ferry services, pleasure cruises, boat hire and boat building (Hames Sharley, 1998). In 1970 jetties were built at the site to provide greater access to charter boat and ferry services and by the 1990s, the area required major works to accommodate the growing demand for berthing space at the jetties (Hames Sharley, 1998). By the late 1990s, Barrack Square had become a tourist node. With a quarter of a million river cruises and a half a million ferry passengers departing from the jetties each year the demand had outgrown the facilities (Hames Sharley, 1998, p. 6). A Barrack Square Master Plan was prepared by consultants for the Ministry of Premier and Cabinet and the focus of the site's redevelopment in 1999/2000 was based on providing a key central tourism attraction for Perth and to 'connect the city to the river' (Hames Sharley, 1998, p. 7). The central feature of the redevelopment was a bell chamber and bell spire, built to house the historic bells of St Martins, which were a gift to the city of Perth in 1988. This structure is known as the Belltower (cf: Photo 3 and Photo 4).

Photo 3 Belltower facing river, Barrack Square tourism precinct – Perth, Western Australia

Photo 4 Belltower facing city, Barrack Square tourism precinct - Perth, Western Australia

Redevelopment of Barrack Square included re-building jetties, the addition of buildings which were to become restaurants and cafés, the Belltower and extension of the board walk to 'establish an intimate connection between people, buildings, boats and the water' (Hames Sharley, 1998, p. 8). The reference to creating an intimate connection with the river, which is found numerous times within the Barrack Square Masterplan, gives an indication of the important emphasis that is placed on the river and is a theme that emerged from the interviews that were conducted for this thesis.

Numerous state and local government agencies have a jurisdictional stake in Barrack Square. They include the Swan River Trust (SRT), Department for Planning and Infrastructure (DPI); Department of Indigenous Affairs (DIA); Department of Environment (DoE) and the City of Perth.

5.7.3   *Lifecycle Concept Related to Swan River*

In accordance with both Plog's (1974; 1998) and Butler's lifecycle (1980) models, as discussed in Chapter 2, tourism development on the Swan River may be regarded as in its growth stage. Visitor numbers to Perth are continuing to increase (Western Australian Tourism Commission, 2004a, 2004b), and ongoing tourism development is occurring on the river. For instance, plans are proposed for new developments by the Perth City Council along the foreshore. In addition, the completion of a new Convention Centre in 2004 has become a major tourism centrepiece adjacent to the river. The Barrack Square area currently attracts mainly conventional tourists, rather than the niche or adventuresome tourists of Plog's (1974; 1998) early stages of lifecycle development. According to Brown, Derrett, Korn, Oostdyck (1996), Butler's (1980) lifecycle model enables a proactive approach for tourism managers to intervene at early stages of the lifecycle, in order to avoid stagnation at a destination. The model encourages the application of ecologically sustainable principles and practices across the tourism industry by understanding the possible negative impacts to a destination at various stages within the model. Therefore while the lifecycle models are not the focus for the case study research, it is beneficial to put the research area into a lifecycle context if interventions to prevent stagnation can be developed.

5.8   Overview of Stakeholders

This section provides an overview of each of the stakeholder groups and the general attitudes and feelings of stakeholders towards the research topic. As this research takes a predominantly qualitative approach, this overview is necessary to assist the reader to place stakeholders in context, which will assist in understanding the perspectives of the respondents.

Semi-structured in-depth interviews were conducted with forty eight respondents including tourism operators, government agency personnel, non-government organisations and community stakeholders. Over fifty-two hours of transcripts resulted from the interviews. In addition, one hundred and twenty five surveys of visitors were conducted using structured questionnaires. The following table displays the breakdown of the tourists who participated in the survey and indicates that there is a bias of international visitors.

Table 5.3   *Percentages of Intrastate, Interstate, and International Tourists*

Respondents	N=125	Frequency	Percent
Valid	Intrastate	22	17.6
	Interstate	38	30.4
	International	65	52.0
	Total	125	100.0

5.8.1 Tourism Stakeholders

All tourism stakeholders were chosen because of their direct or indirect connection to the selected research site or the river. A range of tourism activities are represented in Table 5.4 including accommodation, charter boat, retail, restaurant and tour operations. Not all the operators were located on the river. The accommodation operators used the river as a part of their overall marketing strategy, with only one situated directly on the river foreshore.

The scenic tour operators were located away from the river and their tours were not specifically focussed on the river. However, their brochures all advertised the Swan River as a feature of their business and included a river cruise as part of their itinerary in partnership with another company.

Ten of the tourism stakeholders operated their business from Barrack Square. Two other tourist operators on Barrack Square were contacted for this research, but declined to participate stating that they were either too busy or were not interested. An interesting comment from one of those operators who declined to participate was that they felt their operations did not have a connection with the river or tourism. Their operation involved conducting wine river cruises departing from Barrack Square travelling to the wineries in the Swan Valley, located upstream on the river. The operator stated that their business was about wine appreciation, and the river was merely a means of transport. This statement perhaps reflects their value for the river.

Generally, the attitudes of all of the tourism respondents was one of willingness to have their voices heard, with some operators openly expressing anger surrounding the management of the river, Barrack Square and related issues, such as a lack of understanding by government authorities of how tourism operates. All of the operators were passionate about their particular activity. After the initial letters of introduction were sent out, one charter boat operator who was contacted by phone to arrange an interview, spoke with little encouragement for over an hour about what they perceived to be major issues with the management arrangements of Barrack Square and the river.

Table 5.4　*Tourism Stakeholders*

Tourism Stakeholder	Activity	Overview of Operations / Markets
TO1BO	Charter Boat Operator	Owner operator of large charter boat company for 18 years. 6 vessels – 3 operate out of Barrack Square. 500+ capacities. Interstate, intrastate and international markets.
TO2BO	Charter Boat Operator	Operating for 7 years from Barrack Square. Predominantly local market. Holds up to 250 people.
TO3ST	Helicopter flights	Operations located on river foreshore. 70% local market.
TO4ST	Bus tours	Coach Tours- Small owner operator. Groups of 10-15. Partnership with charter operator- to drop off clients for river cruises as part of operations. Predominantly interstate, intrastate markets
TO5ATT	Attraction	Bell Tower Attraction - operating for 5years. 75% international and 35% Interstate, intrastate markets..
TO6RET	Restaurant	Retail business on Barrack Square. Operating for 7 years. A 50% Interstate, Intrastate and 50% international markets..
TO7ST	Perth Tours	Conducts tours of Perth and its key features. Not located on the river, but has partnerships with a charter boat operator at Barrack Square which forms a key part of the tours. Interstate, intrastate and international markets.
TO8BO	Charter Boat Operator	Worked in the boat and tourism industry since 1976. Interstate, intrastate & international markets
TO9ACC	Accommodation Provider	Overlooks river & uses river in promotional material. Interstate, intrastate and international markets... Aim to promote Perth.
TO10REST	Restaurant	Operating for 12 months- took over a business which had previously failed. Interstate, intrastate and international markets..
TO11BO	Charter Boat Operator	Small Charter Boat operator. Own business. Operating on the river for 20 years. Interstate, intrastate and international markets..
TO12BO (2)*	Charter Boat Operator	Large company. Recently bought out another smaller operator. One respondent had been with the company for 8 weeks but had previously worked for another charter boat company.
TO13REST	Restaurant	Licensed café at Barrack Square. Predominantly local market but includes international tourists
TO14REST	Restaurant/Bar	Manager. Fully licensed restaurant/Bar located over the water at Barrack Square. Local market & tourists
TO15ACC	Accommodation Provider	Marketing Manager. Five Star Hotel. Corporate & leisure market. Interstate, intrastate and international markets.... River views
TO16ACC	Accommodation Provider	Four Star Hotel. Markets include: Corporate, leisure, Interstate, intrastate and international markets... River views
TO17ACC	Accommodation Provider	Large business operator on the foreshore of the Swan River 400 rooms. 70% Interstate, intrastate and 30% international markets... Two years in Perth.

Key: * = Two respondents interviewed

Codes for tourism operators:　**BO**= Charter Boat Operator　　　**REST**=Restaurant/Café/Bar

ACC= Accommodation Provider　**ST**= Scenic Tour　　　　　**ATT**=Attraction　**RET**=Retail

Only one operator, a restaurant/café operator who agreed to be interviewed, expressed hesitancy about the interview, due to their belief that they did not have anything worthwhile to contribute to the research. This particular operator also indicated that their business was not economically sound at this point of time, and was concerned about the business' survival. This may have contributed to their hesitant attitude.

To ensure that identities of individual tourism respondents are protected, codes identifying operators in Table 5.4 have been altered in the findings chapters. For example, TO1BO will be referred to as TOBO in subsequent chapters.

5.8.2 Government Stakeholders

Government agencies represent the diverse government interests in the river and include both state and local government representatives. Agencies who had a direct role in governance activities connected to the Perth Water precinct of the Swan River or had tourism related interests were chosen. One local government, The City of Swan (CSC) is not located in the Perth Water Precinct. However, the researcher deems the CSC to be an important stakeholder because of the strong tourism interests connected to the river. The City of Swan (CSC) is the gateway to the Swan Valley Wine Region, north of Perth and all charter boats who conduct winery tours to this region pass through this council precinct. Two representatives from the CSC, one of whom had the role of tourism promotion, were enthusiastic about participating in the research and indicated concern at the lack of management of tourism development on the river.

Table 5.5   *Government Stakeholders*

Government Stakeholder	Government Agency	Agency Role
GO1CSC (2)*	City of Swan Council (CSC)	Local government roles and responsibilities Responsible for foreshore maintenance. The Swan Valley is a major wine region in Western Australia, accessible by boat. Experiencing significant increases in tourism along river.
GO2DPI	Department of Planning & Infrastructure	Planning & approval of developments along the river. Licensing of boat operators. Indirect management of Barrack Square
GO3CSP	City of South Perth	Director of Strategic & Regulatory services. Local government roles & responsibilities. Responsible for foreshore maintenance.
GO4SCC	Swan Catchment Council	Fostering of community & government partnerships. Community development & training in regard to the Swan River. Policy development.
GO5CoP	City of Perth	Local government roles & responsibility Responsible for foreshore maintenance.
GO6TPF	Transperth Ferries	Government ferry operations on Perth Waters
GO7CALM (2)*	Conservation and Land Management	Management of nature reserves, Regional Parks and Public Conservation Lands. Research & Education. Conservation.
GO8TWA	Tourism Western Australia	Promotion & Marketing of the State for Tourism
GO9DIA	Department of Indigenous Affairs	Indigenous Affairs
GO 10SRT	Swan River Trust	Swan & Canning River planning & management. River development approvals. Policy development. Community education.

Key: * = Two respondents interviewed

Although all government agencies contacted agreed to be involved in the research, hesitancy was expressed by a number of respondents. On initial contact, the Perth City Council for instance, did not believe they could contribute on any issues on tourism or the river, despite the fact that the Swan River foreshore is a major aspect of the council's precinct. Tourism Western Australia, were also hesitant, again, because they did not believe they could contribute to the discussion on the river, although they acknowledged that tourism was occurring both on the river and its foreshore. The Transperth Ferries also were doubtful, stating that 'they didn't really have anything to do with tourism.' This was in spite of the fact that the ferry carries passengers to and from the Barrack Square tourism precinct (city side of the river) to the southern foreshores where visitors disembark to Perth's zoo and restaurants.

5.8.3 Non-government Stakeholders

Non-government organisations, listed in Table 5.6, represent diverse interests, but were identified as significant stakeholders according to their involvement with either the river or with tourism activities.

Table 5.6   *Non-government Stakeholders*

Non-government Stakeholder	Non-government Agency	Agency Roles
NG1CBA	Charter Boat Association	Represents Charter Boat interests to government.
NG2CCWA (2)*	Conservation Council of Western Australia	Peak state conservation body, monitoring environment.
NG3WWF	World Wide Fund for Nature	Environmental issues. Lobby group. Respondent's specific role is to work on water policy development & sustainable water management.
NG4TWA	Tourism Council of Western Australia	Peak tourism industry group. Voice of the tourism industry. Consults with government.
NG5FACET	Forum Advocating Culture and Eco Tourism	Operating for 13 years. Promotion of sustainable tourism education.
NG6NTWA	National Trust of Western Australia	Community based organisation. Watchdog for heritage issues-natural, built and cultural.
NG7WAITOC	Western Australian Indigenous Tour Operators Committee	Promotion, Education & Training for Indigenous Tourism.

Key: ***** = Two respondents interviewed

Of the seven non-government stakeholders interviewed, two had strong environmental interests, three represented tourism interests, whilst the remaining two represented heritage and indigenous interests. All of the respondents were passionate about their particular field and willingly agreed to participate in the research to have their opinions heard. Whilst not all were positive in their attitudes to tourism development on the river, they all believed that it was an important area of research which needed to be discussed.

5.8.4 Community Stakeholders

Community stakeholders, as shown in Table 5.7, were identified through their particular activity, which directly involved the river. The stakeholders included individual participants who were active on the river, together with participants who represented particular community interests. Generally, the community stakeholders who were contacted did not hesitate to participate, although lack of knowledge of tourism was cited as being a concern for some of these respondents who questioned the value of their contribution to the research.

Table 5.7   *Community Stakeholders*

Community Stakeholder	Activity / Organisation	Role/Interest
CO1KAY	Kayaking	Family oriented kayaking activities on the Swan River. Kayaks twice a week. Pleasure oriented.
CO2CG	Claisebrook Catchment Group	Environmental education, water quality management. Cycles along river once a week.
CO3CYC	Cycling	Cycles along river on regular basis with groups or own on a regular basis at least once a week. Kayaks on river every 3 weeks.
CO4RECF (2)*	RecfishWest	Represents the interests of recreational fishers- estimated to be around 643 000 (Prokop 2004 pers. comm.) * Voluntary fisheries liaison officer - community based education.
CO5PB (2)*	Power Boat Association	Represents speedboat racers who conduct activities on river on weekends. Purpose of club: to promote speedboat racing in WA. Club rooms located on foreshore of river. Multi use clubrooms.
CO6YC (2)*	Yacht Club	General manager of yacht club. * Public relations officer. Recreational yacht, promotion of sport. 300 boat marina on river.
CO7SA	Western Australian Ski Association	President of Ski Association. Competitive water skiing on river.

Key: * = Two respondents interviewed

One representative from RecfishWest was particularly emphatic about participating and in fact stated that 'they must be included in the research'. The respondents who participated from this group were extremely emotive about their views and at times displayed anger regarding issues surrounding the management of the river and tourism development. The respondents from the Power Boat Operators Association indicated a willingness to participate. However, they were initially reticent about

divulging information regarding an ongoing conflict with a tourism operator. The conflict concerned a government agency's assessment of a development application on behalf of the tourism operator concerned. There was a degree of suspicion by the respondents who were concerned that results of the taped interview may be judged negatively. Explanation of the research objectives and confidentiality arrangements of the research process addressed this concern. Transcripts were sent to the respondents so that any aspect of the recordings could be removed, if deemed necessary by the respondents. No changes were made to the transcripts. A frank discussion surrounding the conflict with the tourism operator, which was not tape recorded, was conducted after the interview had concluded.

It is important to note that while respondents who participated in the research, spoke on behalf of their organisation, all members of that particular organisation may not necessarily share their opinions.

Secondary data, which related to community attitudes to the river, was also used for this research and will be discussed as part of the findings. This included a government report on community focus groups called 'Future Perth' conducted in 2000 and a consultant report to government regarding community attitudes to numerous issues. Results from the secondary data will be discussed in Chapter 7, Section 7.4.

5.9   Conclusion

This chapter presented an overview of the Swan River case study area, and the respondents included in the research. The Swan River is regarded by the state government of Western Australia as a vitally important nature resource with important values for the Perth Region.

The Swan River is part of the urban environment and can be viewed as a complex system consisting of interconnecting ecological, social and cultural values. It has significant indigenous values and regarded as a sacred site by the Aboriginal community. The river also played an important role in early European settlement from the 1820s and continues to be regarded as important to today's Perth community.

Since European settlement, modifications to the river system have resulted in major changes to its hydrological and ecological functions, including loss of riparian habitat, fauna and flora species and an increase in algal bloom outbreaks.

During the 1990s the river's health was recognised as being under stress by both government and community members. A legislative framework was established to ensure that the river was appropriately managed and protected during this period and government policies were initiated to operationalise that protection. Two key pressures identified were incompatible planning and development, and inappropriate land and water management practices.

The purpose of this research was to use a complex systems perspective, to understand influences and issues surrounding sustainable tourism development outcomes of the river. The forty eight respondents who participated in the research were involved in building a picture of the stakeholder values and perceptions associated with the Swan River. A complex systems perspective enabled the identification of themes and issues that were pertinent to all stakeholders and areas where there could be potential conflicts of interest. It is through these themes and issues that connections and disconnections between each of the stakeholder groups were made in order to identify behaviours influencing the components of the complex system and sustainable tourism development outcomes of the Swan River. Areas in which stakeholder's needs must be addressed were identified from this process.

Each stakeholder connected to the Swan River expressed their own perceptions they associated with sustainability and sustainable tourism development and perceptions of the river, in regard to its condition. In addition, several important issues also

emerged throughout the stakeholder interviews connected to sustainable tourism development. Chapter 6 will present these findings.

CHAPTER 6

STAKEHOLDER PERCEPTIONS OF SUSTAINABLE TOURISM DEVELOPMENT

> Tourism isn't a benign thing that's going to protect the environment. It has to be controlled…we need to support programs that try to protect nature, to restore nature, to allow people to make a living from nature without destroying it… (David Suzuki, 2000).

6.1   Introduction

Australia is considered to be a niche tourism market globally, attracting some five million international tourists annually, as opposed to countries such as France and the United States which annually attract 75.5 million and 50.9 million international tourists respectively (Western Australian Tourism Commission, 2003). At a state level, tourism in Western Australia is considered to be the state's fourth largest industry contributing some $3.8 billion to its economy (Western Australian Tourism Commission, 2003).   In 2005, a total of 633 500 international visitors arrived in Western Australia representing an increase of 6.6% from the previous twelve month period and a 12.6% of the state visitor market share (Tourism Western Australia, 2005b, p.2). In addition, there were 6 013 000 domestic visitor arrivals in Western Australia representing a decrease of 8.6% from the previous year and 8.5% of the market share from the Australian states (Tourism Western Australia, 2005a, p. 3). Western Australia, in a global context, is considered to be a niche destination (Government of Western Australia, 2003, p. 141). Tourism Western Australia is the government tourism agency responsible for marketing the state as a tourism destination with a focus predominantly on the state's natural assets.

In an attempt to address the concept of sustainability within a government framework, the Western Australian government released a State Sustainability Strategy in 2003 (Government of Western Australia, 2003). The concept of sustainability, which was recognised in the Strategy as being a challenge to define, is represented in Figure 6.1. The Strategy attempts to reflect the importance of economic, environmental and

social factors, but more importantly, attempts to emphasise the integration between these factors. Within the Strategy, tourism was called upon to ensure the long term sustainability of the industry through minimising the impacts of tourism development on cultures and communities and preserving the natural environment (Government of Western Australia, 2003, p. 141).
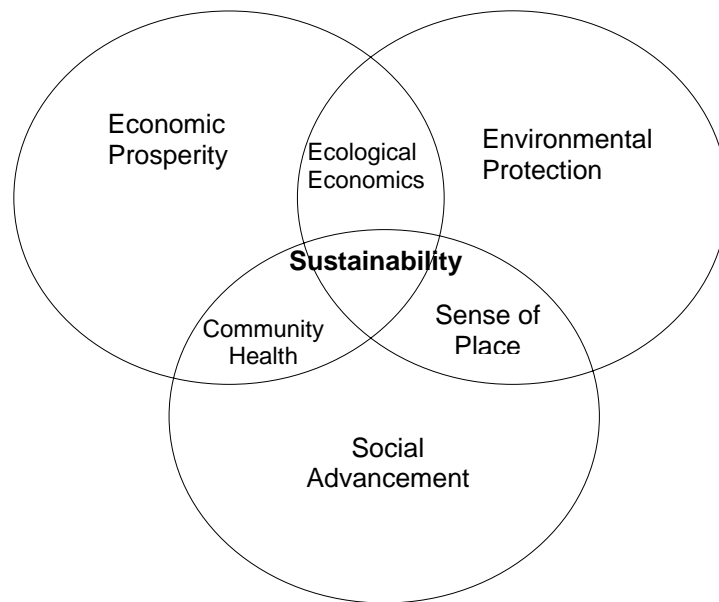
Figure 6.1   Integrating environmental, social and economic dimensions of sustainability
(Government of Western Australia, 2003, p. 24)

This research was undertaken within the context of tourism's growing importance to the State of Western Australia (Western Australian Tourism Commission, 2004a, 2004b) and the Government's desire to ensure that the concept of sustainability is included within the State's tourism industry. It is timely to identify stakeholders' perceptions of sustainability and sustainable tourism development to determine if, in fact, stakeholders have economic, environmental and social perceptions of the concept.

In Chapter 2, it was pointed out that there has been little research which explores stakeholder perceptions of sustainable tourism development. Unless there is an understanding of these perceptions, sustainable tourism development may not be possible (Hardy & Beeton, 2001). Often when it comes to discussion of sustainable tourism development, it is the maintenance of tourism that is the agenda. Hardy and Beeton's (2001) study of the Daintree region of Far North Queensland concluded that management strategies may not be suitably addressed if the needs and perceptions of stakeholders are not understood. Chapter 2 also highlighted the fact that a number of

perceptions surrounding sustainability terminology exist which may help to explain why implementation of sustainable tourism development outcomes is problematic.

This Swan River case study identified stakeholder perceptions of sustainability, sustainable tourism development, and key issues surrounding these concepts in an attempt to understand the complex system in which tourism operates when linked to a natural resource. The perceptions held by stakeholders have the ability to influence the complex system of the Swan River, by acting as strange attractors, keeping the system in a state of fluctuation (cf: Table 3.1). Conflicts within the system may also occur between the various stakeholders when different perceptions of sustainability exist, which also keep the system in a state of fluctuation.

Figure 6.2 presents the themes surrounding sustainability and sustainable tourism development that emerged during the interviews with stakeholders. These underlying themes are interconnected and have the ability to influence the effectiveness of sustainable tourism development outcomes and need to be understood. This chapter will focus on the themes highlighted (through shading) in Figure 6.2. The broader issues of planning, consultation and industry responsibility will be discussed in Chapters 8 and 9.
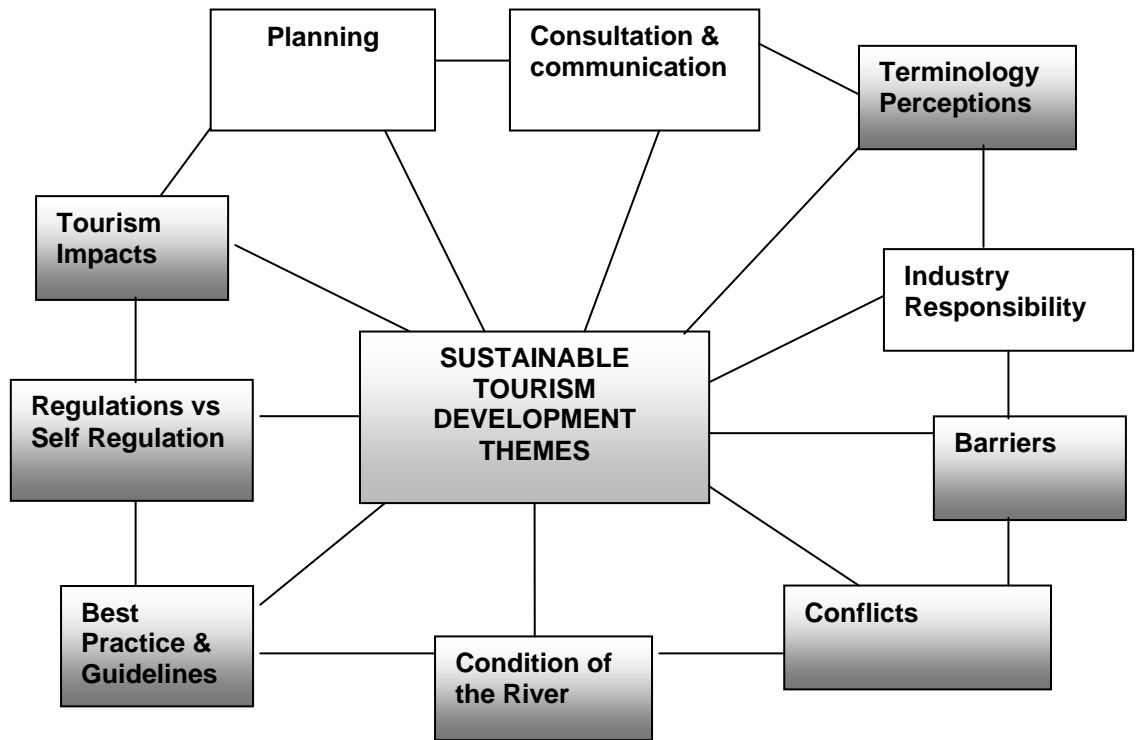
Figure 6.2   Sustainable tourism development themes

Firstly, tourism and tourism impacts as perceived by stakeholders involved in the semi-structured in-depth interviews are presented to give an overview of their attitudes to tourism on the Swan River. Findings will demonstrate that there is a diverse range of perceptions associated with the river's condition. Secondly, the terms sustainability and sustainable tourism development, as perceived by these same stakeholders, are discussed followed by specific issues surrounding tourism development. Finally, research findings regarding sustainability issues are illustrated from the tourist stakeholder's perspective. Table 6.1 presents the findings of the stakeholders interviewed in the semi-structured interviews. The table indicates whether a stakeholder raised a particular issue or a particular perception in the interview via a shaded square.

Table 6.1   *Sustainable Tourism Development Themes*

Respondent	Tourism Develop't View		Sustainability and STD Perceptions							Regulations and Codes of Practice			Themes			
	Negative	Positive	Ecological	Economic	Tourism	Triple Bottom Line	Social Equity	Intergen Equity	Understand STD	Positive	Negative	Impact Awareness	Policy & Planning	Industry Responsibility	Condition of River	Barriers
TO1BO		■		■					Y			Y		■	NI	■
TO2BO		■	■	■					Y			Y		■	NI	■
TO8BO									N						IMP	
TO11BO		■		■					N		■		■		IMP	■
TO12BO*					■				N	■		Y			IMP	■
TO10REST		■			■				N				■			■
TO13REST				■					Y			Y			NI	■
TO14REST				■					N							■
TO9ACC					■				Y			Y	■			
TO15ACC									N	■		Y	■		NI	■
TO16ACC		■	■	■	■				Y			Y			NI	■
TO17ACC		■	■	■			■		Y			Y				
TO3ST		■	■	■					Y	■		N			NI	■
TO4ST			■	■					Y			Y				■
TO7ST		■	■						Y		■					
TO5ATT						■			Y			Y			NI	■
TO6RET		■							N			N			IMP	■
GO1CSC*			■			■			Y	■						■
GO2DPI		■							Y			Y				■
GO3CSP						■			Y	■					IMP	
GO4SCC	■	■	■						Y	■		Y				
GO5COP			■						Y				■			
GO6TPF		■							N							■
GO7CALM*	■		■		■				Y		■					■
GO8TWA		■	■	■					Y		■		■	■	G	
GO9DIA	■							■	Y	■					IMP	
GO10SRT	■		■			■			Y							
NG1CBA		■							Y	■		Y				
NG2CCWA*	■		■						Y				■		P	
NG3WWF	■		■			■			Y			Y	■	■		■
NG4TCWA					■				Y			Y				
NG5FACET	■					■			Y			Y	■			
NG6NTWA	■		■						Y						P	■
NG7WAITOC			■						Y						P	
CO1KAY		■							N						P	■
CO2CG	■		■				■		Y		■	Y			P	
CO3CYC		■							N	■		Y				
CO4RECF*	■								Y				■			■
CO5PB*	■								N						P	■
CO6YC*	■			■					Y	■						
CO7SA	■								Y				■			■

Key: *= Two Respondents Interviewed

Codes for Respondents: **TO = Tourism operators**   **BO** = Charter Boat Operator
REST=Restaurant/Café/Bar   **ACC**= Accommodation Provider   **ST** = Scenic Tour Operator
ATT = Attraction   **RET** = Retail Operator

GO = **Government Departments**   **NG** = **Non-government**   **CO**=**Community**

Y= Yes **N**= No   **NI** = Not important   **IMP** = Important   **G** = Good condition   **P** = Poor condition

6.2   Perceptions of Tourism and Tourism Impacts

Table 6.1 illustrates that common and divergent perceptions across a range of themes exist amongst respondents of the case study. Respondents, across all stakeholder groups indicate awareness that tourism has the potential to negatively impact on the river, although this view was particularly dominant amongst non-government stakeholders. This perception perhaps reflects the strong ecological values associated with the river expressed by the non-government respondents as will be discussed in Chapter 7. A negative perception of tourism development and activities on the Swan River existed from non-tourist stakeholders for a number of reasons. Pollution fears, amenity concerns and the general growth of tourism were some of the issues highlighted by respondents, as reflected in the following comments:

> …it's got to be closely watched... because...if there is a dollar in it, people will do it…and that's not going to help much at all…if the river is dotted with floating restaurants ... it's a bad idea in the long term… The point of the river being what the river is will change...it will just be a convenient place to put a restaurant rather than being such a nice area… 'cause the river on a nice day is a beautiful place. (CO1KAY)

> ...at the Barrack St jetty there's the restaurants and there's a café or fast food places and there's also the boat tour places…and there's brochures and on a windy day…they're just flying away and so I think just managing litter when you're near the foreshore, litter should be managed anywhere, but specifically there....that's just a matter of providing decent bins and where you place the fast food outlet so it's not right on the water front so it may be inland or something…(CO2CG)

> We have a big problem in December with garbage. Some boats may be doing three charters a day, they fill up with garbage on board…some people have a tendency to just throw it onto one of the wharves or the river. (NG1CBA)

The issues of tourism developments impacting on existing activities and on the natural features of the river were also raised by the non-tourism stakeholders on a number of occasions. For instance, one community stakeholder, representing a Ski Association, cited an ongoing conflict between a nearby accommodation operator and their Association. The accommodation operator is proposing to build a jetty which the Association believes will significantly impact on their own activities. Although negotiations between the parties have been undertaken, there is still no mutually agreed upon outcome. Other respondents commented on both tourism development and more

broadly on development in general reflecting stakeholder concerns about impacts on their activities and the health of the river system.

> We have issues, all sorts of issues. I think the first one is the fact that they've gone and built all this lovely area and then said to rec fishers, you can't fish there. Which is a bit of an issue in itself ... (CO4RECF)

> We've removed all the natural wetlands, we've removed the reedy swampy areas that take all the gunk out of the river…the developers want to develop everything… my problem with the river is that it is too concentrated. They build the thing and put three or four cafeterias there and they're all competing with each other, none are making money, throw a bell tower in it and it's got a thing that is impacting on the health of the river and it's really not serving any purpose to give people more usable areas of the river. What they should do is stagger them up and down the river in areas that can be sustainable …and you need to look at the ecosystem first. What effect is the hotel over a river going to have before a planner decides it can go ahead….(NG2CCWA)

> The problem has been the whole of the Esplanade is reclaimed land, …so much interference has been caused with the natural with the streams, the freshwater streams and the streams that once ran right the way from Claisebrook all the way down. A lot of them now have been taken under ground a lot of them have been blocked off and so even Barrack Square has been built on reclaimed land. (NG7WAITOC)

The different perceptions surrounding the river and the different values that are associated with the river may help in understanding why these attitudes exist. These values will be discussed in Chapter 7. However, findings suggest that tourism stakeholders hold a predominant economic value for the river which contrasts with the community and non-government respondents who hold a predominant social, ecological and recreation value focus. In clearly stating that the ecosystem should be considered first, the CCWA respondent may conflict with a tourism operator who believes that the economic aspects of the river should be foremost in management strategies. An acknowledgement of the need for tourism to be sustainable was emphasised by one non-government tourism stakeholder who spoke of the negative reputation and impacts of tourism development in the 1970s and 1980s. The respondent argued that:

> ...the consciousness of the community has been raised... tourism has to be sustainable and unless it is sustainable it will just kill the gooses [sic] that lay the golden eggs and that's the whole business, so it has to be sustainable (NG5FACET)

A range of perceptions of tourism impacts, and the degree to which these impacts potentially affect the river and other stakeholders was evident across all stakeholder groups, including the tourism operators. Whether these impacts are real or not, many stakeholders felt very strongly that tourism development had the potential to impact on the health of the river and to impact on other stakeholder groups. In order to help understand these perceptions, it is useful to identify the stakeholders' perceptions of the condition of the river which will be presented in the following section.

6.3   Perceptions of the Condition of the Swan River

When stakeholders discuss the river's ecology from a sustainability perspective, it is necessary to understand the importance of the condition of the river to stakeholders and their understanding or perceptions of the condition of the river. The level of understanding of the river's ecology may have implications for sustainable management strategies.

Chapter 5 pointed to the declining health of the Swan River system with declining fauna and flora and increasing algal blooms. Findings from this case study, suggest that there are diverse perceptions about the condition of the river, which may result in different perceptions of how to work towards sustainable outcomes.

In order to determine the importance of the river's condition on businesses associated with the river, tourism stakeholders were asked to comment on a significant algal bloom which had occurred on the river two weeks prior to commencement of interviews. A number of tourism operators indicated that, despite widespread media coverage of the impact of the bloom, their businesses were not impacted. These same operators also stated that the condition of the river generally did not impact on their business. One tourism operator stated that they were not even aware that the algal bloom had occurred, whilst others acknowledged its occurrence with statements such as:

> Personally it's important, but to the business it is not important….People don't use the river for swimming in this area, it doesn't make much difference to the boats anyway and this area is, I don't know whether it is polluted or silted or both. But you know it doesn't seem to affect this area. (TOATT)

…it doesn't affect anybody. Because there is an algae bloom once a year - it doesn't affect anybody. Who's it affect? The minority of people who go down there to use the river, they can't go and use it they can't go and fish, ...it's only a few people so I would say the general attitude of people is "so what?". You know we want it clean, ... you always want something clean, but it really doesn't affect anybody. (TOBO)

Other tourism operators, whilst acknowledging the impact of the algal bloom, commented on the media's attention on the bloom which sensationalised the impacts:

…the media can create a perception that it is significantly worse than reality. But in terms of operations and terms of experience, the algal blooms to date have virtually had no impact at all… (TOBO)

...a number of older folks wouldn't come out on to the boats because they thought that they were going to get infected by the algal bloom. Even though they are at least a metre away from the water at all times, they, with the bad publicity, the media marketing of it, saying that our river was failing, and whose fault that is I don't know, but the media got onto it and said our river was in danger of dying, and that was a load of rubbish, because this happens all the time. If we don't have the rains to wash the river out… The river needs to be washed out, for the Swan River it's a natural event as rain. (TOBO)

In contrast, there were tourism operators who revealed that the algal bloom and condition of the river did have an impact on their business. A charter boat operator indicated the significance of algal blooms on their business markets in the following comment:

The bloom a few years ago did affect us because that came in high season, in January, and the river was virtually closed. We probably had a 25%-30% decrease in that week or so. We had to go back to our wholesalers, overseas and assure them that it's quite safe. The river was not closed; only closed to people who wanted to swim or water ski and that type of thing but a boat cruise on the river? Japanese people, for example, had wanted us to sign some sort of indemnity clause before they would allow any passengers on the cruise. (TOBO)

Overall, tourism stakeholders believed the condition of the river was important for their business economically, although there were those who indicated concern for the river itself. In contrast to the attitudes of tourism stakeholders, many of the community, government and non-government stakeholders emphasised ecological concerns. These respondents were generally representing organisations with an environmental focus. Comments from respondents included:

...like this algal bloom causes me so much concern because if people get desensitised to the fact that we get significant algal blooms and then fish kills in the Swan river, the next thing, is that the fish don't have a chance to recover…In terms of the Swan River, it's under the radar, and this is the thing that worries us the most. It's viewed as, it's a given that it's an integral part of Perth, but it'll be all right. It's been okay for 175 years and therefore we have an expectation that it will continue for the next 175 years…..but it won't ... (CO4RECF)

..it reflects the health of the environment in the Swan Region and if it's not healthy it shows you've got poor environmental surroundings and then you have flow on effects on recreation and amenity because it's such a focus for everyone and you know very quickly when something is not right...there is outcry….there is now quite a well known link between catchment land use and how it reflects in the water. (GO7CALM)

... when we do have algal blooms... the extreme events of which are triggered by certain...climatic conditions and certain nutrient flows at certain times of the year, into the river... they're the high points in the expression of the ill health of the river ... (NG3WWF)

The comments reflect the complexities involved in the river system, including impacts of external events such as climate change and influences of the wider catchment along with the community's perceptions and understanding of the river.

Many non-tourism stakeholders were extremely vocal and emotive about the river's condition in the short and long term, believing that the river was in crisis, reflecting the importance of the ecological values of the river to these stakeholders, as will be discussed in the Chapter 7. The concerns seem to be consistent with the government's acknowledgement of the stressed state of the river noted in Chapter 5. This same view was not evident amongst tourism stakeholders and may lead to conflicts occurring between stakeholders.

Apart from determining the different stakeholder perceptions of tourism and tourism development impacts and the condition of the river, it was also important to understand the different stakeholder perceptions of the terminology that is associated with sustainability. Findings surrounding these perceptions will be presented in the following section.

6.4   Perceptions of Sustainability Terminology

Chapter 2 discussed the different terms associated with sustainability along with the different perceptions of the terminology found within the tourism literature. It was evident that people approached sustainability from different perspectives and often this is related to the interpretation of the concept of sustainability and sustainable tourism development terminology.

Stakeholders from both government and non-government organisations highlighted the terms sustainability and sustainable tourism development as important in the overall management of tourism development on the Swan River. When stakeholders were asked what the terms sustainability or sustainable tourism development meant to them, the majority of stakeholders displayed a degree of understanding of the actual terms, although very different perspectives were evident. Although the majority of stakeholders expressed their opinions on the term sustainable tourism development, there were respondents from both the tourism and community stakeholder groups who indicated that they had either never heard the term before, or had heard the term but had no idea about what it meant (Table 6.1). This finding appears to support Murphy's (1998) assertion discussed in Chapter 2 that there needs to be greater linkages between stakeholders to alleviate confusion surrounding sustainable tourism development.

The term sustainability, in fact, evoked emotive responses from some of the stakeholders, with a degree of scepticism about the use of the term apparent from the non-government and government stakeholders. Comments from government and non-government respondents included statements such as:

> 'Sustainable' is one of those words, you either hate it or you like it!...I mean I use the term sustainable and I don't feel too bad about it and I know some people just don't like using the term. They think it's just a crock basically.
> (GO4SCC)

> I think the word sustainability is the most abused work in the English language and people jump on sustainability to... sanitise or kind of give an environmental sustainability value to whatever they're putting forward. So I think it is a bit abused, more than a bit abused and it can be different things to different people. (GO5COP)

> It's been misused, it's a bit like the term ecotourism has been misused (NG4TCWA)

In addition to the apparent scepticism about how sustainability terminology was interpreted, varying perceptions existed associated with the terms amongst stakeholders. The following section presents the different stakeholder perceptions associated with the term sustainable tourism development beginning with ecological perceptions.

6.4.1   Ecological Perceptions

When defining sustainable tourism development, the most common perspective highlighted across all stakeholder groups was the ecological perspective. This correlates with stakeholder values which will be discussed in Chapter 7. Ecological values were one of the most commonly held values associated with the river, particularly for the government, non-government and community respondents (cf: Table 7.1).

To many tourism stakeholders, the term sustainable tourism development implied environmental impact awareness. Comments by stakeholders, particularly tourism stakeholders, indicated the importance of protecting the river in order for tourism to be viable with comments such as:

> Well it's a bit like cleaning up your backyard really, I used to be a farmer and I used to lease land and basically you'd look after everything around you, even if your next door neighbours didn't, because basically if everything was going alright then your business will go alright (TOBO)

> Sustainable tourism to me is whatever the product entails, that whatever the experience is... that whatever you do doesn't impact on that or if it does, it enhances it, but certainly doesn't detract, or in any way date, age or eventually make it extinct. (TOBO)

...it is allowing people to use an area without impacting on it detrimentally. (TOST)

One stakeholder, representing indigenous community interests, believed that sustainability was about protection of the environment of the river, and highlighted the importance of indigenous cultural aspects in terms of the environment when discussing sustainable tourism development stating that:

> Well, you know when you talk about indigenous tourism, probably the biggest factor is the environment, making sure that what we do, not only educates people about our cultural practices and heritage from the past but also, and I know when we are running tours, a major part of what we present to our public is environmentally, how did we maintain the areas and where we lived... (NG7WAITOC)

The common ecological perceptions of sustainability and sustainable tourism development amongst government and non-government respondents is consistent with those stakeholder concerns about tourism's impact on the river and their views that the river was in poor health as discussed in Section 6.3. The stances portrayed by some non-government respondents were focussed on resource preservation and could be regarded as a strong sustainability position in accordance with Hunter's (1997; 2002) spectrum on sustainability discussed in Chapter 2. The perceptions also appear to be more in keeping with the ecological sustainable development (ESD) perspective discussed in Chapter 2.

The next most common perspective which emerged when defining or discussing sustainable tourism development was an economic perspective. This perspective was particularly evident amongst tourism stakeholders as the following section discusses.

6.4.2 Economic Perceptions

Tourism stakeholders were the only group where the primary focus of sustainable tourism development was the economic perspective. Tourism stakeholders also portrayed the economic values as being significant, as Table 7.1 demonstrates in Chapter 7. The only government stakeholder to also take an economic perspective was the government tourism agency, Tourism Western Australia. Four of the tourism stakeholders who highlighted the economic perspective of sustainable tourism development also highlighted the ecological perspective connected to the term. One tourism operator related the term to the economic benefits gained from major events, claiming that:

> ...a lot of us guys are sort of lost with it, the way they speak. [about STD] You know, trying to bring so many millions of dollars here- but you take the America's Cup period, you take the Rugby Union that we had last year. We didn't see much if it. Rally Australia- one or two of us picked up the occasional group out of it but it's not millions of dollars that we are seeing. We are seeing probably a thousand dollars, but not millions of dollars….During the Rugby Union World Cup we would probably have seen five or six charters maximum, as a spin off from it. We don't get much from all this tourism. (TOBO)

Another tourism operator explained that sustainable tourism development was simply:

> Just trying to keep the tourists here really, try to keep the place interesting and keep the tourists, I mean you don't want people to come here once, you want them to come back (TOREST)

This statement takes a tourism-centric viewpoint and focuses on the ongoing viability of tourism, which is a view that Hunter (1995b) and Milne (1998) believed was evident in much of the tourism literature and was a cause for concern. Both of these authors believed a tourism-centric view would lead to unsustainable outcomes.

An anthropocentric focus was taken by another tourism stakeholder commenting that:

Sustainable tourism means the management of assets to get the most use out of those assets but at the same time protect them for the future and to provide a safe environmental practice that we can adhere to as a code (TOACC)

Stakeholders also mentioned that the economic viability of tourism businesses as part of STD was important, citing instances of where businesses had failed and questioned the carrying capacity of the river in terms of economic viability. These concerns are reflected in statements such as:

… a business has got to be able to make a profit which with government restrictions, government interference, makes it very difficult. Our biggest tourist operator, boat tour operator XXX cruises, an absolute professional, went bankrupt. And I put a lot of that to government interference. (TOBO)

I went to a workshop of the Tourism Commission *(Tourism Western Australia)* a couple of years back and one of the things that concerned me was their statement that any major tourism development, that the third owner makes money, the first two will go broke. And you think if that's the case, why we are even designing these things. I mean, by the third time it's owned by the overseas people, we've sold it out, the first couple of people that have had the idea it wasn't viable and it wasn't sustainable in the first place (NG2CCWA)

A government stakeholder acknowledged that the economic aspects of sustainable tourism management are the key to small businesses in the whole sustainability debate explaining that:

..when you've got a small business operator whose role is to basically feed their family, the role is to get the money in the door, make sure that business is viable and the family and to send their kids to school and all the rest of it, I think the environment is right down the list. (GO4SCC)

The points of view expressed by the tourism respondents correlate with the views of Mowforth and Munt (1998) and Williams (2001) which were highlighted in Chapter 2. Both these authors assert that sustainability was context driven and Williams (2001) in particular, argues that anthropocentric perceptions of the term were focussed

upon due to the inherent ambiguities in the term. The anthropocentric stance taken by some of the tourism stakeholders would, according to Williams (2001), reflect the assumption that the natural world exists primarily to meet human needs. The anthropocentric views, also would be regarded as being a very weak sustainability position, as described by Hunter (1997) in Chapter 2.

While the stakeholders in the above section centred predominantly on the economic aspects of STD, there were those who were broader in their perceptions.

6.4.3 Triple Bottom Line (TBL)

The term 'triple bottom line', evolved from three principal goals associated with sustainability, namely environmental stewardship, social responsibility and economic prosperity (Caswell, 2001; Placet et al., 2005). Social responsibility also incorporates a cultural dimension, which needs to be recognised in the term. Although it has been well recognised that TBL goals should be embraced simultaneously, the reality is that this is often not achieved (Placet et al., 2005).

For the purposes of this research, the TBL was regarded as a separate perception when respondents specifically used the term or mentioned each aspect in connection with each other aspect when explaining the term sustainability or sustainable tourism development. A number of respondents from organisations with an environmental emphasis believed that STD incorporated the three important elements of sustainability, as reflected in the following comments:

> When I hear the term, what it would mean to me would be tourism development that needs to consider, needs to be developed in the context of the sustainability agenda in general, so tries to take into account sustainability principles recognising that there are economic, social and environmental objectives for our society. (NG3WWF)

> ...it is environmentally, socially and economically sustainable, that's the triple bottom line I suppose (NG5FACET)

> Well I suppose the idea of sustainability is that you try and minimise the negative impacts on the environment and the community…what's the other

one?…the economic ...so tourism can be done in a way that protects the environment or enhances the environment even… (CO2CG)

...when we talk about sustainability…delivering economic benefit obviously, meeting the social needs of the community, or not interfering with them and operating in a way that doesn't degrade the environmental resources on which it is dependent (GO10SRT)

The TBL responses appear to be in line with Murphy's (1998) definition of sustainable tourism development which emphasised social, ecological and economic elements of sustainability. It may be questionable whether respondents incorporated a cultural dimension into their understanding of the triple bottom line, which Murphy (1998) also highlighted. Findings surrounding social values associated with the river, which will be discussed in Chapter 7, emphasised the river as a social setting or meeting place for community members, rather than having connotations of culture.

In addition to the triple bottom line perceptions, three stakeholders highlighted intergenerational and social equity perceptions. The three stakeholders pointed to the need to ensure that the environment is protected for future generations and emphasised that all groups within society should be considered in planning decisions. A government stakeholder from the Department of Indigenous Affairs commented that:

My view of the term sustainable is that it's there tomorrow and the day after and whenever… so it's a bit like I was talking to you about rock art middens and things where you know if you don't manage the tourism then...it will degrade. (GO9DIA)

Although both intergenerational and social equity are regarded as key principles of sustainability, few respondents discussed these elements. In fact social and cultural elements of sustainability were not highlighted by respondents in general. This appears to be in keeping with the views of several authors highlighted in Chapter 2 that social and cultural issues are often missing from the sustainability debate (Craik, 1995; Jackson & Morpeth, 2000; Twining-Ward, 1999). However, further questioning of respondents would be required to substantiate whether there is a general lack of understanding of these principles.

The findings in this research demonstrate that different stakeholder perceptions exist amongst respondents. Understanding that underlying perceptions exist, will assist in acknowledging that different stakeholder needs and agendas will be brought to the table when discussing sustainable tourism development outcomes. Understanding that these underlying perceptions of sustainability and sustainable tourism development will influence how stakeholders perceive the river to be managed is necessary for managers of the river to implement effective planning and governance processes.

Stakeholders identified a number of issues surrounding sustainable tourism development, including those of best practice and regulation and guidelines for operators using the Swan River. These underlying issues will also influence stakeholders' perceptions of how the river should be managed. Although tourism guidelines or codes of conduct have not been established by government agencies for tourism operators using the Swan River, a number of operators discussed best practices that they were using, which were considered to assist in their operations being sustainable.

6.5   Issues Surrounding Sustainable Tourism Development

6.5.1   Best Practice

Operationalising the concept of sustainable tourism development is often viewed in terms of 'best practice' codes of conduct and guidelines for tourism operators. Pigram (1997, p. 118) defines best practice simply as 'the best way of doing things relative to levels of performance in comparable firms and operations.' The term is used to represent strategies and techniques that are presently accepted by relevant authorities as the 'best' way of achieving sustainable development (Pigram, 1997; Tourism Council of Australia & CRC Tourism, 1998, 1999). Although there are no codes of conduct, guidelines or specific regulations for tourism operations on the Swan River, the issue of regulations and guidelines emerged during the interviews with stakeholders. The charter boats are licensed by the Department of Planning and Infrastructure, which also conduct annual surveys to assess the safety aspects of vessels. This same department manages legislative guidelines for all vessels, including private vessels not involved in tourism. The legislative guidelines relate to release of pollutants into the river and safety issues. There are a number of issues surrounding these particular guidelines which will be discussed in Chapter 8. A scenic tour operator, who conducted helicopter flights, also abided by safety guidelines and these came under the jurisdiction of the Civil Aviation Safety Authority.

Apart from the charter boat operators, as previously stated, the tourism stakeholders were not expected to abide by any particular codes of conduct or best practice guidelines set by management agencies specific to their activities. A small number of tourist operators, however, indicated that they applied best practice techniques in their business, such as recycling of waste products, water efficiency programs and were attempting to reduce chemical use. One accommodation operator acknowledged the potential impact of chemical use on the river, commenting that:

> We always try to...get environmental sensitive chemicals, if you can use environmental sensitive chemicals, but they are reputed to be less harmful to the environment than what was perhaps being used in the early days. We don't use bleaches any longer or caustic chemicals....which have a tendency, no matter what your programmes are, to leach into the sub terrain area and of course our location here could easily get into the river. (TOACC)

Best practice as an issue that is viewed as a barrier to sustainable tourism development is discussed further in Section 6.6.1. In addition to the concept of best practice, stakeholders were asked about the need for regulation of tourism activities on the river.

6.5.2   *Regulations and Guidelines*

Diverse opinions were expressed by stakeholders as to the merits of regulation or guidelines for tourism development or operators on the river. Regulation, according to Elliot (1997, p. 213), is used as a management device to control particular activities such as tourism. The purpose of guidelines is to provide the rules which enact the regulations. All charter boat operators viewed the vessel licensing process implemented by legislative authorities as a necessary mechanism. There were stakeholders across the range of groups who had a positive view on the need for some form of regulation (Table 6.1) and codes of conduct for all tourism operators utilising the river. Government and non-government stakeholders were particularly in favour of regulations, claiming that:

> … experience probably does show that it [Swan River] does need to be regulated. From a nature conservation perspective it's because that…particularly from a faunal point of view. You can have impacts on animal behaviour if an operator isn't operating within terms of particular guidelines that have been set down. So there needs to be particular guidelines in terms of setting out what requirements are because a lot of the time that will be based on scientific research and data about animal behaviour that you wouldn't expect a tourist operator to be aware of or.. necessarily understand, so you actually need to set up what those rules are.. I think it is just unfortunate how humanity is that you, most of the time, need to check on people. (GO7CALM)

> …we've got too many cowboys out there now, who are…call themselves ecotourists who are doing all sorts of anti- eco stuff... (NG5FACET)

> I know a few of the operators and they are slap happy and very dangerous in a lot of the things they do. It's not just for the river, I mean the boats can damage the river a lot with what they carry, but it's the people on the boats as well. I mean they…it's alright chasing money but you have to go about it the right way…so I like rules and regulations, some could be harder but they don't have the people to enforce them enough. (GO6TPF)

One government stakeholder related the need for regulation in terms of meeting tourist needs through provision of experiences commenting that:

> …regulation is extremely important, if you are talking regulating to ensure that the experiences you are trying to manage will not be endangered by some further subsequent development. So that's absolutely critical…You need to manage tourism, undoubtedly, and regulate tourism to ensure that it doesn't just mean, that more tourism is necessarily better because that can endanger the very resource. Yes, I do strongly support the view that tourism needs to be regulated to ensure that the management objectives for the resources that you've identified are important for that tourism….then you must manage your tourism accordingly so that you maximise the value and enjoyment for the market that you're basically aiming it at... (GO5COP)

Guidelines were viewed by some stakeholders as necessary for a range of reasons including: protection of the visual amenity of the river; retention of the environmental values of the river; and in terms of the types of developments that should be allowed along the foreshore. Protection of the visual heritage values of natural areas was also deemed an important role of regulations and guidelines for tourism activities.

6.5.3   *Self-regulation*

Individual stakeholders across all groups believed that regulation was unnecessary on the Swan River, in contrast to those who advocated regulation. A number of stakeholders indicated that self-regulation was an adequate strategy to ensure sustainable tourism development believing it is up to individuals to be responsible. One charter boat operator related self-regulation in terms of market forces, arguing that 'best practices are created by businesses. If my business was not good enough I would fail, I've been here now 20 years and I operated to attract people.'(TOBO) Other charter boat operators had similar perceptions, arguing that:

> I think with the captains and proprietors of vessels on the river it's in their interests, they don't want to break any rules. One, it's a fine for them, one it's bad for business and you don't want any mishaps like someone falling overboard, like accidentally putting diesel in the water, waste thrown in, you just don't want that..(TOBO)

> There is no operator there that would like to do something bad to the river. I mean sure there was one operator there who put diesel into the river and that was a person who wasn't following procedures and was completely stupid. I mean

you will get some person who works for you that will do something wrong. I mean, it happens to every industry. (TOBO)

There was also a perception amongst some tourism stakeholders that adequate government regulations existed for the river to ensure that operators conducted activities appropriately, although operators did believe that it was necessary to have a "watchdog" to monitor the operators. One of the restaurant operators conveyed the view that:

> … if you get caught putting any sort of effluent into the river, I believe it's a $250 000 fine so when these buildings were built, they had to comply with fairly rigid guideline. I think in that way there is already enough in place (TOREST)

Another charter boat operator agreed saying:

> Well I think there are already regulations there. We can't put sullage in the water, we can't do that and I am not quite sure, but I think the Swan River Trust can put stuff in the water to test. You would get caught out pretty quickly if you did it. They can test oils and water from your boat, so basically you just don't do it. (TOBO)

The community stakeholder involved with catchment groups suggested that a cooperative approach was required to ensure operators met standards to ensure environmental protection, explaining that:

> …the Swan River Trust have been working with the yacht clubs around the river to try and improve their practices in terms of ... refuelling boats,...anti fouling boats and ...in a way, the regulations weren't working because people...just ignored them but by developing a cooperative approach it seemed to me that they were getting a lot further, and in fact the yacht clubs were almost starting to vie with each other to be better (CO2CG)

A number of stakeholders opposed the idea of self-regulation arguing that the idea was good in theory, but practically, they were not convinced that it was an effective tool in the sustainable management of the river. The stakeholders opposing self regulations believed that there needed to be minimum standards set by government on what people could or could not do on the river or its foreshore. For instance, a government stakeholder involved with community environmental programmes connected to the Swan River Catchment, felt that:

Self-regulation is one of those interesting things, I don't know whether people are educated well enough to know what is right and wrong. I mean it's a simple thing. When I was a kid, …recycling wasn't a big issue back then and you know my parents used to just dig a hole in the back yard and bury the oil when they changed the oil in the car…you know awful things, and we just didn't know and ignorance is one of those things until you are educated on something you don't know…. And codes of practices and things like that aren't enforceable so if they do contravene then there isn't a lot you can do and if the community got wind of that, there is a bit of a risk I suppose… (GO4SCC)

Although this research did not concentrate on regulation and self-regulation as strategies to operationalise sustainability, issues surrounding these strategies that emerged throughout this research highlighted the different perspectives across the stakeholder groups. Managers of natural resources such as the Swan River, need to understand and consider these different stakeholder perspectives. Further research is required to identify the importance of issues surrounding merits of regulation over self-regulation. Research on regulation versus self-regulation within tourism is limited, although Forsyth's (1997, p. 277) research into self-regulation in Britain, found that tour operators considered voluntary environmental responsibility ineffective and believed that regulation was necessary in order to prevent environmental degradation and abuse of the market 'free-riding' companies which acted irresponsibly in environmental or financial terms. Forsyth (1995, p. 212) had previously suggested that many companies feared that regulation for the sake of environmental or social protection would interfere with business performance and thereby threaten profitability. The tourism operators in this study who questioned the need for regulation appeared to have similar concerns.

Stakeholders not only identified issues surrounding regulation of the tourism activities, but also identified underlying issues that may be deemed as barriers or threats to sustainable tourism development. These issues may also serve as strange attractors which can influence the system and keep it at the edge of chaos where self-organisation and emergence occurs. These issues are presented in the next section.

6.6 Barriers to Sustainable Tourism Development

A number of issues, either business and/or river related, were identified by stakeholders which have the potential to act as barriers to sustainable tourism development on the Swan River. These barriers are summarised into broad interrelated themes in Figure 6.3. It is important to note that these themes should not be viewed in isolation. For instance, the river issues have implications for governance of the river which in turn will impact on the tourism and stakeholder issues. Governance, in fact, emerged as a significant theme across all stakeholder groups, particularly for the tourism stakeholders. Many of the potential barriers to sustainable tourism development also surround planning and policy issues, which were identified in the case study. Findings related to both policy and planning and governance issues will be presented in Chapters 8 and 9 respectively, and will not be presented in this chapter.
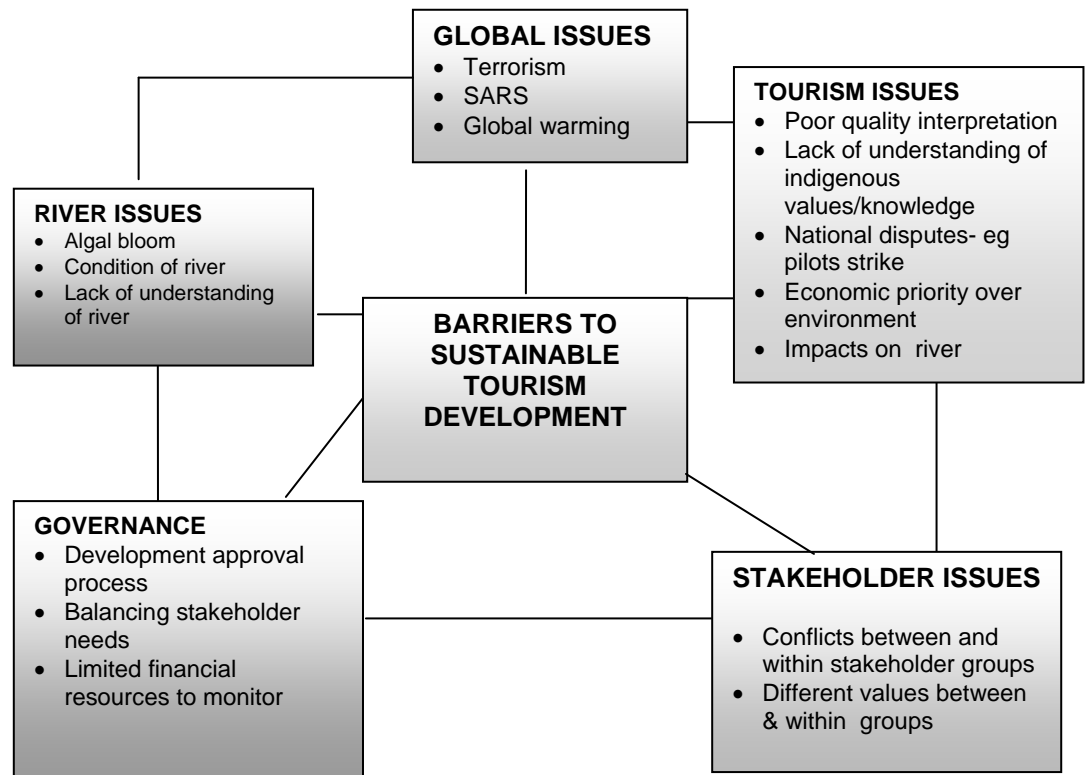
Figure 6.3   Perceived barriers to sustainability

The majority of stakeholders concentrated on issues that were either impacting on individual business operations, or on the river at a local level. However, some tourism stakeholders also spoke of global issues such as terrorism and the SARS crisis impacting on their tourism operations. One charter boat operator stated that global warming was a concern:

> …there is talk of the height of the river increasing, given global warming and that means access for boats under bridges becoming more and more of problem and we have experience of that over the last 12 to 18 months. (TOBO)

Tourism stakeholders also highlighted the impacts of national issues such as the pilots' dispute that occurred in Australia in the early 1990s and the collapse of the national airline carrier Ansett Airlines. At a local level, a number of stakeholders raised issues surrounding impacts to the river such as algal blooms discussed previously in Section 6.3. The most commonly raised issue by stakeholders was a perceived lack of vision for the river, which has the potential to impact on sustainable tourism development. This perception was highlighted across all stakeholder groups and findings surrounding this issue are presented in Chapter 8. Issues surrounding practices

used by tourism operators and conflict between and amongst stakeholders were also perceived to influence sustainable tourism development outcomes.

6.6.1   Best Practice

Stakeholders across all groups indicated instances where tourism operators were not using best practice. Although regulations for charter boat operators were supposed to be in place to prevent pollution and bank erosion, stakeholders in this study claimed that bilge water and sullage was being 'dumped' or spilled into the river and erosion of the river banks from boat wash was occurring as a result of tourism activities. The concerns with the bilge water and sullage was not evident amongst government and non-government stakeholders, as most believed that measures were in place to prevent such practices. Non-government stakeholders in particular highlighted other concerns stating:

> Wash. Wash is a big problem. It's created by the recreational boat owner, it's created by the commercial boat owner. We try to put the message through, keep your wash to a minimum…some of them don't seem to want to play the game.. (NG1CBA)

> There's not a great attempt to even understand the viability of the river. I mean for instance the café down at the kiosk at XXX, the proprietor and its staff love it when the dolphins are there it's great, it brings more people, but at the same time they're using all sorts of plastic, throw away containers, that wash into the river… (NG2CCWA)

> … they're [tourism operators] also a threat to the long term sustainable management of the rivers and estuaries. So I think that needs to be managed in some way. (NG3WWF)

The lack of best practice measures and lack of awareness of appropriate practices were deemed to hinder sustainable tourism development of the river.

6.6.2 Conflicts

Conflicts within and between stakeholder groups as highlighted by a number of stakeholders have the potential to be a barrier to sustainable tourism development. For instance, one local government stakeholder pointed out that an attempt to revegetate the river foreshore area with native Western Australian species had failed because significant persons within council 'hated' native plants. Instead, non native species such as petunias and pansies were planted. The government stakeholder indicated that native plant landscaping would benefit tourism by drawing upon the popularity of West Australian native plants which draw significant numbers of tourists to the state each year. As will be discussed in Chapter 7, the natural landscape values of the river were deemed to be important for most stakeholders and the assumption made by the local government stakeholder appear to be in keeping with those views. The respondent representing the indigenous stakeholders also indicated that native plants should be planted along the foreshore, not so much for a tourism perspective, but for the river's benefits saying:

> …as much as possible with natural edging because all those things, the sedges and reeds are also natural filters they help filter out the effluent coming through it and also the bulrushes and anything else that you can put in there… (NG7WAITOC)

Conflicting viewpoints exist not only between stakeholders but within stakeholder groups, adding to the complexity of understanding stakeholder perspectives.

Other illustrations of conflict within stakeholder groups were highlighted by a number of tourism stakeholders who indicated that there were continuing conflicts between the tour charter boat operators, which may be a potential barrier to sustainable tourism development along the river. Issues surrounding equity amongst operators was raised by one operator who believed that discrepancies existed between how operators were treated by representative organisations. One charter boat operator, who spoke with conviction, explained that:

> I was a member of the charter boat association, I resigned from it. I resigned from it because I didn't like the way it appeared...that it was a self interested group that were managing it…I was in it for more that eight years….never ever have I received a charter out of the charter boat association, yet I see members of

committee who get lots of charters and I assume, because they don't have the marketing, that I do, assume that they are getting those charters by virtue of them being on the committee. And I made some suggestions, which were not acted upon, therefore I'm paying money into a group to finance other people against me in opposition to me. (TOBO)

The president of the Charter Boat Association acknowledged that there were conflicts between operators, which were exacerbated by the lack of infrastructure in place at Barrack Square. This stakeholder also highlighted the conflicts that were occurring between the charter boats and private recreational vessels, explaining that:

> ...there is an awful lot of conflict there when the number of charter boats…the recreational boats that are owned by companies who are picking up their guests and there are times when you can go into Barrack St Jetty and you can have anywhere up to eighteen vessels wanting work, and there's only enough berthage for four vessels. (NG1CBA)

These conflicts, whether perceived or otherwise, may lead to unsustainable practices being undertaken by operators in order to be competitive in the market place. In fact it has been suggested that there is a linkage between best practice implementation, the concept of sustainability and lifecycle models (Burton, 1997; Slee et al., 1997). For instance, in a study of ecotourism operators, Burton (1997) found that the majority of tourism operators offering the most sustainable type of ecotourism were finding it difficult to return a profit whilst adhering to sustainable best practices. As competition increases and markets change over the life of an operator's business, operators facing economic problems may decide to cut corners or undertake practices which do not abide by principles of sustainability, in order to survive economically. (Burton, 1997; Slee et al., 1997)

Economic sustainability was a very real threat to one of the smaller charter boat operators, who was under increasing pressure from larger charter boat operators. The charter boat operator indicated that he was attempting to cut business costs and was already price cutting in order to retain market share. Prior to the interviews being conducted another charter boat operation had folded and was taken over by a larger company and a number of the larger charter boat operators implied that other smaller operators were struggling financially. During the research period, one charter boat

operator who declined to be involved in the research experienced staffing problems. Staff in fact, went out on strike, claiming they were asked to work unreasonable hours, which they believed were putting the safety of passengers at risk. This same operator had been identified by a number of tourism stakeholders as struggling financially. Other operators who are trying to survive as competition increases on the Swan River may attempt to cut costs and undertake unsustainable practices. Some practices may be undertaken, which could be viewed as a threat to sustainable tourism development.

Conflicts between and amongst different stakeholder groups are explored further in Chapters 8 and 9. The next section presents the findings of the tourist stakeholders that relate to perceptions of sustainable tourism development.

6.7   Tourist Perceptions of Sustainable Tourism Development

For the purpose of this research, tourists were regarded as a separate stakeholder group and were involved in a survey which consisted of a questionnaire. (Appendix 4) Within the questionnaire, six Likert Scale attitude statements, as shown in Table 6.2, were utilised to determine the level of importance placed on sustainability issues associated with the river by tourists. Respondents were asked to rate the attitude statements regarding the river using a scale from 1-5 where 1=strongly agree and 5 = strongly disagree. The following section presents the findings related to tourists' perceptions of sustainability issues and the overall findings for each of the statements is presented in Table 6.3 and Figure 6.4.

Table 6.2 *Likert Scale Sustainability Statements*

Likert Scale Sustainability Statements
1. The environmental condition of the Swan River is important to tourism
2. Greater tourism development is needed along the river
3. Tourism operators should recycle
4. Tourism operators should employ locally
5. Tourism operators should contribute a fee to assist management of the river
6. Tourism operators have a responsibility to look after the river

For the majority of tourist stakeholders surveyed, this was the first visit to Perth and to the Swan River (Appendix 8). The first statement asked tourists whether the environmental condition of the river was important to tourism. As can be viewed in Table 6.3 and Figure 6.4 below, 87.7% of respondents either strongly agreed or agreed that the condition of the river was important to tourism while the majority of respondents (59.8%) indicated they strongly agreed with the statement.

This finding appears to correlate with the findings in the following chapter that 78.9 % of tourist stakeholders indicated that the environmental condition of the river was important to their visit. The findings also correlate with the findings that 91% of tourists surveyed strongly agreed or agreed that the natural values of the river were important. Section 6.4.1 pointed to the government and non-government stakeholder's ecological perceptions of sustainability. Although the attitudes of tourists appear to be similar, further research is required to correlate these perceptions.

Table 6.3   *Tourists' Attitude to Sustainability Criteria*

Respondents N=125	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
	%	%	%	%	%	%
Condition of river	59.8%	27.9%	6.6%	3.3%	2.5%	100.0%
Increased development	18.2%	31.4%	32.2%	10.7%	7.4%	100.0%
Recycle	49.2%	36.3%	9.7%	4.0%	.8%	100.0%
Employ locally	35.8%	37.4%	18.7%	4.1%	4.1%	100.0%
Management fee	33.1%	36.4%	20.3%	6.8%	3.4%	100.0%
Responsible operators	49.2%	35.5%	9.7%	3.2%	2.4%	100.0%
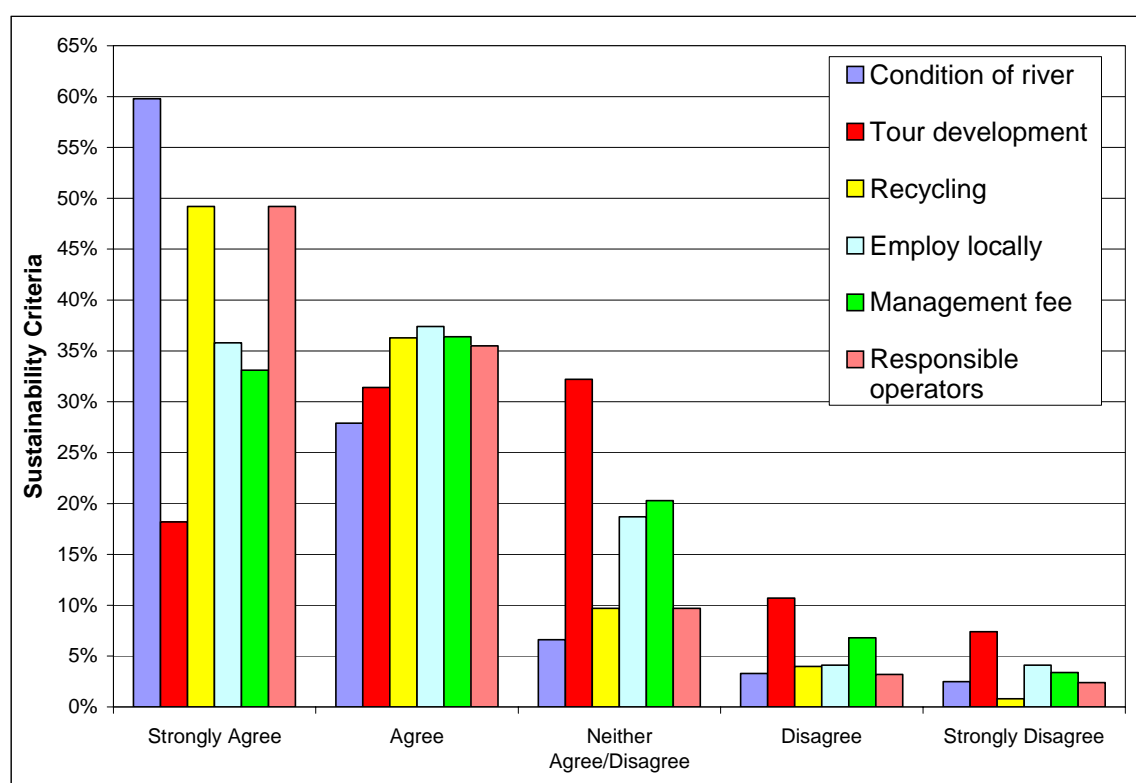
Figure 6.4   Tourists' attitude to sustainability criteria

Although overall findings appear to be conclusive, it is useful to determine whether different viewpoints exist between different age groups within this stakeholder group. Table 6.4 and Figure 6.5 display the findings from the tourist's response to statement one regarding the importance of the condition of the river. The condition of the river was particularly important for the 50-59 age group where 100% of respondents indicated that they strongly agreed or agreed to the statement. It was also evident that for the remaining age groups, the river's condition was regarded as important for tourism, with 80% + of respondents strongly agreeing or agreeing with the statement.

Interestingly, in the 18-29 and the 60 and over age groups, 8.6% and 9.6% of respondents respectively, indicated that they either disagreed or strongly disagreed with the statement that the river's condition was important to tourism. Further in-depth questioning of these respondents would be required to ascertain why this would be the case. This finding appears to be in common with those tourism stakeholders involved in the in-depth interviews who indicated that the condition of the river did not impact on their business. In Section 6.3, for instance, tourism stakeholders had indicated that the impact of the algal bloom on their business was negligible, with one operator stating that they were unaware of the algal bloom even occurring. The belief by some stakeholders that the condition of the river is not important to tourism may have implications for management of the river.

Table 6.4   Tourists' Attitude to Importance of River's Condition

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
18-29	Condition of river	57.4	25.5	8.5	4.3	4.3	100
30-39	Condition of river	50.0	38.9	5.6	5.6		100
40-49	Condition of river	56.3	31.3	12.5			100
50-59	Condition of river	70.0	30.0				100
60 and over	Condition of river	66.7	19.0	4.8	4.8	4.8	100
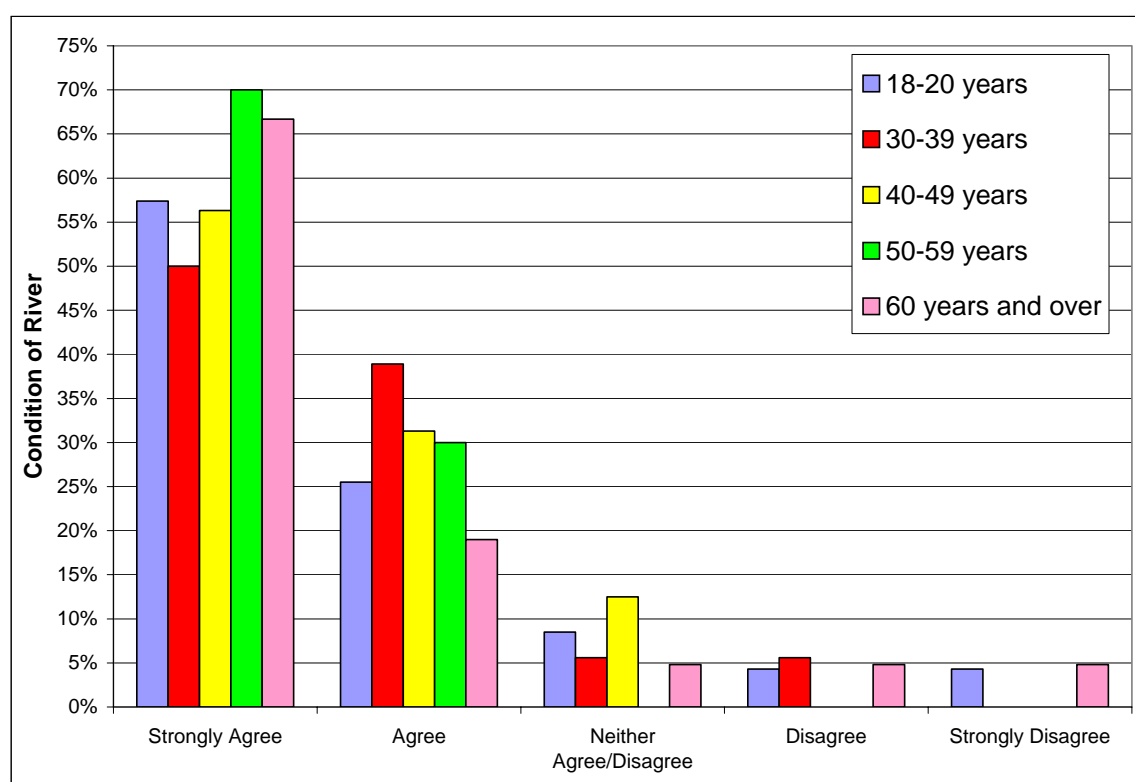
Figure 6.5   Tourists' attitude to importance of river's condition

In conjunction with the high response rate indicating that the condition of the river was important to tourism, along with the findings that natural values of the river were important (cf: Chapter 7), less than 50% of tourist respondents also believed that there was a need for greater tourism development along the river (cf: Table 6.3). Perhaps surprisingly, the 50-59 age group had the strongest agreement response to statement two with 76% either strongly agreeing or agreeing, despite their high level of agreement that the river's condition was important to tourism (Table 6.5 and Figure 6.6). The 60 and over age group had the lowest response rate level, with 35% either strongly agreeing or agreeing while 20% strongly disagreed with the statement. There was not a strong positive response rate from the remaining age groups and in fact, it appeared that these groups were ambivalent as to their attitudes towards increased development, with almost a third of each age group neither agreeing nor disagreeing with the statement. This ambivalence may be a reflection of the attitude statement which did not specify types of developments.

Table 6.5   *Tourists' Attitude to Increased Development*

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
18-29	Increased development	10.4	31.3	37.5	12.5	8.3	100
30-39	Increased development	10.5	42.1	26.3	15.8	5.3	100
40-49	Increased development	31.3	25.0	37.5	6.3		100
50-59	Increased development	38.9	38.9	16.7	5.6		100
60 and over	Increased development	15.0	20.0	35.0	10.0	20.0	100
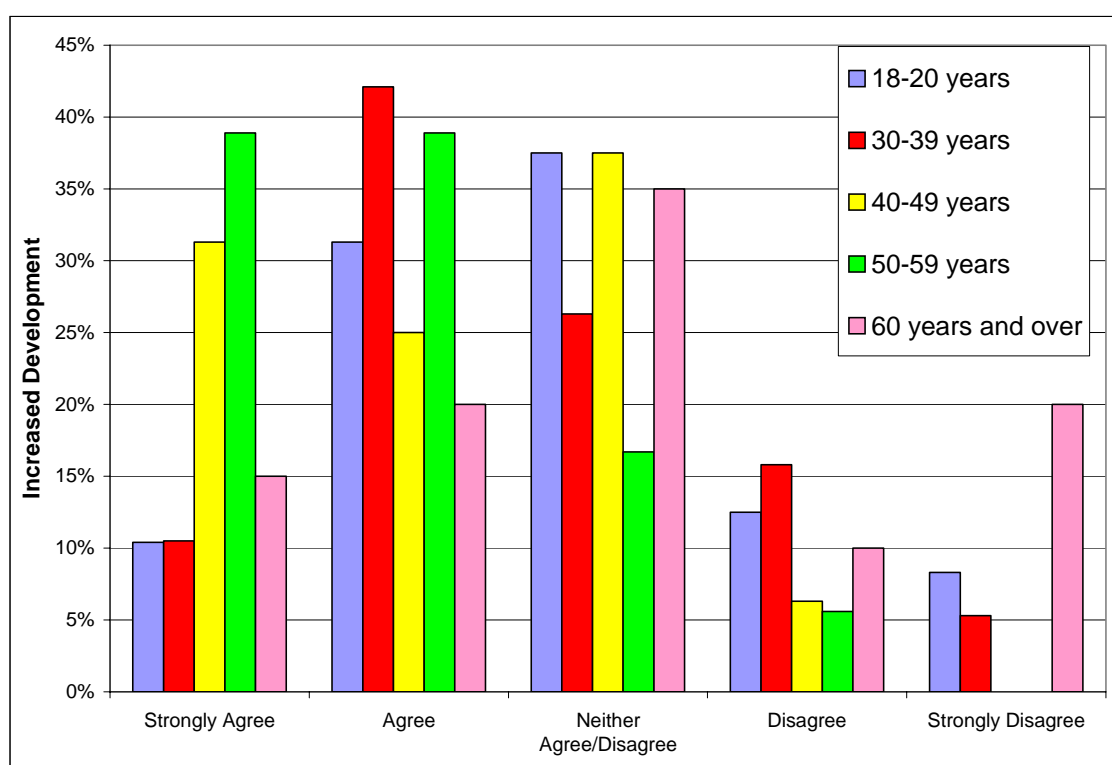
Figure 6.6   Tourists' attitude to increased development

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Further in-depth questioning would be required to determine the type and level of development that tourists would have agreed to or envisioned for the river to ascertain whether their views were similar to other stakeholder groups. Plog's (1974) lifecycle model, suggests that as destinations evolve, the type of tourists attracted to these destinations changes to those who have different needs and expectations in relation to levels of tourism development. This view is supported by a study of ecotourists conducted by Lew (1998), who found that as more mainstream tourists moved into the ecotourism market, the new clientele were less concerned with over-development and the loss of pristine environments and traditional cultures, which may lead to operators using less sustainable practices. Whilst the Swan River would not be regarded as an ecotourism destination, as a natural urban resource, it is regarded as an important attraction for Perth by tourists and the stakeholder groups involved in this case study. The attitudes towards increased development may indicate lifecycle stages of development and growth of the Swan River in relation to tourism. Understanding stages of development, by identifying the markets may enable proactive intervention measures to be adopted to ensure that sustainable tourism development does occur on the river.

The remaining attitude statements were associated with best practices often associated with sustainable tourism development, such as recycling, employing at a local level, tourism operators contributing to management of a resource and being responsible operators (Ecotourism Australia, 2005; Manning, 1999; World Tourism Organization, 1996). Overall, 85% of tourists had a positive attitude towards operators recycling (Table 6.3) which was consistent across all age groups as shown in Table 6.6 and Figure 6.7.

Table 6.6   *Tourists' Attitude to Recycling*

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
18-29	recycle	40.8	40.8	12.2	6.1		100
30-39	recycle	63.2	21.1	10.5	5.3		100
40-49	recycle	31.3	62.5	6.3			100
50-59	recycle	55.0	35.0	10.0			100
60 and over	recycle	65.0	20.0	5.0	5.0	5.0	100
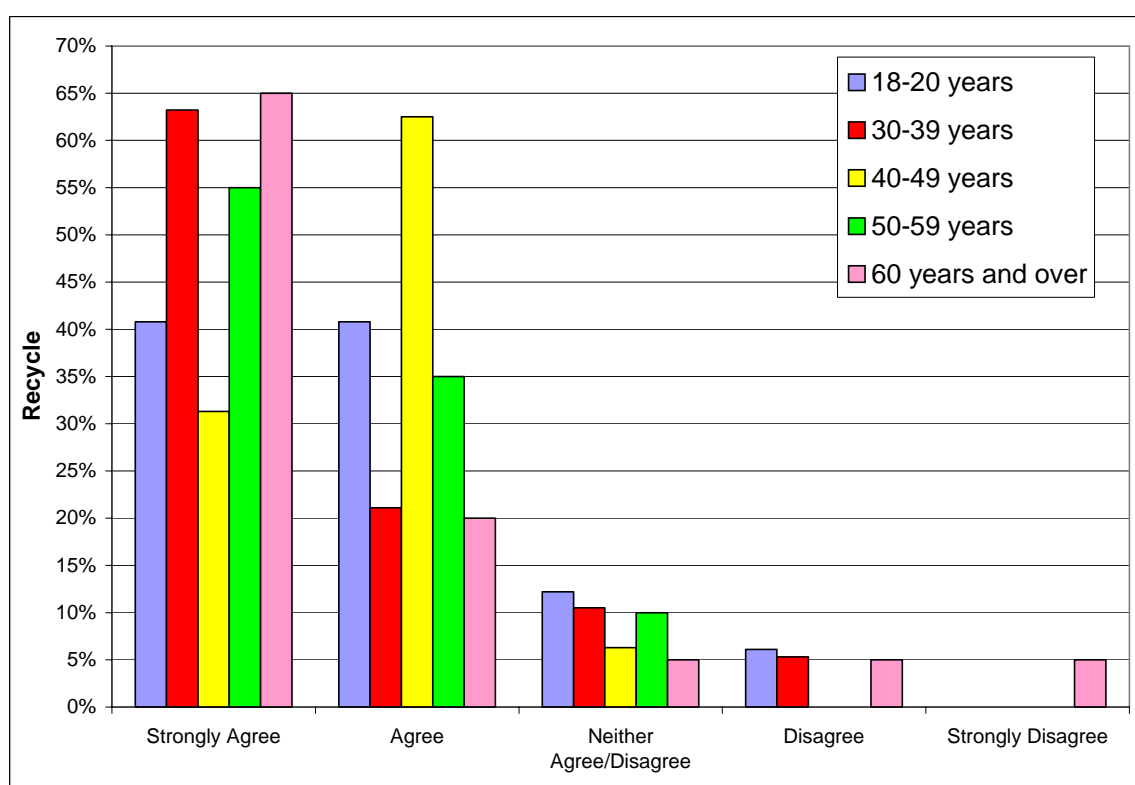
Figure 6.7   Tourists' attitude to recycling

The statement concerning employment did not have the same consistency of agreement from each age group as recycling. While overall 73% of tourists were positive towards the statement that operators should employ locally, (Table 6.3) only 53% of 18–29 year olds strongly agreed or agreed. (Table 6.7 & Figure 6.8) A relatively high level of uncertainty is reflected in the 31.8% of 18-29 age group who neither agreed nor disagreed with the statement and 8.3% strongly disagreed. Many of the respondents in this particular age group were either international students or backpackers. Obtaining local employment whilst travelling or being a student is considered an important consideration for these two groups of people and therefore may have influenced their attitudes to this statement.

Table 6.7   *Tourists' Attitude to Local Level Employment*

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
		%	%	%	%	%
18-29	employ locally	14.6	39.6	31.3	6.3	8.3
30-39	employ locally	26.3	57.9	10.5	5.3	
40-49	employ locally	37.5	50.0	12.5		
50-59	employ locally	60.0	30.0	10.0		
60 and over	employ locally	70.0	10.0	10.0	5.0	5.0
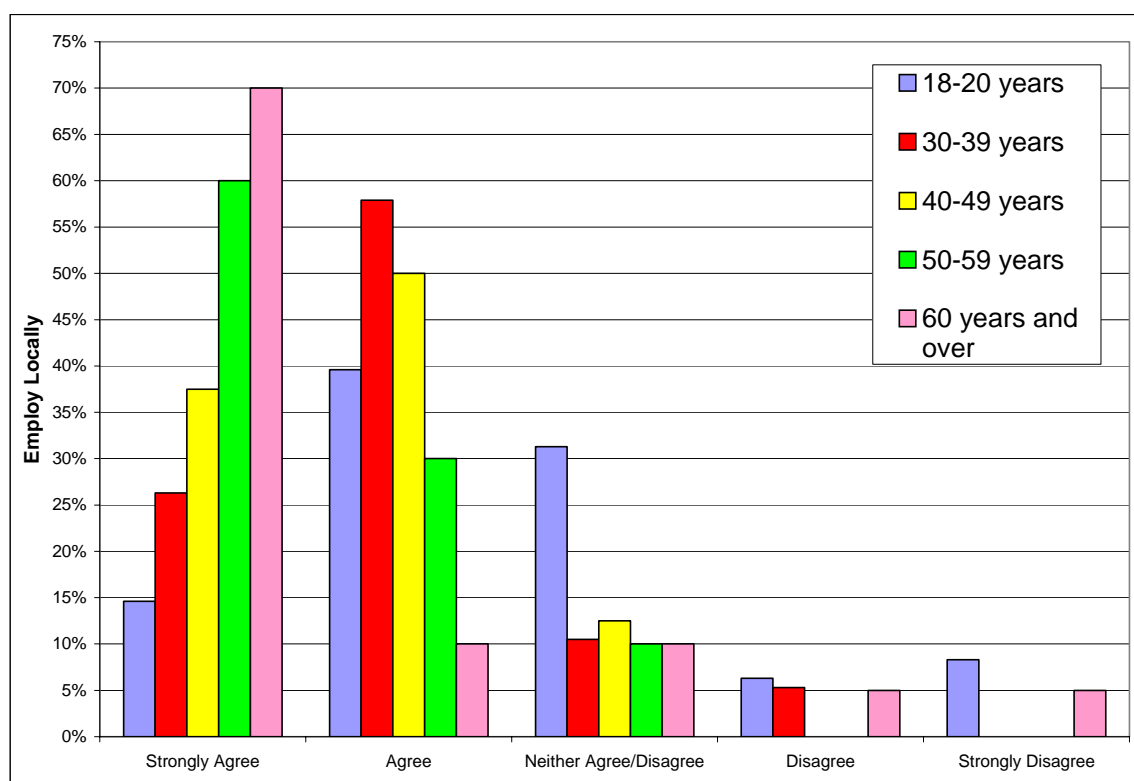
Figure 6.8   Tourists' attitude to local level employment

Tourists generally indicated a positive attitude to the statement concerning operators contributing to the management of the river, with 69.5% either strongly agreeing or agreeing to the statement (cf: Table 6.3 Sustainability Criteria). However, 20% of tourists were uncertain, indicating a neither agree nor disagree response. Perhaps some clarification to the statement may have been required. Again, the 18-29 age group had the lowest response rate, with 59% either strongly agreeing or agreeing and also had the highest level of uncertainty with 27.3% neither disagreeing or agreeing with the statement (Table 6.8 and Figure 6.9).

Table 6.8   *Tourists' Attitude to Businesses Contributing to Management of Swan River*

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
18-29	management fee	25.0	34.1	27.3	11.4	2.3	100
30-39	management fee	52.6	26.3	15.8	5.3		100
40-49	management fee	25.0	50.0	25.0			100
50-59	management fee	57.9	21.1	10.5	5.3	5.3	100
60 and over	management fee	15.0	55.0	15.0	5.0	10.0	100
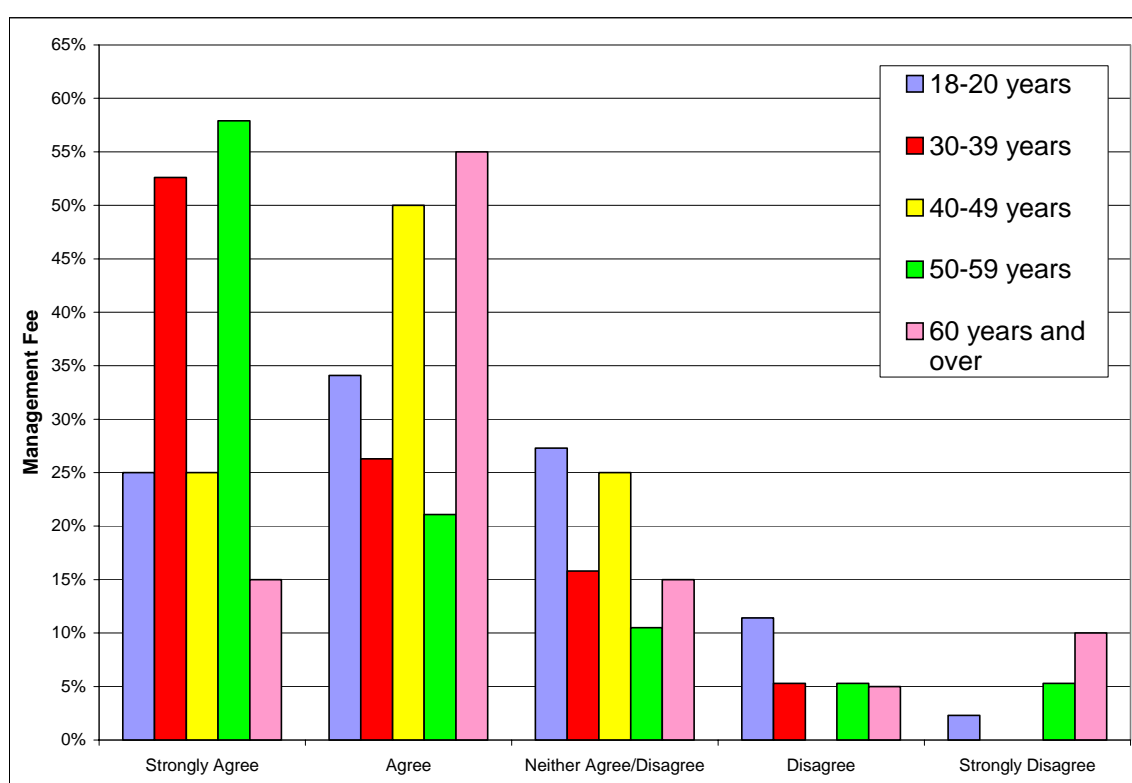
Figure 6.9   Tourists' attitude to businesses contributing to management of Swan River

The attitude response rate to the statement regarding operators having a responsibility for the river was high with 84.7% of respondents strongly agreeing or agreeing with the statement. The 40-49 and the 60 and over age group were particularly strong in their attitudes, with 100% and 90% respectively indicating that they either strongly agreed or agreed with the statement.

Table 6.9   *Tourists' Attitude Towards Responsibility of Operators*

Respondents N=125		Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
18-29	responsible operators	41.7	33.3	18.8	4.2	2.1	100
30-39	responsible operators	63.2	26.3	10.5			100
40-49	responsible operators	25.0	75.0				100
50-59	responsible operators	60.0	25.0	5.0	5.0	5.0	100
60 and over	responsible operators	61.9	28.6		4.8	4.8	100
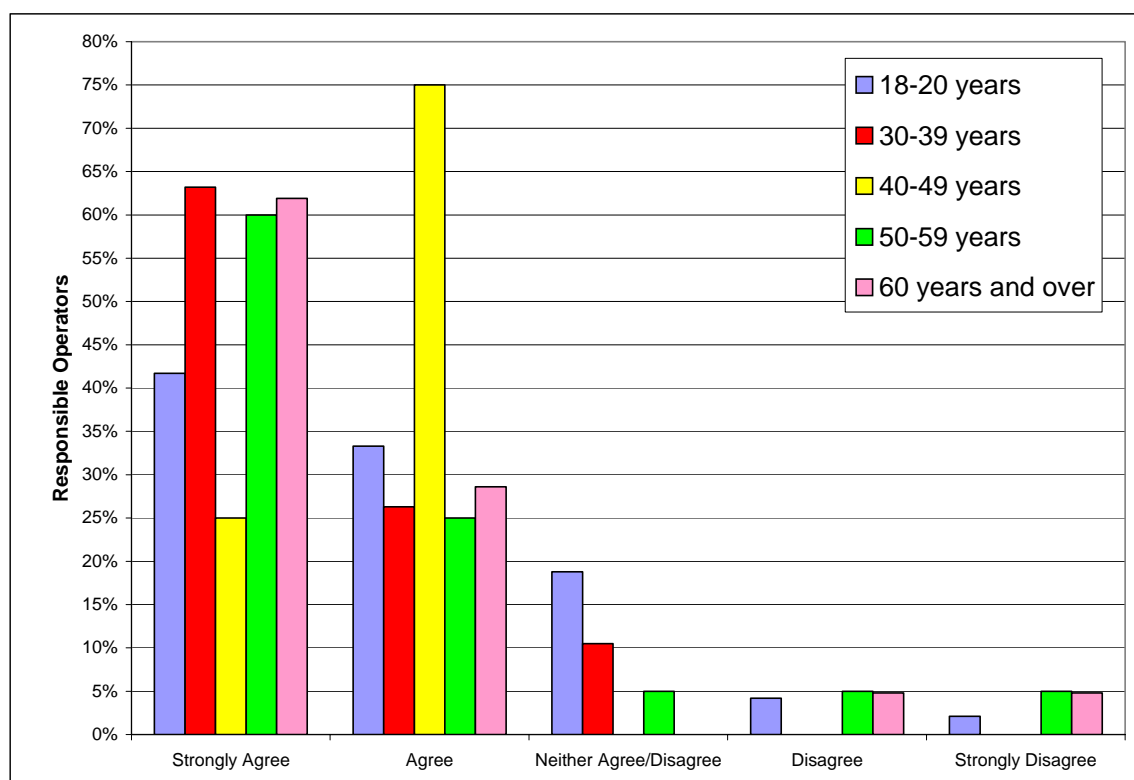
Figure 6.10   Tourists' attitude towards responsibility of operators

It is important to identify tourists' attitudes towards best practices because of their potential to ensure that operators implement best practices. Pressure from environmentally aware tourists may mean that tourism businesses will have to become more environmentally responsible to continue to attract clients. Pigram and Wahab (1997, p. 20) for example, point out that choices made by tourists are influenced by lifestyle, social mores, traditions and cultures and that in the future, more environmentally aware tourists may in fact opt for, or demand, evidence of a commitment to sustainable forms of tourism. If this is the case, tourists can have an impact on sustainable development of a natural resource such as the Swan River and need to be considered as important stakeholders in the overall management of that resource.

6.8   Conclusion

This chapter firstly highlighted the underlying stakeholder perceptions of tourism and the condition of the Swan River that exist amongst stakeholders connected to the river and importantly, the underlying perceptions of sustainability and sustainable tourism development. Secondly, the chapter presented underlying stakeholder identified issues and barriers which have the potential to influence the complex system of the Swan River and sustainable tourism development outcomes. Finally, the chapter presented findings from a survey of tourist stakeholders' attitudes to sustainability criteria.

Tourism was perceived by government, non-government and community stakeholders to have a negative impact on the river through contributing to pollution both on the river and its foreshore. In addition, concerns were raised that tourism development impacted on other stakeholder activities and the natural environment. Government stakeholders however, also acknowledged that tourism provided a positive outcome in terms of economic and social benefits to the broader Perth community.

Tourism operators, overall, perceived the river to be in good condition, with some operators using words such as 'almost pristine' to describe the river. Recent algal blooms on the river were perceived to have had little, if any, impact on business

operations for some operators, whilst others cited specific impacts to their business from algal blooms. Operators appeared to 'blame' media reporting for their business impacts as opposed to tourists reacting to the actual condition of the river during the algal outbreaks. Whilst tourism operators overall believed that the condition of the river was important to their business, it did not appear to be a major issue of concern.

In contrast to the tourism operators' perceptions of the river, non-government stakeholders, whose organisation focussed on environmental issues, perceived the river to be in crisis, with some respondents suggesting the river would be 'dead' in ten years. These stakeholders argued that there was a lack of understanding of the river's ecology amongst tourism operators and the general community. A number of community stakeholders also highlighted their concern for the river's condition believing it to be in a poor state.

Perceptions of sustainability and sustainable tourism development differed amongst each of the stakeholders. Findings suggested there was a lack of understanding of either term amongst tourism operators and the community respondents. Tourism stakeholders who expressed an understanding of the terms emphasised the economic aspects of sustainability in contrast to non-government and government stakeholders who emphasised the ecological or triple bottom line aspects.

A number of underlying barriers to future sustainable tourism development were highlighted by stakeholders (Section 6.6, Figure 6.3) and include issues at a local through to a global scale. One barrier is the perceived lack of vision for the river, which is discussed in Chapter 8. The implementation of best practices and regulation are key identified issues that need to be resolved for the Swan River. At present there are no overall guidelines for tourism operators utilising the river which address sustainability principles. Best practice implementation was deemed to be an issue amongst tourism stakeholders who understood that activities were currently being undertaken which could impact not only on the river, but also on other tourism operators. Diverse opinions are evident as to the merits of regulation over self-regulation amongst stakeholders. Government and non-government stakeholders argue that regulation is necessary, as

opposed to tourist operators who believe there is already too much regulation and that self-regulation is required.

Tourist stakeholders confirmed the importance of the river's condition to tourism in general which correlated with their belief that the river's natural values were important to their visit. In addition less than 50% of tourists believed that greater tourism development was required. In terms of best practice, tourists believed that operators have a responsibility to look after the river, be involved in recycling, employ locally and contribute to the management of the river.

This chapter pointed to the connections between stakeholder perceptions of sustainability and their values associated with the river. The following chapter will present findings related to stakeholder values and perceptions of the Swan River.

CHAPTER 7

STAKEHOLDER VALUES AND PERCEPTIONS OF THE SWAN RIVER

The river basically makes Perth one of the most beautiful cities I've ever seen (Tourism Operator 2004)

..one of the values, one of the extremely important values of the river is not actually a biophysical one, it's a perception of landscape and the judgement as to whether the river is better or not better for having development along it (Government Stakeholder)

7.1   Introduction

The state government's 'State Sustainability Strategy' highlighted tourism as one of the priority areas for action (Government of Western Australia, 2003). The section of the Strategy which discussed tourism focussed on the state's natural resource areas and the identified vision for tourism was to: 'make Western Australia the world's natural choice' (Government of Western Australia, 2003, p. 144). National Parks, Marine Parks and World Heritage Areas were highlighted as being important for tourism. However, the Strategy failed to highlight such natural resources as the Swan River, an important feature of the urban landscape in Perth which is utilised by tourism operators and is an attraction for tourists who visit Perth. The Strategy stated that:

> In using tourism for economic development it is important for communities to identify and preserve a 'sense of place' that is defined by its people, its buildings, its places and natural environments and its culture. Importantly, communities need to be aware of the social and economic benefits sustainable tourism offers (Government of Western Australia, 2003, p. 143).

The outcomes associated with the above statement could also be applied to the Swan River, as a natural resource, albeit in an urban area. The Swan River, as Chapter 5 discussed, is considered a complex system involving a diverse range of stakeholders. The community, as referred to in the above statement, incorporates these diverse stakeholders who have different values associated with the river and therefore different views on the economic and social benefits that tourism may offer. In order to achieve

sustainable outcomes for a natural area, such as the Swan River, it is beneficial to determine stakeholder values associated with that particular area so that common and conflicting values can be identified. Through understanding values, explanations can be made as to why people ascribe importance to some things over others (Palmer, 1990). As Seligman, Syme and Gilchrist (1994, p. 108) noted, values that are constructed by individuals are dependent on the context from which they emerge. Values assigned to one natural resource, for instance, an urban river, may differ from the values assigned to another natural resource such as a wilderness national park or even an urban river in an alternate location.

Values people assign to a natural resource, such as the Swan River, can be considered in terms of a spatial and temporal context, forever changing and therefore influencing the dynamics of the system. In complex systems terms, they can be viewed as strange attractors which influence the behaviours of the system. Conflicts may arise between the different systems when differing values emerge and these conflicts lead to the system evolving. Understanding the emotional attachments and connections people have to a natural resource via the values they associate with it also provides understanding for why levels of concern about management practices arise (Eisenhauer, Krannich, & Blahna, 2000).

This chapter discusses the theme of stakeholder values and perceptions associated with the Swan River. The chapter also presents findings from secondary data, used to triangulate the case study findings.

7.2 Stakeholder Values Associated With the Swan River

Stakeholders, particularly the tourist and government stakeholders, viewed the Swan River as a significant attraction for Perth and Western Australia and findings illustrated that a range of values were associated with the river (Table 7.1). When stakeholders were asked to comment on the values they associated with the Swan River, they cited recreational, social, ecological, scientific, economic, natural, historical, indigenous, sense of place, icon and spiritual values. These values were identified by the researcher when stakeholders specifically used the term, or when it was implied from comments made during the interview, or in some instances, values were identified from external evidence such as from brochures or web sites used by tourism operators. It must be noted that these values are tightly linked and at times overlap. For instance, the recreational and social values associated with the river overlap, but were differentiated for the purpose of this study, based on whether the stakeholder was focussing on the activity or the social aspects of the activity. The ecological and natural values were also differentiated in this study on the basis that some stakeholders referred to the ecological aspects of the river, such as the flora and fauna as being important as opposed to those who were interested more in the aesthetics of the natural landscape of the river.

The range of stakeholders interviewed in the research, included those who had lived in Perth all of their lives, to those who had lived in Perth less than two years. From the outset of the research, it was apparent that the river held important connections to respondents whether they grew up with the river or not. The two most commonly referred to values associated with the river were the social and economic values followed closely by the ecological and natural values. Tourists were also asked to comment on their trip to the river and many of the comments also related to the social setting of the river and related activities. These comments will be presented in Section 7.3.

Table 7.1 _Stakeholder Values Associated with the Swan River_

Respondent	Social	Economic	Ecological	Natural	Recreational	Sense of Place	Historical	Indigenous	River as Icon	Scientific	Spiritual	River as Attraction
TO1BO	●	●	●		●	●	S	●				●
TO2BO	●	●		●								●
TO8BO	●	●	●	●	●	●	●	●				●
TO11BO		●				●	S					
TO12BO *		●	●	●								●
TO10REST	●	●			●							●
TO13REST		●		●								●
TO14REST	●	●	●									
TO9ACC	●	●		●	●							●
TO15ACC	●	●	●	●	●							●
TO16ACC	●	●	●	●	●	●	●	●	●			●
TO17ACC	●	●	●									
TO3ST	●	●		●	●							●
TO4ST		●	●	●	●	●	●					●
TO7ST	●	●	●	●		●	●					
TO5ATT	●	●										
TO6RET	●	●	●	●								●
GO1CSC *	●	●	●	●	●	●	●					
GO2DPI	●	●		●	●	●	●					●
GO3CSP	●		●	●	●	●						●
GO4SCC	●		●	●	●	●	●	●		●		
GO5COP	●	●	●	●	●		●					
GO6TPF	●	●		●		●						●
GO7CALM *	●		●		●			●				●
GO8TWA	●	●	●			●						●
GO9DIA	●	●	●	●	●	●		●				●
GO10SRT	●	●	●		●	●		●				
NG1CBA	●		●	●	●	●						
NG2CCWA*	●		●	●	●	●	S					
NG3WWF		●	●	●	●	●				●	●	
NG4TCWA	●		●	●	●	●					●	●
NG5FACET		●			●	●		●				
NG6NTWA	●		●		●	●					●	
NG7WAIT0C	●		●	●	●	●					●	●
CO1KAY	●	●	●	●	●		●					
CO2CG	●		●	●								●
CO3CYC	●	●	●	●							●	
CO4RECF*	●	●	●	●	●				●	●		
CO5PB*	●		●		●	●						
CO6YC*	●		●		●							●
CO7SA	●	●	●	●	●							

Key: * = Two Respondents Interviewed   **S =** historical reference to self eg childhood memories

Codes for Respondents: TO = Tourism operators   BO = Charter Boat Operator
REST = Restaurant/Café/Bar   **ACC** = Accommodation Provider   **ST** = Scenic Tour Operator
ATT=Attraction   **RET** =Retail Operator

GO = **Government Department**   **NG** = **Non-government**   **CO** = **Community**

* The table indicates whether a stakeholder identified a particular value or a value was implied from comments via a shaded square.

7.2.1   Shared Values

Despite the diverse interests in the river, from government, non-government, tourism and community respondents, findings suggest there are a number of common values associated with the river which serve to connect the stakeholder groups.

7.2.1.1 Social Values

The most common value expressed by stakeholders were the social values linked to the river. All of the government and community stakeholders mentioned social values of the river as being an important value as reflected in comments such as:

> …if you go down to the river you can actually be somewhere where it's a bit more tranquil, a bit more space, its got Marri trees and lovely gums lining it…it's also because of the cycle paths lining the river we use that a lot for recreation. Like my sister will come over you know with her son with the bikes in the car and we'll go for a ride around the river (CO2CG)

> The one thing I see for the Swan Canning[*] River is the fact that it is easily accessed by families and that's the one thing we see on patrol more often than not. A family group's down for a picnic, dad and the kids, mum and the kids have got a line in the water and to me that's the biggest asset of having the Swan so close to a large population. It's easily accessible to families, disabled fishers etc… (CO4RECF)

> It's a place for people to come and relax and relate … (GO6TPF)

The social values expressed emphasised the importance of the river as a place for families and friends to meet, relax together and where activities such as picnicking, cycling or walking could be enjoyed. The river was viewed as an integral aspect of the social experience.

Different perspectives regarding the need to provide infrastructure to enhance the social experience were evident amongst the stakeholder's comments. A small number of stakeholders believed that the river could be utilised better through the development of additional cafes and restaurants adding the proviso that open spaces

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[*] The Canning river is a tributary of the Swan River.

should remain to ensure the foreshore was uncluttered. In other words, the visual amenity of the river was important for the social experiences undertaken along and on the river. One government agency responsible for management of reserves and parks along the foreshore of the river felt that:

> ...the really important thing about the river though, is its breadth, it's such a dominant force on the landscape. I don't know very many cities where you can stand at South Perth and have that view of Kings Park *(referring to the unhindered view)*…it's sensational …. And so that's a critical thing and the view from the Kwinana *(reference to the Freeway crossing the river)* whether you like a road between people and water but coming along the Kwinana and looking out…its just sensational … the aesthetic need and pleasure and vision of it is essential. (GO7CALM)

Social values were also linked to childhood memories of the river and the stakeholders' social experiences of the past. Several respondents reflected on childhood stories related to the river, illustrating the social connection individuals held to the river. Comments reflected not only the social values connected to the past, but a strong sense of place in social terms that the river held for respondents.

> I guess I'm disappointed in its diminishing role…prawning nights were a great night out before tele was around and the picnics at Crawley and the baths or whatever were great in those days…(NG2CCWA)

> I grew up on the Swan, the banks of the Swan River, so to me it was the lifestyle which is rapidly disappearing,... it was where I learnt to swim, it was where I went crabbing, it was where I went prawning, it was where I learnt to fish, my father used to go off fishing at about oh every night and come home at 3 am in the morning with great huge fish which we used to enjoy... I learnt to mess around in a boat, on the Swan I wouldn't say I sailed properly, but it was just the lifestyle, it was where my mother used to go down when we were swimming and meet her friends and drink there, there was a boat room. Today it is different. I go there and sit in the kiosk in Crawley Bay my kids learnt to swim down there, ... it's a big part of my life, it's where I take visitors to Perth, I drive them around and show them the river…(NG2CCWA)

The linkage between the social connection to the river and sense of place expressed by respondents will be discussed in Section 7.2.1.5.

The issue of social equity was raised by a community stakeholder who explained that river access for the elderly, infirm and disabled was critical and needed to be

addressed by the government agencies who managed the river. This same stakeholder was extremely critical of the lack of access for their interests, namely recreational fishing, and believed that their social and recreational needs were being ignored at the expense of tourism development along the river. Ensuring ongoing river access so that all the community could enjoy the river was emphasised by most stakeholders who participated in the study. The river access issue reflected the focus on social values that were attributed to the river by stakeholders and will be discussed further in Chapter 8.

The strong association with the social values of the river expressed by stakeholders did not appear to correlate with the perceptions of sustainability as discussed in the previous chapter. The social perception of sustainability did not emerge as an important perception in Chapter 6. Only two respondents highlighted social equity issues associated with sustainability, although social perceptions were incorporated into the triple bottom line interpretations of a number of respondents.

7.2.1.2 Economic Values

The economic value of the river was significant to the tourist operators with all individual respondents expressing the economic importance of the river. Most of the government stakeholders also viewed the economic values of the river as significant. In a broad sense, the economic value was associated with viewing the river as an attraction for tourism purposes providing economic benefits to the broader stakeholder community. As will be discussed in Section 7.3, tourists cited the Swan River as an important attraction for Perth, which appears to correlate with tourism and government values associated with the river.

The river provided a livelihood for tourism operators such as the charter boat operators and operators located at Barrack Square. The strong economic attachment differentiated this group from the other stakeholder groups and is consistent with their strong economic perception of sustainable tourism development. It also appears to be consistent with the view of Seligman, Syme and Gilchrist (1994) who argue that values are context driven. In other words, people who earn a living out of a resource will have

stronger economic values associated with the resource than those who do not rely on the resource for a living.

Those operators who were not directly located on the river also cited the economic benefits of the river to their operations. Accommodation providers for instance, featured the river in marketing their product in their brochures and on their web sites with photos of the river and used terms such as 'scenic river views' and 'located on the beautiful Swan River'. One operator stated that rooms with a view were more expensive, confirming the economic advantage of the river to the overall product. Tour operators, not situated at Barrack Square, also marketed their product by reference to the river on brochures and included a river cruise with a charter boat operator to enhance and diversify their overall product. For many operators, tourism was the key focus of the river and operators recognised that their livelihood relied upon the river stating that:

> It's our livelihood. If the river wasn't here I wouldn't be here.....I had just turned 21 and I was looking to start a business up. I identified that cruises on the Swan then could make a long life career.....commercially it's the way to go to benefit locals and tourists alike (TOBO)

> … well we wouldn't get half as many people here if it wasn't for the river... (TOREST)

Comments by a number of tourism operators indicated that the economic values of the river were foremost to the river's function explaining that:

> Basically it's just for the tourists and for the boats which is just great… (TOREST)

> for the river to be successful, it needs to be an economic success not just a natural success. We need it to be an economic venue for the total river to be viable (TOBO)

The above comments reflect a tourism-centric and anthropocentric perspective that was evident amongst tourism stakeholders' perceptions of sustainable tourism development, illustrated in Chapter 6. The comments also reflect Williams' (2001) position discussed in Chapter 2 that natural resources are often viewed in terms of existing primarily to meet human needs.

Other tourism operators also recognised the river's economic importance in being able to differentiate their product in the tourism market, making comments such as:

> …it is something about landmark, it is something that evokes in people's minds a pleasant view…..as a hotel it is difficult to differentiate yourself, particularly in the leisure market. A hotel room is a hotel room is a hotel room!... People like to think that they get a view so the Swan [River] for us is an opportunity to identify with an icon that people like to see. (TOACC);

> ...the location is critical because people want to be by the river, they have a feeling they want to be by the water and secondly they have got the city on the other side… (TOATT)

The government tourism agency also saw the marketing advantages of the river as a key attraction and commented that the river was:

> ...marketable as a pristine river, almost. The expanse of the river is a major attraction and is unusual by world standards because of its size. Where else in the world would you see a river this size in a capital city? Situated on such an expanse of water. It's our natural advantage - natural product. (GO8TWA)

The respondent intimated that the economic values were a key aspect of the river, that would lead to broader social and environmental benefits to the community. The respondents stated that:

> tourism is viewed as important for employment. It is the bottom line. There is a push to increase the growth of tourism – facilitate the process, more people will mean more economic, social and environmental benefits. (GO8TWA)

The government tourism agency respondent's response appears to reflect their economic perception of sustainability (Table 6.1) and also supports Butler's (1998) view discussed in Chapter 2, that the tourism industry adopts sustainability in terms of a economic, public relations and marketing focus. However, government agencies with a non-tourist focus also identified the river as a key tourism attraction for Perth. The respondent from the agency which issues charter boat licences and is responsible for leasing arrangements for the operators on Barrack Square, viewed the river as:

> ...the main tourist attraction for the City of Perth. I think it is underutilised and there is too much bureaucracy that stifles development, stifles tourism… (GO9DPI)

Half of the tourism operators interviewed also believed the river was underutilised whereas no other non-tourism related government or non-government organisation concurred with the notion that the river was underutilised. The respondent from The Tourism Council of Western Australia (TCWA), a non-government tourism body, agreed that the river was underutilised in a tourism context believing the river to be a key attraction and in fact asked 'where would the city be without the Swan River?' The belief that the river was underutilised, reflects the economic values associated with the river and the economic perceptions of STD that these stakeholders held, as highlighted in Chapter 6.

Government agencies that emphasised the economic values of the river focused on the river's broader economic benefits and acknowledged that the river provided an important asset to the city of Perth. One of the local government agencies, the City of Swan which is promoted as the gateway to the wine region north of the City of Perth, cited that their council spent between $200 000 and $300 000 a year on tourism related activities. They believed that the river was 'a significant economic benefit' to the council and played a significant role in attracting tourists. Although the large number of vessels that were using the river to access the wineries was becoming an issue, according to the respondents, it was felt that this river access was a vital connection to the broader Perth community. Other local government agencies also believed the river's economic values were significant as reflected in statements such as:

> Economics is the bottom line all the time. It's a failure to recognise that the fundamental resource on which the whole of the city is located is in fact the greatest potential generator for the city if you treat it correctly (GOCOP)

The state government agency, The Swan River Trust (SRT) is responsible for managing and protecting the Swan River. Although recognising the river's potential to support tourism businesses, the respondent from the SRT believes the river's economic value is reflected in the increased residential development occurring along the river. The result was increased land values along the river foreshore and an increased level of local

government rates and state government revenue through the state's stamp duty tax. The respondent also pointed out that:

> ...there is an enormous impact on land values because of the river, the differential between river views and not river view in terms of economic benefit to residents around the river, it's huge.(GO10SRT)

Additional economic benefits to the state could also be recognised in marketing the river for special events, which was highlighted by one of the community based associations interviewed for the study. The respondent from the water ski association pointed out they had worked with Tourism Western Australia to bid for an event known as the Gravity Games, an extreme sports event which until the successful bid by Western Australia, had not been undertaken outside of the United States of America. The urban location of the Swan River, along with the surrounding foreshore facilities, added to the success of the bid which, according to the respondent, is economically significant for Western Australia.

Chapter 6 pointed to the economic perceptions of sustainable tourism development amongst tourism stakeholders. Findings suggest that there is a linkage between these perceptions and the economic values that they associated with the river. A number of tourism stakeholders spoke in terms of a tourism centric focus when discussing the values of the river. Government and non-government stakeholders on the other hand, whilst recognising the economic value of the river to the broader community, did not emphasise the economic aspects of sustainability over other aspects of the concept such as the ecological values (Table 6.1).

7.2.1.3 Ecological Values

The ecological values, along with the natural landscape of the Swan River were two values that respondents from all groups cited as being significant for the river. The ecological values for the purpose of this study refer to the flora and fauna that live in or on the foreshore of the river. The natural values, which also refer to the flora and fauna, provide an overall landscape or aesthetic focus by the respondent.

The river's ecology was viewed as an important component of the river's health and as an attraction, particularly for the tourism stakeholders. Two of the councils situated on Perth Water were involved in wetland restoration and both recognised the tourism potential of the foreshore restoration works. The City of South Perth was in the process of restoring wetland habitat along the foreshore for the black swans (*Cygnus atratus*), and viewed the wetlands and the swans as an important opportunity to promote ecotourism. The City of Perth was also involved in development of an extensive artificial wetland to create habitat and to reduce the nutrient flows into the river. It was hoped that the development would attract tourists and the local community who could use facilities to enjoy a river experience as reflected in the following comments:

> One of the things the Swan River has been famous for is having black swans…we do have some black swans who do have their habitat within the river environment, but because the banks have largely been modified and habitat removed it's pretty limited…and one of the things the city is looking at is in terms of an ecological type tourist facility to encourage that black swan habitat. …..and if it's marketed and promoted appropriately as a spot which is already popular…..it is home to quite a diverse range of birdlife. (GO3CSP)

The ecology and health of the river was perceived as important to the tourism operators who used the river as part of their product. Dolphins and bird life, although not the main aspect of the tourism business, provided additional benefits for the operators and were viewed as enhancing the overall visitor experience.

> …if the river is not in a fit and proper, pretty state, it clearly detracts from the experience…there is a period of about seven or eight months of the year where most days...not everyday, but most days they will encounter a pod of, there are two pods, of dolphins that inhabit the river and quite often make themselves

available for viewing (*laughs*) and they play the game and if we encounter that, or pelicans are sighted or black swans are encountered...our commentary brings that out…(TOBO)

Tourists love coming down by the water, doesn't matter where you go in the world. We get dolphins up here. I wish they would come on a regular basis, on a day to day basis we'd be laughing. We get them probably about once a month, twice a month down here so it tells us the river is very clean and lots of fish and it's a beautiful spot (TORET)

We have so many people come to us and say 'what a magnificent river' We know it, so let's preserve it and people are catching fish… the river is pretty much alive as you see up in Perth Waters, the dolphins are jumping out of the water. People say 'wow dolphins this far up the river' Everyone thinks this is a fresh water river but it is a tidal river- there is very little fresh water in it…(TOBO)

In contrast to the positive perception of the ecological condition of the river by tourism operators, there were other stakeholders who believed that the ecological values of the river tourism operators were under threat. The non-tourism, non-government stakeholder groups in particular, believed that the environmental or ecological values of the river were foremost, which correlates to the strong ecological position taken on sustainability highlighted in Chapter 6. Only one community stakeholder displayed equally strong opinions about the impacts to the river. Concerns about the river's condition were evident in statements such as:

To me, the river needs to be managed for its environmental values, nothing else, that's what it is. …..I think we have to recognise that that is an ecosystem, which we have badly interfered with, we've restricted the water flow, we've brought in the fertilisers and nutrients from the rural areas which we're always hearing about, but you try to get anybody from the metropolitan area to admit that we're also pouring it in from all of our river shore activities…(NG2CCWA)

..and we have species of birdlife for example that fly all the way from the northern hemisphere from Russia, migratory bird species that are internationally recognised. It is important to conserve their habitats and they come to certain spots on the Swan River foreshore and if those habitats if all of them are destroyed then that species will just not be able to find food and they'll die…. I wouldn't like to see new developments happening in areas of high conservation value…(NG3WWF)

…it's never looked worse. I mean the river is getting a lot of water activity now which is very difficult environmentally to restrain boats from using fuels and oils and things ….any development to do with coming close to the waters edge, the banks themselves, because you know developments not only destroy not

only the water quality, but also the turtles and the life sources of the river that maintain the quality of the river as well…(NG7WAITOC)

Interestingly, no stakeholder mentioned the Marine Park status of sections of the Swan River as discussed in Chapter 5, although one stakeholder above mentioned the migratory birds for which the Marine Park was established.

These same non-tourism stakeholder groups spoke of concerns about the potential for tourism developments impacting on the river's ecology through pollution from boat spills and removal of vegetation from the foreshore, potentially destabilising the river banks and losing wildlife habitat. Other non-tourist government stakeholders were also concerned about the impacts to the ecology of the river believing:

> …we have done terrible things to our river and yet still hanging in there, are kind of residual natural values. There is still fishing to be had, still evidence on a much diminished scale of bird life, black swans, you do see them occasionally on the river although the early stories saw large quantities of them so we've clearly done a lot of damage to the environment. (GO5COP)

Although the ecological value was common across stakeholders, it was evident that different perspectives existed. Tourism stakeholders spoke in terms of the use value of the ecology to their business and intimated that the rivers' ecology was in good condition. The use value perspective appears to be consistent with the economic perceptions of STD by tourism stakeholders indicated in Chapter 6. In contrast, the non-government, government and community stakeholders who emphasised the ecological values spoke more in terms of the intrinsic value of the ecology and believed that the river's ecology was under threat.

In Chapter 6 ecological perceptions of sustainability and sustainable tourism development were the most common perspectives across all stakeholder groups, although they were particularly strong amongst the non-government stakeholders. This links with the strong ecological values associated with the river by this group of stakeholders. Government stakeholders also emphasised the ecological values of the river, which correlated with their perceptions of sustainable tourism development.

Closely linked to the ecological values are the natural values that stakeholders hold for the river. The natural values, stakeholders referred to during the interviews, related more to the natural landscape and natural aesthetics of the Swan River, which differentiated these values from the ecological values.

7.2.1.4 Natural Values

Despite the differing perceptions between tourism stakeholders and the other stakeholder groups of the state of the river's ecology, the river's natural landscape was an important value across all stakeholder groups. The Perth Water precinct of the Swan River has been modified significantly since European settlement, as discussed in Chapter 5, however, to stakeholders, the river has still retained a natural 'feel' to it, compared to many other urban rivers in Australia. The attachment to natural spaces within an urban environment was emphasised by stakeholders with one natural resource management government stakeholder saying that there were 'changes to people's attitudes to their natural spaces… people have a much higher value, sense for it' (GO7CALM). This same stakeholder believed that in the future there would be an increased demand from the community for natural spaces, especially in urban areas. Another local government stakeholder reiterated this belief, suggesting that:

> people are crying out for a recreational experience which involves the passive enjoyment of nature, observation of nature, understanding of nature...' (GO5COP)

Retention of the existing natural landscape, of the river, was important for stakeholders involved in the study. Many stakeholders commented positively on the fact that the Swan River did not have buildings right along the city foreshore, like many other Australian urban rivers. The river's natural landscape was deemed to be a positive feature which set it apart from many urban rivers throughout the world. Stakeholders also mentioned that the natural features of the river were important for tourists who

visited the river. Agreement in regard to the natural landscape, across each of the stakeholder groups can be found in comments such as:

> Perth foreshore is still quite natural and beautiful and even along the front of the city where it's not natural because all the trees have been changed, it's still not built on …(CO2CG)

> I think the big thing too with the Swan and tourism is the fact that you speak to most tourists that come over here, I mean we just had a fishing clinic with twenty five Japanese exchange students only a couple of weeks ago and the thing that astounds them the most, is the fact of how beautiful and pristine … I mean really if Western Australia has got anything to offer tourists, the fact that, because we are so isolated, things are still in pristine condition….(CO4RECF)

> .. if we lose its natural values of the river we lose its natural recreational values… so I think now in an era of greater environmental awareness, we would like to restore some of those lost natural values.(GOCOP)

The Swan River's natural and ecological values were viewed as an important asset to Perth and linked to those values was a perception that the Perth community and tourists had a strong connection to water.

> ... it's also clearly the fact that West Australians love water. We throng as close to the water's edge as we can…it's to do with fun and enjoyment, recreation on the river rather than transport. Some rivers are really notable for the fact that they are transport corridors up river, but Perth can't set any serious transport or business industry up. It's all to do with recreation and it's recreation associated with natural environmental values. That's the crux of it. (GO5COP)

> Tourists love coming down by the water- doesn't matter where you go in the world (TORET)

> …we see it as a natural attraction to Perth because it has an inherent value from a tourist point of view. It's clean and seen to be as pristine and it's a wonderful asset in terms of its presence so close to the city and people are attracted to waterways, where it be the ocean or river or lakes or whatever. So from that point of view it is an asset. It's one we'd like to see managed with a view to retaining the natural beauty of the river but at the same time provide an opportunity to people to enjoy the facility. (TOACC)

Many respondents spoke in terms of a broader context of the importance of Western Australia's natural features and related the Swan Rivers natural landscape as being consistent with the non-urban natural features. As an urban river, the natural

values of the river were deemed as significant not only at a local level, but at a wider state level for tourism purposes.

7.2.1.5 Recreational Values

Although the recreational values are closely linked to the social values of the river, stakeholders specifically mentioned the river's value as providing recreational facilities and opportunities. The recreational values associated with the river were especially significant for the community stakeholders who were involved in various activities either on the river or on the foreshore. Recreational activities included kayaking, cycling, water skiing, powerboat racing, fishing and yachting, and represented the diverse use of the river. Numerous respondents also highlighted passive activities, such as leisurely walks viewing scenery or picnicking on the river foreshore, as important recreational activities accessible to the broader community.

Increased use of the river, and conflicting activities, were mentioned by respondents as potential threats to the recreational values, which required greater management and monitoring from government agencies.

7.2.1.6 Sense of Place

Evident throughout the study was the strong sense of place value associated with the river by all stakeholder groups, but particularly for the non-government stakeholders. Sense of place refers to the strong connections that people have to a physical space, such as a natural landscape, and the perceptions of the relationship they have with that particular place (Eisenhauer et al., 2000). Both utilitarian and intangible values, such as belonging, attachment, beauty, and spirituality are associated with the notion of sense of place creating unique and meaningful associations with a landscape (Cheng, Kruger, & Daniels, 2003; Eisenhauer et al., 2000; Hay, 1998).

Respondents were emotive when discussing the importance of the Swan River at a personal level and words such as icon and iconic were frequently used to describe the river's importance to the general Perth community.

> We see the river as an iconic river which is important for visitors and the Perth community…the river has been afforded iconic status. It is the most visually appealing river in the world- it's Perth's social fabric (GO8TWA).

> Well the river is an icon, it's the thing that links. The Swan River is , I think it is an icon. I think it is one of West Australians' icons (NG5FACET)

> The river as a source of food, has an iconic aesthetic attribute… (NG3WWF)

> Based on the values of the river in association with Perth or Western Australia, we obviously felt very strongly that the heritage values as such warranted an icon status (NG6NTWA)

Stakeholders perceived that the very identity of Perth was inherently linked to the Swan River. Stakeholders discussed the importance of identity in terms of a historical and a broader context, explaining that:

> People often ask what is it that makes Perth special? What are the assets we've got here and Kings Park immediately springs to mind, and the river. What is an image of Perth, what's a lasting image, and it's the river and Kings Park…there's something special down there that especially addressed that sense of place (GO5COP)

…and so the river has since prehistory been there, it was used by aboriginal people, it was used by the very early settler, it's used by birdlife…I mean the whole thing is just central to our being, living in Perth…it's really important to get it right (NG5FACET)

Speaking personally, it's very much part of the identity of Perth. It's something that Perth people are proud of, not only the fairly reasonable state of the river as far as the health of the river is concerned, but also its sheer size (TOACC).

The sense of place value placed on the river by stakeholders illustrates that the connection to the river is complex, and has deep meaning to those attached to the river.

7.2.2   Non-shared Values

While it is important to focus on the common values that are associated with the river, it is equally important to look at those values that were not emphasised by stakeholders. The river has significant indigenous values to the Nyungar community, as discussed in the previous chapter. However, very few tourism, non-government and community stakeholders highlighted the significance of the indigenous values. One of the key issues relating to the Swan River in *Riverplan*, which was discussed in Chapter 5, was recognition of indigenous values of the river. Government stakeholders on the other hand did emphasise the indigenous values and the importance of the river to the indigenous community. Both the Department of Indigenous Affairs and The Swan River Trust respondents, in particular, stressed that the indigenous values needed to be understood by the broader community and taken into consideration when making decisions about the river. The SRT respondent expressed the belief that:

The values of the river are enormously important to the Nyungar community …I would make a distinction between the spiritual association and the cultural. They're related but there is a distinction between I guess the spiritual relationships the spiritual significance of the river and deriving from that the cultural values and responsibilities of the Nyungar community. And that translates as well into an ongoing relationship with the rivers and as well as that in a sense a territoriality… a sense of territoriality of country. It's related to the spiritual but it's also simply about, this is our place, this is where we live. If you like, it's the Church, it's the place of business and the home of the Nyungar community. And that's something that I think, we as a community we haven't recognised and... incorporated into the way we do business in relation to the rivers. (GO10SRT)

The indigenous stakeholder, who represented the Nyungar community, spoke passionately about the relationship of the indigenous community to the river and explained that:

> The Mooro group *(the local indigenous tribe)* have governance basically over the whole of the Swan River going right up through to the Avon Valley, also a part of the Canning as well. (NG7WAITOC)

This respondent explained the history of the river prior to European settlement and explained the spiritual significance of the river which is connected to the Dreamtime story of the Waugul. It must be noted that different interpretations of the Dreamtime story may be told by other members of the Nyungar community. This is one interpretation:

> ...if we go back to our Dreamtime stories and if we look at our spiritual being that makes up our rivers and waterways being the Waugul, you know the Swan River was basically put in place, the valleys and just the curvature of the river itself was put in place by the male Waugul which came down through the Avon and created… parted the mountains, to create the waterways which is now the Avon River coming through from Northam all the way down. The male Waugul actually came from the land area, and came all the way through and you can sort of see when you look geographically the way the waterway moves, rivers and streams, they move like a snake crawling across the earth umm and as he came down, of course he came through the Avon Valley, down through Midland, down through Guildford until he eventually got down into the Swan River where he met up with the female Waugul which came down from the northern suburbs (sorry for using my hands you're not going to see this …). Coming down from Yanchep, all the way through, so you'll know from North Yanchep, basically from Lancelin all the way down through to Bunbury, there is a concession of lakes and they are all freshwater lakes all the way through and so according to our Dreamtime stories, the lakes were created by the female Waugul coming down from the north and everywhere she came up she created a lake and then to come up to have a look for her partner but then when she didn't see him she sunk down again so eventually that concession of lakes is where the female Waugul kept looking for a male coming down from the coast umm, they eventually met up in the Swan River and the width of the Swan River in front of the City is where both of them went into the mating pattern so that created the width of the river and then once they separated, the male went down the Canning River and the female continued on down south looking for somewhere safe to lay her eggs…. and then when she came down to the Yalgorup National Park, to Lake Clifton that's a beautiful little lake, very clean, very secluded, and she laid her eggs, which is what scientifically we call the thrombolites, and we call them the Waugul eggs. So then she returned back to the Swan River and as the Dreaming stories say, she decided to rest and lay against the base of Kings Park (NG7WAITOC)

One scenic tour operator who participated in the study believed that the indigenous values were important and included commentaries during the bus tour about the Dreamtime story of the Waugul and historical background of the importance of the river to the Nyungar community. Only one other charter boat operator included commentaries on the significance of the river to the indigenous community.

Scientific and spiritual values were also highlighted by a minority of stakeholders. An environmental non-government stakeholder and a community stakeholder argued that there is little community understanding of the scientific value of the river, and believed that threats to the river's ecology diminish its scientific values.

The spiritual connection to the river is closely linked to the sense of place that people associated with the river and again, stakeholders believed that the spiritual connection was important to understand. These unshared values, although expressed by a minority of stakeholders, have the potential to create conflict between different stakeholders if not understood, and the potential to create or maintain fluctuations within the system. This aspect will be discussed in Chapter 10.

The following section presents the findings from the tourist stakeholders group.

7.3   Tourist Stakeholder Values

As explained in Chapter 5, for the purpose of this study, tourists were regarded as a separate stakeholder group and were involved in a survey which consisted of a questionnaire. As part of the survey, an open-ended question asked tourists to comment on their visit to the Swan River.   Fifty-four of the one hundred and twenty five respondents gave a response (cf: Appendix 9). The low response rate may have been due to the percentage of international tourists who may have felt uncomfortable with the English language. The open ended question was at the end of the questionnaire and another possible explanation could be that the respondent simply was 'tired' of the interview. With the low response rate in mind, a significant proportion of comments (forty two) were positive in regard to opinions of the river. Tourists commented largely on the scenic value of the river, using words such as 'lovely' and 'beautiful' to describe the river with one visitor from the United Kingdom stating that it was 'one of the most beautiful riverside settings of any city in the world'. Another commented that the river was :

> One of the magnificent rivers I've come across, seen around the world, a huge interest in historical/heritage was what captured me and I enjoyed the activities and wine and also the people. (Japanese tourist)

In contrast, a number of visitors' perceptions of the river's condition were negative which seemed to correlate with the non-government stakeholders' negative perceptions of the condition of the river. The negative comments were representative of intrastate, interstate and international visitors and included comments such as:

> …the river does not seem to be in as good condition (Visitor Country WA)

> ...dirty and bad colour (Visitor Sydney NSW)

> ...the river is dirty (Visitor Hong Kong)

Contradictory perceptions were also evident in tourists' comments on the social values of the river. There were those visitors whose comments indicated that the social opportunities on the river provided a positive experience, whilst others believed that there was a lack of social opportunities. The age of respondent, their length of stay,

previous visits and differing values attributed to a natural resource, such as a river, may explain contradictory perceptions. For instance, 18-29 year old respondents may have very different experiential needs from 40-49 year old respondents. However, this was not substantiated in this research and further research would be required. Respondents across all age groups in this research reflected the following contradictory perceptions:

- Enjoyable because of the activities it offers….(Visitor from County WA)

- Cruise was very enjoyable and informative (Visitor from UK)

- Could use some more attractions, like a pub or club also some information about the river like an info centre (Visitor from UK)

- Needs more activities (Visitor from Country WA)

Of the fifty eight respondents who answered the open ended question, only five respondents specifically stated that greater tourism development was required along the river which appears to contrast with tourism stakeholders who believe the river is underutilised. Those who did believe that greater tourism development was required also highlighted that the natural beauty of the river was important in another section of the questionnaire. Future development plans for the river will need to consider the importance of the natural landscape to visitors.

Apart from the open ended question, value statements, as shown in Table 7.2, using Likert Scales were utilised to determine the values that tourists associated with the river. Respondents were asked to rate the value statements about the river using a scale from 1-5 where 1=strongly agree and 5 = strongly disagree (cf: Appendix 4).

Table 7.2 *Likert Scale Value Statements*

Questionnaire Value Statements
• The Swan River is an important attraction to my visit
• The Swan River is an important tourist attraction for Perth
• Information about the meaning of the river to aboriginal people is important to my visit (indigenous)
• The Swan River is an important place to socialise (social)
• Information about the history of the river is important to my visit (history)
• Recreational activities on the river are important for tourists (recreational)
• The restaurants and cafes on the river are important to my visit (social)
• The environmental condition of the river is important to my visit (ecological)
• The river is important because of the opportunity for businesses (economic)
• The natural beauty of the river is important for tourism (natural)

Results indicate that tourists viewed the Swan River, firstly as an important attraction for their visit and secondly as an important attraction for Perth. This finding supports the views of tourism and government stakeholders who also viewed the river as a significant attraction for Perth. Table 7.3 and Figure 7.1 show that a high percentage of Country WA visitors rated the river as a significant attraction for Perth which also correlates with the tourism and government stakeholders' views.

Table 7.3   *Value of River as an Attraction for Tourists*

Respondents	N=125	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
		%	%	%	%	%	%
Country WA	Attraction for visit	36.4	31.8	27.3	4.5	0	100
	Attraction for Perth	63.6	9.1	9.1	9.1	9.1	100
Interstate	Attraction for visit	21.6	54.1	10.8	5.4	8.1	100
	Attraction for Perth	48.6	40.5	2.7	5.4	2.7	100
International	Attraction for visit	21.5	40.0	24.6	12.3	1.5	100
	Attraction for Perth	34.9	50.8	6.3	6.3	1.6	100
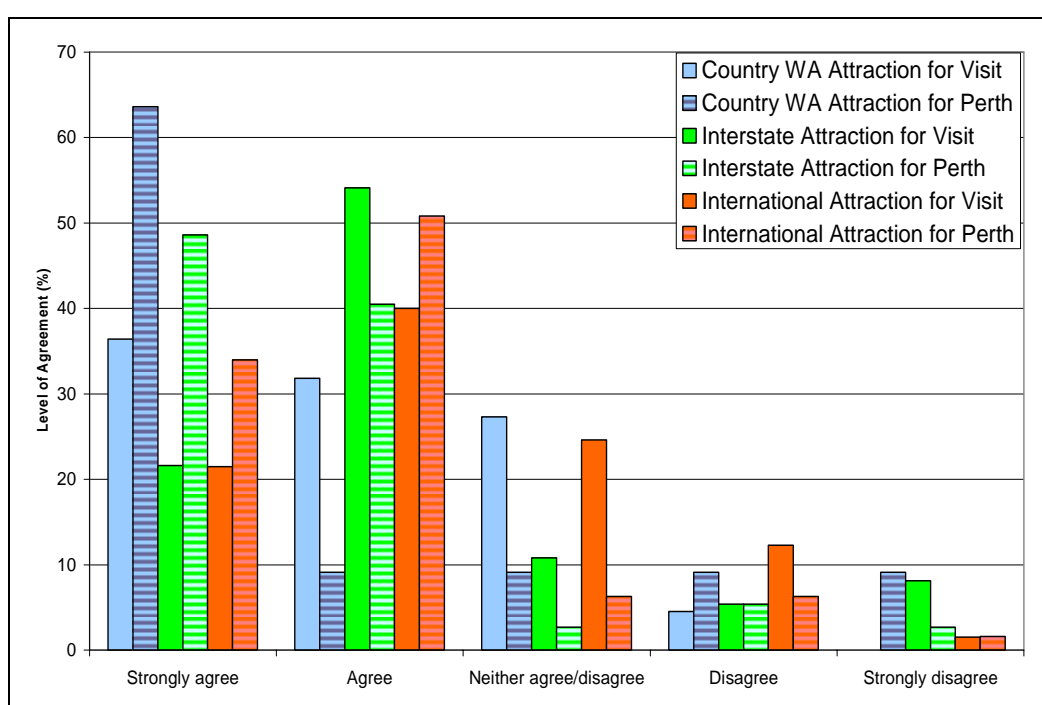
Figure 7.1   Value of river as an attraction for tourists

Interstate visitors and international visitors also viewed the river as an important component of their visit and saw the river as an important attraction to Perth. In addition tourists recognised the importance the river's natural values to tourism. As Table 7.4 and Figure 7.2 demonstrate, the most commonly agreed value for the tourist stakeholders was the natural value of the river with 90% of tourists either strongly agreeing or agreeing to the statement that the natural beauty of the river was important for tourism. Without being able to qualify why this value was important to this group of stakeholders, the indication is that the natural values of the river are important. It is important to note that the statement to which the visitors responded did have a tourism focus. Interestingly it appears that tourists' views of the natural values of the river differed to those of the tourism stakeholders. Whilst the tourism stakeholder group, as discussed in Section 7.2.1.3, agreed that the natural values of the river were important, there was not an overwhelming agreement by this group that the natural values were the most significant value. Instead, the tourist stakeholder group indicated a stronger connection to the government stakeholder group where most stakeholders indicated that the natural values were important.

Table 7.4 *Tourist Values for Swan River*

Respondent N=125	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
	%	%	%	%	%	%
Indigenous culture	3.4	21.6	37.1	23.3	14.7	100
Social	18.3	35.8	27.5	14.2	4.2	100
Recreational	40.3	42.7	9.7	5.6	1.6	100
Café/ Restaurant	30.6	37.9	18.5	9.7	3.2	100
Environment	42.3	36.6	12.2	6.5	2.4	100
Economic	19.3	39.5	26.9	11.8	2.5	100
Natural (Aesthetic)	63.4	27.6	2.4	3.3	3.3	100
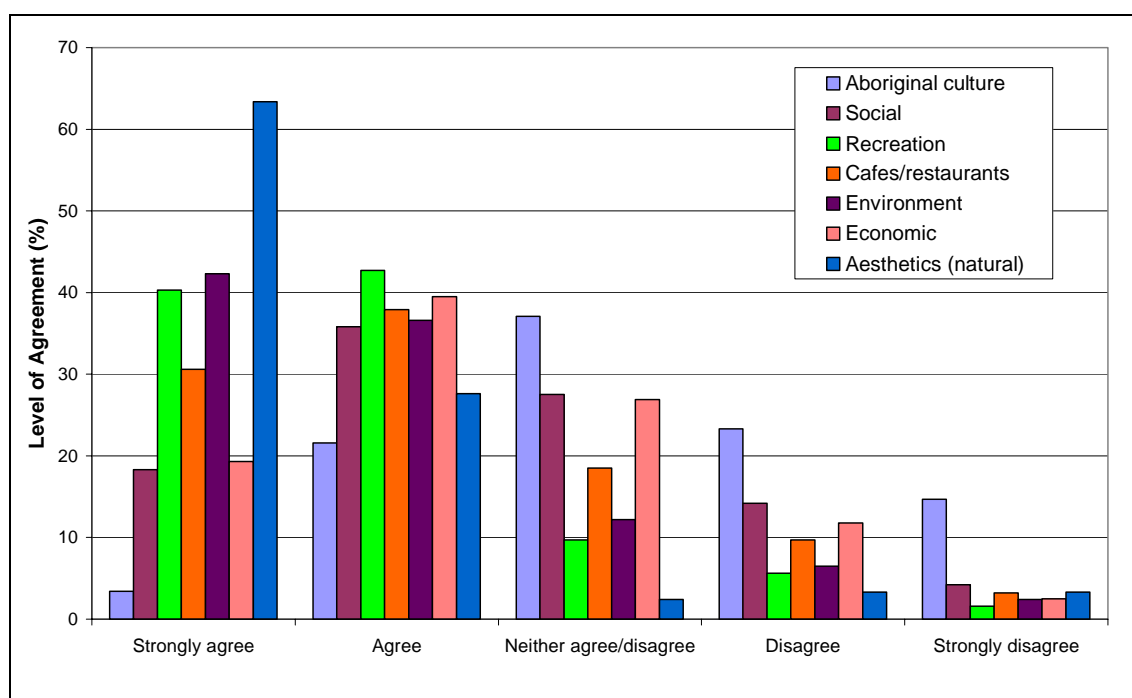
Figure 7.2 Tourist values for Swan River

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The recreational and environmental values all had strong associations for the tourists, which were similar to the findings of the other stakeholder groups. However, the social and economic values of the river were not as highly rated as being important to the tourist (Table 7.5 & Figure 7.3). Whilst the stakeholder groups involved in the semi-structured in-depth interviews believed that the social values were the most important value attributed to the river followed by the economic values (Table 7.1), the tourist stakeholder group rated the economic value as being one of the least important values. Social values that were most important to the visitors were associated to infrastructure on the river, such as the cafes and restaurants, whereas the other stakeholder groups focused on the river as an important meeting place. However, it is feasible to assume that visitor needs will differ from the local community needs or those who rely on the natural resource for their livelihood.

Table 7.5   *Comparison of Tourist Values*

Respondents N=125	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	Total
	%	%	%	%	%	%
recreational	40.3	42.7	9.7	5.6	1.6	100
environment	42.3	36.6	12.2	6.5	2.4	100
cafe/rest	30.6	37.9	18.5	9.7	3.2	100
social	18.3	35.8	27.5	14.2	4.2	100
economic	19.3	39.5	26.9	11.8	2.5	100
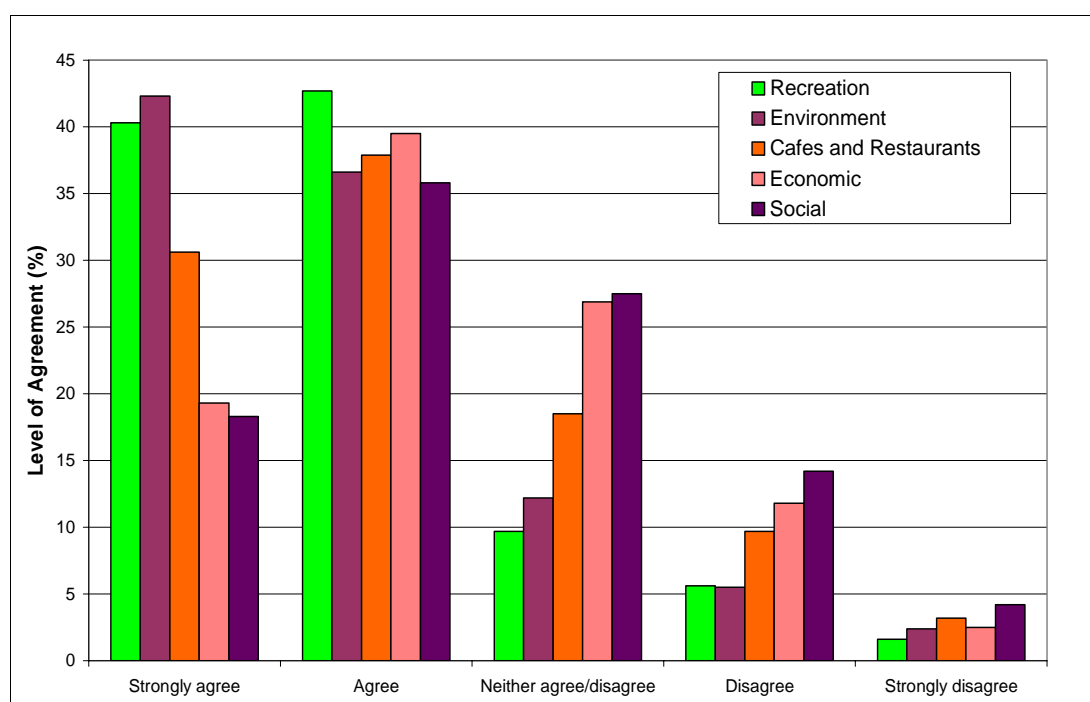
Figure 7.3   Comparison of tourist values

The value that had the least level of importance to the visitors was the indigenous cultural value, which appears consistent with findings from stakeholder groups involved in the semi-structured interviews. A total of 25% of responses either strongly agreed or agreed with the statement: Information about the meaning of the river to aboriginal people is important to my visit. A total of 37.1% neither agreed nor disagreed with the statement. Barrack Square, where visitors were interviewed, has no interpretive signs regarding the river and therefore a lack of awareness of the indigenous significance may not be surprising.

In order to triangulate the research data, secondary data was used to compare findings and enhance the richness of data. The following section discusses findings from a government initiated planning process, which involved a series of workshops which was deemed important for the findings of this study.

7.4   Government Consultation with the Perth Community

In 2000, the Western Australian state government undertook a scenario planning process guided by the Western Australian Planning Commission and scenario planning specialists from Curtin University of Technology (Government of Western Australia, 2000a). The Perth's Futures Project, as it was called, aimed to establish an integrated framework of strategies to guide Perth's development over the next 30 years and involved input from 70 stakeholders (Government of Western Australia, 2000a). The overall objective of the project was to achieve sustainable development outcomes for the Perth community. Several key findings are pertinent to this study, by identifying the values of the Swan River in the broader community. The Future Perth Project identified that the natural environment was extremely valuable for residents and stakeholders who saw it as a 'fundamental aspect of Perth's unique quality of life.' (Government of Western Australia, 2000b, p. 107). The suggestion that there will be increased demand for natural spaces, by a government respondent in Section 7.2.1.3, correlates with the findings of the Futures Project.

Public open spaces were of particular value to the stakeholders. The Swan River was isolated as an important river whose 'value to the City of Perth could not be understated' and needed to be protected (Government of Western Australia, 2000b, p. 108) which is consistent with findings from this research. The community was perceived to be very protective of the river and its foreshore area and concerns were expressed about the health of the river. Stakeholders indicated a belief that algal blooms demonstrated the fragile nature of the river's ecology and the river should be protected from pollution.

A statement from one of the participating stakeholders suggested that:

If the Swan River turns green every year, then it's not going to be a good look. If the heart of your city is going bad, that's a symbol that all is not well (Government of Western Australia, 2000b, p. 22)

Another key finding appeared to demonstrate the conflicting values associated with the river. Although the stakeholders were concerned with the health of the river and believed the river must be protected, they also believed that the river was underutilised and provisions should be made to enable greater interaction with the river. What this entailed was not identified in the Future Perth document but the opinions were similar to many of the tourism stakeholders who participated in the case study.

In addition to the Future Perth project, consultants were employed by the government to conduct research into the public's perceptions towards maintaining the Swan-Canning River (Swan River Trust, 2000b). Four hundred and eight telephone interviews were completed with Perth residents, across a range of suburbs. Residents were asked to rate the importance of the river to themselves and to the general Perth community on a scale of 1-9 where 1 was not at all important and 9 was extremely important (Swan River Trust, 2000b, p.21). Two thirds of the respondents or 66%, rated the river as 'extremely important' to them personally and a further 19% rated the river as 'important'. When asked to rate the importance of the river to the community, the 'extremely important' rating increased to four fifths or 80% while 14% rated the river as 'important'. Only 1% of the respondents rated the river as being 'unimportant'

or 'not at all important'. Again, while there is no qualitative data to clarify why respondents felt this way about the river, the results do substantiate the importance of the river to the Perth community. The results also complement the case study results and confirm that although there are differing values associated with the Swan River by the various stakeholders, there is certainly a strong attachment to the river.

7.5   Conclusion

This chapter presented the values that respondents from each of the stakeholder groups associated with the Swan River. When discussing the values of the river, it was evident that each individual stakeholder identified with the river in their own way, which was reflected in their values. The respondent from the Swan River Trust best summed this up by saying that:

> the key values are whatever benefit people derive from it and that is going to change from the activity and perceptions of the person. It may be a warm feeling from knowing it's there…it may be that people derive enjoyment from simply driving past and looking at it or from walking beside it right through from the benefits of recreational use…(GO10SRT)

The connections that people have with natural environments are often based on emotional sentiments which ultimately influence how they perceive, experience, and value the environment (Cheng et al., 2003, p. 88). Emotional attachments were evident in the stakeholder responses and although there were common or shared values expressed across each of the stakeholder groups, differences in values were also evident.

The stakeholder perceptions of sustainability are closely linked to the values that are held by stakeholders. The economic perceptions of tourism stakeholders correlate with the economic value that tourism stakeholders held for the river. Non-government stakeholders not connected to tourism, explained sustainability and sustainable tourism development in terms of an ecological perception which reflected their focus on the

ecological values associated with the river. Government respondents centred discussion either on ecological or triple bottom line perceptions which reflected their main values associated with the river. Community respondents generally demonstrated a lack of understanding of the terminology, although their values associated with the river concentrated on the social and ecological elements.

Social and economic values were the most commonly expressed values across all stakeholder groups. Social values were viewed in terms of family and social gatherings and there was also a strong emphasis on the memories that were associated with the river. Findings highlighted the importance of the visual amenity to the stakeholder memories associated with the river.

The strong economic focus of the tourism operators set this group apart from the non-government, community and tourist stakeholders. The economic value for tourism operators was critical as it provided their livelihood. Governments also recognised the importance of economic benefits at different levels. Firstly, the river provided economic benefits, as a tourism attraction for interstate and international visitors to the state. Secondly, individual local governments perceived an economic advantage to being located on the Swan River, through tourism potential and increased rates. Tourists did not view the economic values of the river to be the most important, although they did see that infrastructure such as café's and restaurants were important parts of the visitor experience.

Different perceptions were evident amongst stakeholders, in terms of the utilisation of the river. Tourism operators and tourism organisations viewed the river as being largely underutilised, whilst non-government, community and government stakeholders not connected to tourism, believed that the river was under pressure from over use. Interestingly, the secondary data from the Perth Futures project also believed that the river was underutilised.

Ecological values were common amongst stakeholders and findings highlighted the different perceptions of these values. Tourism operators viewed the ecology in terms of a use value as attractions for tourists, whilst non-government respondents, in particular, emphasised the intrinsic value of the ecology. The non-government respondents viewed tourism as a possible threat to the river's ecology.

The natural values, in terms of the aesthetics of the landscape, and the sense of place were important across all stakeholder groups, with sense of place being of particular importance to the non-government stakeholders. Natural values were deemed important to the tourists visiting the river and the secondary data suggested that these values were of particular importance to the broader Perth community.

Findings illustrated that a number of values were not shared across the stakeholders. Historical, indigenous, scientific and spiritual values were mentioned by a minority of respondents, but to these respondents they were deemed significant values. Of particular interest is the fact that indigenous values, which have very strong links with the indigenous community, were not readily recognised by other stakeholder groups. Potentially this may lead to conflicts between different groups, if the indigenous values are interpreted inappropriately or not considered in management strategies.

In order to work towards sustainable tourism development outcomes for the Swan River, values will play an integral role in the effectiveness of the process. Understanding the different values that people associate with the river, will highlight potential contradictions and conflicts that may arise in planning and management practices and strategies. The underlying values, if not understood, may keep the system of the river in a state of fluctuation and influence sustainable outcomes. As Adger et al. (2003) pointed out in Chapter 2, decision making processes involving natural resources are complex due to the need to balance between stakeholder values.

Both Chapters 8 and 9 present key stakeholder issues that emerged throughout the research which connect stakeholders. Chapter 8 will present the findings related to stakeholder issues surrounding tourism planning and management.

CHAPTER 8

TOURISM PLANNING ISSUES

Whose river is it anyway? (GO10SRT)

..in the end, a planning system is really about trying to help bring about the best society possible, according to what that society wants so that comes down to the values of the people. (NG3WWF)

8.1   Introduction

The concept of sustainable tourism development, as discussed in Chapter 2, and as the findings demonstrate in Chapters 6 and 7, is interpreted by stakeholders in diverse ways and often reflects the values that stakeholders associate with natural resources. Bramwell and Lane argue (2000, p. 18) that policy objectives and management strategies are required to consider these interpretations. Tourism planning processes are necessary so that values, such as those highlighted in the previous chapter, can be incorporated into policies, and be reflected in sustainable tourism development outcomes (Bramwell & Lane, 2000; Hall, 2000b; Mathieson & Wall, 1987; Page, 2002). Both Hall (1994) and Page and Thorn (1998) claim that interest in sustainability has resulted in a renewed focus on the planning process for tourism destinations in order to minimise the potential negative impacts of tourism. According to Page and Thorn (1998), effective implementation of the tourism planning process, which normally involves public sector organisations, lies in whether these planning mechanisms actually exist and whether they are able to guide and monitor tourism development and potential impacts. Hall (1994) also argued that, although planning and resultant policy may reflect stakeholders' interests and values, a question remains as to whether certain influential stakeholders' interests and values have been considered over other less influential stakeholders. In other words, whether there has been an equitable representation of stakeholders in the planning process.

The identification of tourism planning as a mechanism for achieving sustainable tourism development is not without its critics. Burns (1999) for instance, believes that there is a degree of naivety in the belief that tourism planning can maximise benefits and minimise negative impacts. Although there is agreement that planning has evolved from more simplistic and uncomplicated approaches to tourism, the complexities involved in tourism planning have been largely unrecognised adequately or considered by planners (Burns, 1999). It is also argued by Burns (1999) that tourism planning focuses on the aspects of macro-economic development, foregoing the micro-economic and social development needs of communities. As pointed out in Chapter 3, McKercher (1999) also argues against the belief that tourism can simply be controlled though planning, and believes this attitude has led to reductionist interpretations of tourism systems models.

When managing a natural resource such as the Swan River, it is necessary to understand that different perceptions of what stakeholders regard as sustainable development exist. Diverse visions may lead to conflict between the stakeholder groups and possibly inhibit the ability to effectively plan for sustainable tourism development outcomes. In other words, the conflicts may act as strange attractors within the system. A common vision for the river shared by all stakeholder groups is required before effective planning strategies can be implemented and sustainable outcomes can be achieved. It is also important to identify and address underlying issues in the planning process.

This Swan River case study identified some of the complex issues that surround tourism planning connected to the river. The common tourism planning issues which emerged in the interviews are displayed in Figure 8. 1. As discussed in Chapter 3, underlying behaviours have the ability to influence a complex system and its components and therefore it is important to pay attention to these possible triggers within the system that can result in changes. Planning issues are one possible set of influences that will affect components within a system and their values. This chapter presents the issues surrounding tourism planning.
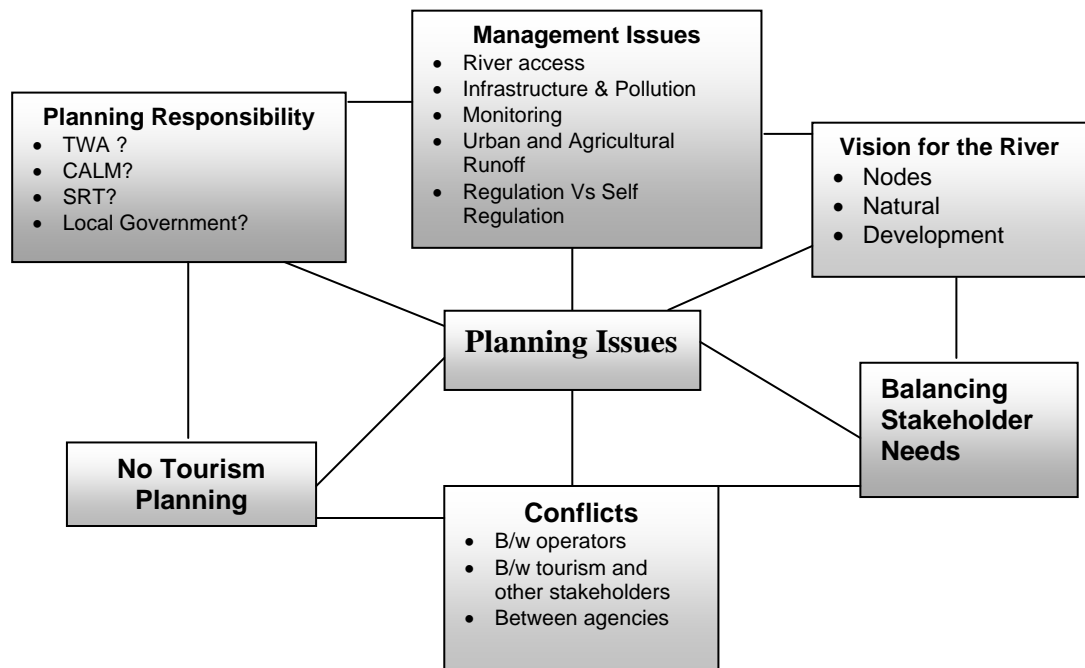
Figure 8. 1   Planning issues

Firstly, findings surrounding stakeholder identified management issues, which need to be considered in planning and policy formulation, will be presented. Issues to be discussed include river access, infrastructure and pollution, boat speed and licensing, monitoring and carrying capacity. Secondly, stakeholder perceptions of tourism planning responsibilities on the river are discussed in order to demonstrate the lack of agreement regarding who should take on these responsibilities. Thirdly, the theme of stakeholder communication will be discussed along with apparent and potential conflicts that were identified between the different stakeholder groups, which may have planning and policy implications. Finally, perceptions of stakeholder visions will be presented in order to demonstrate that planning for sustainable tourism is complex and requires a common vision.

8.2   Management Issues to be Addressed in Planning Process

Stakeholders highlighted underlying management issues that may impact on sustainable tourism development outcomes and need to be addressed in planning strategies. Figure 8.2 and Table 8.1 present the most common identified management

issues that stakeholders believed could impact on tourism or the river and were viewed as important in any planning process. Importantly Figure 8.2 illustrates that the issues should be viewed as interconnected and influencing the complex system of the Swan River.
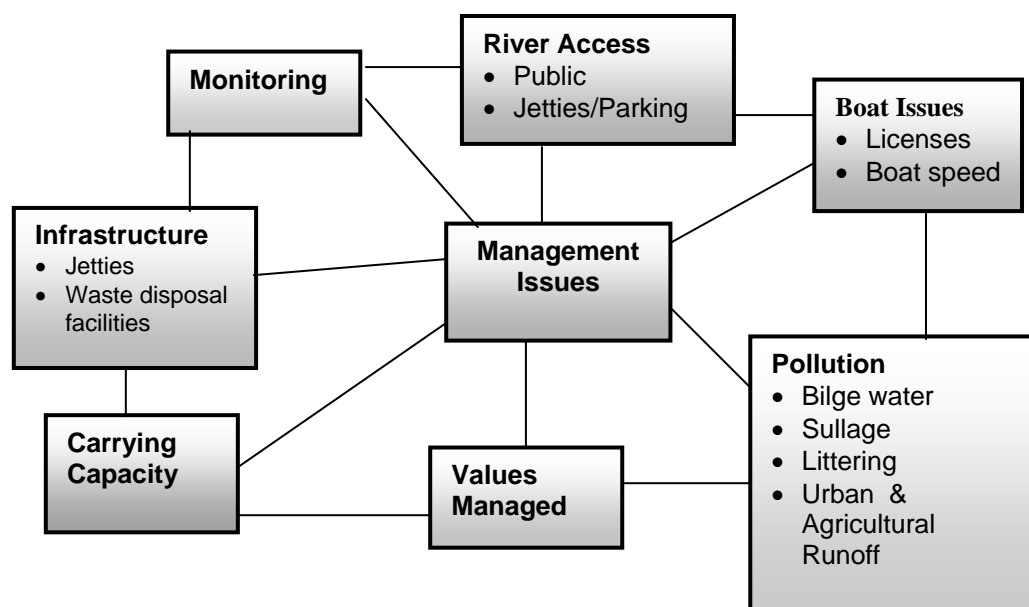
Figure 8. 2   Management issues identified by stakeholders

Table 8.1 specifically highlights (shaded squares) the common management issues identified by each stakeholder. Stakeholders viewed the issues as requiring greater planning by government agencies.

Table 8.1 *Identified Management Issues*

Policy and Planning Respondent	Management Issues						
	Monitoring	Licensing	Self Regulation	Regulation	River Access	Infrastructure & Pollution	Carrying Capacity
TO1BO	■	■			■	■	■
TO2BO	■	■	■		■	■	■
TO8BO		■			■	■	■
TO11BO					■	■	■
TO12BO *		■	■		■		
TO10REST	■		■				
TO13REST					■		
TO14REST							
TO9ACC			■		■		■
TO15ACC					■	■	
TO16ACC	■			■			
TO17ACC			■		■		
TO3ST	■					■	
TO4ST	■				■	■	
TO7ST	■				■		■
TO5ATT							■
TO6RET						■	
GO1CSC *		■		■	■	■	
GO2DPI				■		■	
GO3CSP	■			■			
GO4SCC				■			
GO5COP	■				■		
GO6TPF	■				■	■	
GO7CALM *	■				■	■	
GO8TWA							
GO9DIA				■	■		
GO10SRT							
NG1CBA		■			■		
NG2CCWA*						■	■
NG3WWF					■	■	■
NG4TCWA					■	■	
NG5FACET	■			■			
NG6NT					■		
NG7WAITOC					■		
CO1KAY		■			■		
CO2CG		■	■		■		
CO3CYC					■		
CO4RECF *					■	■	
CO5PB*							
CO6YC *		■				■	
CO7SA						■	

Key: * = Two Respondents Interviewed

Codes for Respondents: **TO = Tourism operators**   **BO** = Charter Boat Operator
REST = Restaurant/Café/Bar   **ACC** = Accommodation Provider   **ST** = Scenic Tour Operator
ATT = Attraction   **RET** = Retail Operator

GO=**Government Departments**   **NG**=**Non-government**   **CO**=**Community**

* Note: The table indicates whether a stakeholder identified a particular issue or an issue was implied from comments via a shaded square.

8.2.1 *River Access*

Increasing river access and retention of existing access was the most commonly cited management issue across all stakeholder groups that needed to be considered in river planning (Table 8.1). Findings in Chapter 7 demonstrated the social values associated with the Swan River and pointed out that river access was closely linked to this value. Tourist stakeholders, whose businesses are situated on the Barrack Square development, focussed on river access in terms of parking and transport for local residents and tourists alike. Parking was a particularly strong concern for tourism operators who believed that the Barrack Square development was poorly planned and administered. In fact many of the tourism operators were angry about the lack of parking facilities, which they believed impacted on their business by limiting the numbers of people accessing the restaurants, cafes and charter boat operations. At present there is little parking available at either the Barrack Square jetties, on the City of Perth foreshore or the Mend St jetty on the southern City of South Perth foreshore, where local community and tourists embark and disembark the ferry service. One respondent at Barrack Square, argued that:

> ...we certainly do need access to the river. Whether you like it or not, the population of Perth is very much dependent on cars and will be, I think, for some time- that's not going to change. So if you want people to utilise the river you need access for vehicles. (TOATT)

The ferry service operator suggested that parking could be made available outside the city where a shuttle bus service was available. Although tourism stakeholders highlighted specific issues regarding access to Barrack Square, the major issue regarding river access for most stakeholders was that of public access to the river's foreshore. One stakeholder explained that historically, public access to the river had been an important issue, from the time of early subdivisions of land for cattle grazing. The subdivisions along the foreshore were vital for settlers in order for their cattle to have access to water. It is evident that stakeholders today still have very strong feelings about the need for the community to have free access to the foreshore. The following two comments summarise the general attitude of public access by the stakeholders:

> I think the community expects... the coastal foreshore and the river foreshore to be public access and it's almost considered to be a right. (GO7CALM)

> ...the river is a resource that is owned by the whole of the community and therefore the whole community should have reasonably unfettered access to the river. (CO6YC)

The attitude towards public access to the foreshore was demonstrated by the recreational stakeholders advocating public access via their facilities which abutted the river's edge. The yacht club, which is restricted to private members, is situated on the foreshore of the river, but allows a right of way access through the site for non-members. In talking about tourism development, the yacht club respondent stated that tourism on the river should be encouraged, as long as public river access is not impeded. A community respondent agreed with the above sentiment, commenting that:

> I think it's really important that people get that the river foreshore is public land....I think it's important that we have developments that are coming close to the river, you know, restaurants and people and things that look out onto the river but they should be set back a bit so you have that bit of foreshore that is open to the public and that is natural... (CO2CG)

Local government respondents also spoke about the need to retain river access for the public in any developments that occur along the river. The City of Perth respondent, for instance, suggested that 'public access should be maintained along the entire length of the foreshore by an interconnection of beaches, boardwalks and promenades.' (GO5COP)

To demonstrate the importance of public access to the river foreshore, a government and non-government respondent explained that government proposals are in place which will attempt to purchase private property that front the Swan River. Although the following comments did not have direct relationship to tourism development, the values and perceptions about the importance of public access which is evident could have implications for tourism planning. For example, the National Trust respondent suggested that landowners should be encouraged to:

> ...put covenants on their land. There's tax breaks, ...there's a whole bunch of things. Now you would have thought up and down that river, that we could get involved by looking at land owners and say look don't develop your land, put a

conservation covenant on your land, that means in perpetuity that's going to be a conservation reserve. Here's some tax breaks, here's some incentives...and we stop this amazing greed, and it is greed about development....we don't have a Bill of Rights in this country. Do people, just because they own the land have an indistinguishable right to develop it, which affects the whole community?... (NG6NTWA)

Community representatives also expressed ardently the need to retain river access for recreational activities, believing that access to the river so close to the city was something unique. The kayak respondent who referred to an area adjacent to Perth Waters, away from Barrack Square explained, that:

> There's quite good parking we can find when we take the kayaks out, stuff like that and that's good, because it's right in the city. There's no travelling time involved and that's a very important thing and it's extremely important from a tourist point of view and all that because one of the things the river gives you when you're on the river, it gives you a different aspect of the whole city and Kings Park and everywhere else from a different perspective you wouldn't see when you're on the land. (CO1KAY)

The above comment also highlights the important visual values that this respondent associated with access to river.

The cyclist respondent also claimed that access right along the river's edge was important for cyclists who presently had access to most of the river. As with other stakeholder comments, the cycling respondent pointed out the only places that were inaccessible were the private properties 'in front of the very rich people's houses. They like to have their own view unimpeded by cyclists or the herd waddling by....' (CO3CYC)

The unique characteristic of the open spaces along the Swan River was viewed by one tourism stakeholder as an important feature to preserve explaining that:

> I like the open access the parkland, all the development being offset, the greenery, the walking paths, the public access. I think that this makes us unique and the older this city gets, the older the rest ...people forget this, the older the

rest of the world gets and the more they will be filling in what little gaps they've got. I think what we have here is unique. (TOBO)

The majority of stakeholders argued fervently for the retention of public access. However, there were tourism stakeholders who believed that it was also important to have a healthy mix of commercial tourism development and residential development along the river whilst maintaining public access. Finding the balance was the key to one tourism operator who stated:

> On the one hand you want a lot of commercial development and on the other hand you want a lot of green development. It's a matter of finding the right balance and the right mix. I think the danger is to go too far one way or another. You sacrifice commercial development for the other areas and you get something that won't work and if you go the other way and have too much commercial development, you'll kill the attraction. So it's a mix, it's a hard mix. (TOATT)

As Figure 8.3 shows, the attitudes of tourism stakeholders appear to be consistent with the economic values associated with the river and the economic sustainable tourism development perceptions.
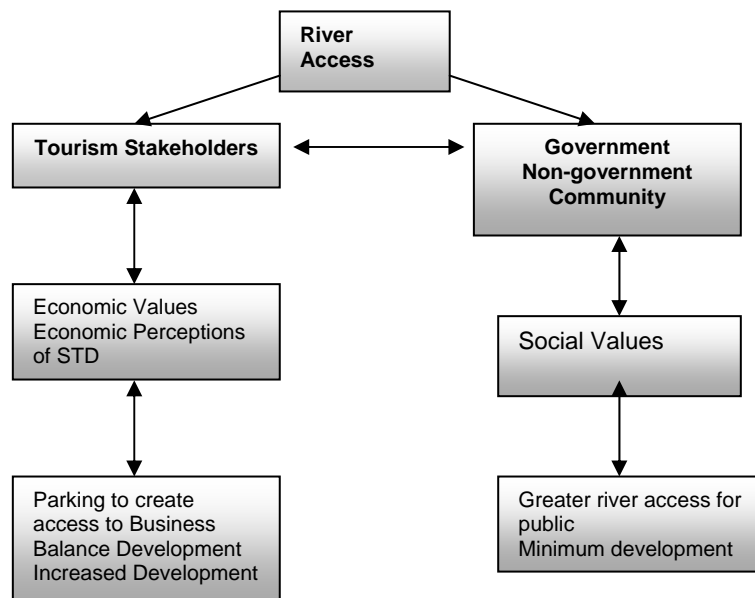
Figure 8.3   River access and values connections

These attitudes also appear to be consistent with the belief of tourism stakeholders that the river is underutilised, as pointed out in Chapter 7. Community, government and non-government stakeholders on the other hand were most vocal about the need to retain river access for the public which appears to be consistent with the social values related to river access that they associated with the river. Interestingly, the arguments for retention of river access were not reflected in these same stakeholders' perceptions of sustainability. In fact, only one community respondent highlighted social perceptions of sustainability in relation to the river.

Stakeholders identified a number of issues related to infrastructure and pollution, including limited river access via jetties, waste disposal, urban and agricultural run-off and littering. The range of infrastructure and pollution issues that were identified by stakeholders, all have the ability to impact on the values stakeholders associate with the river.

8.2.2   Infrastructure and Pollution

The lack of infrastructure along the river, such as jetties, was perceived to influence river access. Tourism stakeholders, in particular the charter boat operators, pointed to the limited foreshore access points available along the river at the present time. Conflicting information from respondents was evident, as to who was responsible for the approval and construction of jetties. Government stakeholders indicated that there was uncertainty amongst departments as to who was responsible. The Department of Planning and Infrastructure (DPI) respondent believed that jetties, once constructed, were the responsibility of local councils, whilst the local government respondents believed that the DPI should be responsible for their upkeep. Community respondents, such as RecfishWest, indicated that many of the jetties were not only unsuitable for vessels, but were unsuitable for fishing activities due to their poor condition, because no one would take responsibility for their maintenance. Charter boat operators also indicated that jetties were not well maintained and very few were suitable for larger vessels used by the tourism operators.

Of perhaps greater concern in terms of management issues connected to jetties, was the issue of infrastructure required for waste disposal along the river for the charter boat operators. *Riverplan*, which was discussed in Chapter 5, is the key management strategy for the river. The strategy identified disposal of ballast waste from vessels as a key pressure on the river, yet the charter boat operators all claimed that there were insufficient facilities in which to dispose of not only ballast or bilge water, but sullage. Chapter 6 also identified this stakeholder issue as a potential barrier to sustainable tourism development. The charter boat operators interviewed for this study, all cited instances where sullage was emptied either into the river, or out at sea, rather than disposal into holding tanks on board vessels or on the jetty. One charter boat operator stated that they used existing facilities to pump out sullage into facilities at Barrack Square but believed that infrastructure was inadequate to meet demand.

The Transperth Ferry respondent, which is government owned, claimed that because of the lack of infrastructure, bilge water, containing oils, are simply pumped into the river. The yacht club respondent also commented that the issue of sullage was not only an issue for tourism operators but for the private vessels explaining that:

> ...there needs to be better provision of waste disposal. To my knowledge, there are only two... sewerage pump outlets on certainly this side of the river. (CO6YC)

The DPI respondent, however, did not believe the lack of infrastructure was an issue, although did acknowledge that the algal blooms occurring as a result of increased nutrients, was an issue for Swan River Trust. In contrast to the DPI respondent's perception, the following comments from tourism and government stakeholders indicated that the lack of infrastructure where operators could pump bilge water and oils was an issue.

> ...with this redevelopment *(referring to Barrack Square)* they should have a central point whereby we could put bilge, bilge water, which has oils and rubbish in it and also oil changes, there should have been a separate facility put down here for the commercial vessels instead of leaving it that we do our own thing. Most here, I think do the right thing but it's not good practice .... (TOBO)

> Well as you know, oil spills down here are a big thing. No one agrees to, no one tries to do them *(reference to oil spill)* but they will happen because they've got no where for any oil wastage to go...I mean all the boats use them. (GO6TPF)

Tourism stakeholders who operated restaurants at Barrack Square acknowledged the impact of the lack of facilities for charter boats to dispose of waste. One operator argued that:

> The only issue being with rivers around here is the pollution, there's been diesel spill and the SRT cleaned all of that up. In an area where you have as many boats and ferries and pleasure craft that's around it's sort of a hub. A hub of that sort of activity on the river you are going to get that sort of pollution. I wouldn't expect to see anyone swim in the river. (TOREST)

A community respondent who indicated that they had previously owned and operated boats, believed that it was not simply a lack of infrastructure that resulted in bilge water being discharged into the river, but the actual mechanisms on board the vessels. The respondent explained that:

> A lot of pollution ends up in the river from vessels that expels their bilge .... directly into the river. Most of them do this via an automatic bilge pump that a lot of boats have got...boats take in some water and it automatically expels the bilge into the river. But unfortunately it usually comes out of the engine area and there's probably quite a lot of oil, diesel and oil, and I see it all the time. (CO1KAY)

One of the larger charter boat operators believed that charter boat operators were responsible and did not pollute the river, and instead highlighted the impact of private vessels pumping waste into the river. The charter boat operator claimed that:

> If we need to we would get tankers down to remove water from the bilge, but all the toilet waste and other waste goes into holding tanks on board the boats and that gets pumped out into the cleaning sewerage system. (TOBO)

In contrast, a smaller charter boat operator, who acknowledged their vessel was not fitted with holding tanks, explained that they would inform customers that toilet facilities were on board but that all waste was discharged into the river. Informing the customers, it was believed, would deter people from using the facilities while on board. Interestingly many non-tourism stakeholders indicated the presumption that all vessels operating on the river had holding tanks on board and that all waste was discharged offshore.

Fuel spillage was also highlighted by some tourism stakeholders as an issue at Barrack Square where operators are able to refuel. There were conflicting reports from operators, some of whom indicated that fuel spillage had occurred on numerous occasions, whilst others commented that it was not an issue. One charter boat operator stated that in seventeen years of operation, their company had only one fuel spill, 'which was done eighteen months ago and it was cleaned up very quickly and owned up very quickly.' (TOBO)

The respondent representing indigenous interests believed that the fuel spillages were having a detrimental impact on the river and commented that:

> ...it's hugely enormous I mean it's never looked worse. I mean the river is getting a lot of water activity now which is very difficult environmentally to restrain boats from using fuels and oils and things like that, which do discharge into the river... (NG7WAITOC)

Other pollution issues that impacted on the river and could subsequently impact on tourism operations of the river were urban and agricultural runoff and litter. Both of these issues were highlighted across all stakeholder groups but particularly from the government, non-government and community stakeholders.

The community catchment group respondent pointed to the increasing pressure on the river from urban runoff, and believed that management strategies were required to prevent pollution from entering the river. The respondent from the South Perth City council agreed that urban runoff and stormwater were major issues for the river and stated that:

> Over the last couple of years we have been doing a lot of work, mainly on our western foreshore actually....to all of our storm water traps which wash straight out into the river.... (GO3CSP)

A non-government respondent representing environmental interests, referred to the increase in phosphorous that was now entering the river from both agricultural and urban areas, due to a decrease in native vegetation and land use patterns. Other stakeholders also spoke of the increased runoff from agricultural and urban areas and

linked the damage to the river that was occurring through accidental spillages from the city's drainage system. The possible impact to tourism of runoff was recognised by one tourism stakeholder operating scenic tours, explaining that:

> ...there is fertiliser that is coming from different areas of farming, which is not tourism directly, but it could have an affect on tourism. The algal blooms concern me because it is an indication that the river is not healthy as we would like it to be. It's important to keep the river healthy. (TOST)

Litter was highlighted as an issue which impacted on the visual amenity of the river and therefore could impact on the tourism experience. Litter was attributed to tourism activities, such as tourism brochures creating foreshore litter and the use of plastic coffee cups from cafés which were ending up in the river. The lack of rubbish bin facilities for private vessels that docked at Barrack Square was also highlighted as creating problems for the tourism operators who worked from this area. One charter boat operator indicated that private vessels often threw rubbish bags onto the jetty leaving it for the Barrack Square businesses to clean up. The DPI respondent confirmed that even though private vessels were not allowed to leave rubbish at Barrack Square, it did occur. The president of the Charter Boat Association indicated that the lack of rubbish disposal facilities right along the river was an issue, and cited incidences where operators had thrown rubbish into the river or onto wharfs.

Recreational activities such as fishing were also highlighted as creating litter for the foreshore areas of the river. The two RecfishWest respondents acknowledged that littering of bait bags and fishing line was an issue and were actively embarking on an education program to minimise the problem. The same respondents also attributed the littering problem to the broader community, highlighting the issue of plastic shopping bags which found their way into the river causing significant problems.

8.2.3 Boat Speed and Licensing

Issues surrounding boat speed on the river and the absence of a licensing system for private vessels in Western Australia, were deemed to be important management issues which many stakeholders believed were increasing pressure on the river and had the potential to impact on tourism activities. During daylight hours, private vessels can travel eight knots and from sunset to sunrise, boats cannot exceed 10 knots on the river, including Perth Waters (Department for Planning and Infrastructure, 2003). Sections of the lower reaches of the river have lower speed limits. However, findings suggest that confusion as to where and when speeding restrictions were required existed amongst the charter boat operators and other stakeholders, along with a belief that restrictions were not adequate. Operators explained that there is an understanding that boat protocols for the river are adhered to by operators, such as slowing down near yacht clubs and bridges, but private vessels often did not adhere to these protocols. Speeding private vessels were cited as creating problems for both charter boat operators and the Transperth ferry. For example, the Transperth operator indicated that the private vessels created waves which impacted on people embarking and disembarking from the ferry. Community respondents also indicated that boat speed was an issue, which impacted on their activities. Comments included:

> One thing I've always thought for many years is the boating speed limit on the river is ludicrous because it would have to be the only river in the world that I know of that you could have an unlimited speed in an enclosed river area (CO1KAY)

> I have a personal view and I'm not necessarily expressing the view of the yacht club here, that as the use of the river increases the trend tends to be towards power boats, not yachts, that the river requires tighter controls of speed of boats using it. There are only some areas in the lower reaches of the river that have a speed restriction but this end of the river hasn't, the boats can travel at whatever jolly speed they like...after sunset vessels can only travel at 8 knots. During daylight hours they do any speed they like. Now some of these very large boats, cause huge wash. The effect that that has on assets such as pen structures, is quite devastating, but more importantly, on the condition of the river bank. I think that needs to be controlled. (CO6YC)

Apart from the impact on activities, boat speed and the resultant boat wash, as the yacht club respondent indicated, also created problems of river bank erosion. Boat wash was an issue identified by the Riverplan document. One local government respondent situated in the Swan Valley believed that the problem was created by both private and commercial vessels. The Swan Valley, as explained previously, was the gateway to the wineries and river bank erosion was a particularly large issue. In the Swan Valley area, the river is both narrower and shallower than sections of the middle reaches located near the City of Perth therefore is more prone to impact from boat wash. Charter boat operators however, held the belief that the commercial boat operators were not responsible for boat wash and erosion with one operator explaining the impacts from private vessels:

> Private boats, and largely these are brought in to designs in North America etc, they can kick up a bow wave bigger than this ferry this size, right, *(pointing to a large commercial ferry)* they're hammering away on the banks you know, and we all know about the degradation of the bank...but they simply don't seem to concentrate on that... (TOBO)

Contributing to the perceived problem of private vessels by stakeholders was the fact that private vessels do not require a license to operate on the river. Private vessel operators do not need to participate in any boat testing procedures or demonstrate knowledge of boating protocols or understanding of the river before operating on the river. Any person aged seventeen or over is legally allowed to operate a private vessel on the river. As one tourism stakeholder indicated:

> The biggest problem from private vessels is number one, they don't have to pay for a license. They don't have to pass any test, they have no knowledge... (TOBO)

The yacht club respondent believed that licensing was a safety issue that required government intervention explaining that:

> I think now, the only state in Australia where there is no regulation for the licensing of boat drivers...therefore a chap can go and buy a $2 million dollar boat, with massive engines in it, having only ever driven a car, and drive it up and down the river. Very dangerous when there may be children sailing in dinghies you can see the little dinghies on the jetty here that we put quite young children and disabled people in. There is a lack of understanding, by some of the river's users of the safety requirements of these users. (CO6YC)

Stakeholders across all groups indicated that introduction of compulsory licences and testing for private vessels was required but cynically suggested that the state government would not have the courage to do this in case of voter backlash.

Since interviews were conducted, licensing of private vessels has been introduced by the State government. The government is also revising its policy on skipper certification and by 2008, it expects to introduce compulsory certification of skippers, prior to operating a private vessel.

8.2.4 Monitoring

A small number of respondents highlighted monitoring, to ensure that operators complied with existing regulations, and the carrying capacity of the river as two management issues that need to be addressed in planning processes. Again these issues, if not addressed, have the potential to impact on sustainable tourism development outcomes of the river.

As discussed in Sections 8.2.2 and 8.2.3, pollution and boat speed were perceived to be significant issues, requiring management strategies to be implemented. However, linked to these issues is a perceived lack of monitoring undertaken by government departments. The Transperth ferry respondent commented that:

> ... we used to have the DPI [*Department of Planning and Infrastructure*] up here ... they used to have a runabout up here which did up river but all of those guys have gone to fisheries; we never see them. We see a police boat once a week, he comes up here on weekends. They're never here when things are happening or going wrong... (GO2TPF)

The DPI respondent indicated that the department did not regularly monitor operators but explained that:

> ...we do have marine inspectors that go up and down the river and if they find anything that needs looking at then they show them an infringement notice or they do the survey or safety, give them a safety requirement, lighting, compass that sort of thing or if they are overcrowded. Our marine inspectors monitor that... (GO2DPI)

A lack of financial resources from the government was the key reason given by stakeholders for the perceived lack of monitoring of operators on the river. A non-government tourism respondent believed that monitoring of all tourism operators was required to ensure that they were utilising sustainable practices. Tourism stakeholders that did not have direct operations on the river, such as the helicopter and tram tours operator, pointed out that they were monitored, but only on safety procedures, rather than tourism related practices.

8.2.5   Carrying Capacity

The question of carrying capacity of the river, in terms of the number of charter boat operators and developments, was highlighted by a number of stakeholders. One of the respondents from the City of Swan Council indicated that within council, there was concern 'about the use of the river, and the frequency of use and the amount of traffic.' (GO1CSC) The local government respondent's perspective on carrying capacity centred on the ecological impacts to the river and the aesthetics of the river.

A somewhat surprising finding of this research was that there is no record of how many tourism operators are actually on the river. The Department of Planning and Industry respondent explained that no actual records of charter boat numbers operating on the river exist. According to the DPI respondent, once a vessel is registered with the Department, an application and a permit is required before commercial activities are undertaken. However, the department has no formal record of whether applications or permits have been activated by vessels owners and therefore has no listing of commercially active vessels operating on the river. One of the larger charter boat operators indicated that their perception was that there were too many operators on the river who were struggling to be economically viable.

A non-government stakeholder also questioned the number and concentration of tourism operators who are located at Barrack Square and spoke in terms of the potential environmental impacts arguing, that:

I'm a little bit concerned though, that they're all concentrated at one point. There's a lot of boats there, there's been a lot of spills there over the year. It's not just sewerage spills, it's your oil spills every other spills, you know...I go back to the thing what will the river sustain. How many ferries can you put in there without ruining the values of the river they want to be on. How many restaurants do you put in without ruining the thing. It may be you need stagger them all. (NG2CCWA)

In Chapter 6 and 7 this particular respondent emphasised that ecological management and planning of the river should be a priority.

Government departments such as The Swan River Trust (SRT) and the Department of Conservation and Land Management (CALM) also questioned the need to identify a carrying capacity for the river. The SRT respondent believed that in terms of establishing a vision for sustainable tourism development of the river, 'we need to understand what the environmental and social carrying capacity is...'. (GO10SRT) The CALM respondent believed establishing a carrying capacity for natural systems was crucial and pointed to the need to determine how many operators were using the river; an issue also identified by the non-government tourism association. This respondent spoke in terms of intergenerational and intragenerational equity, explaining that:

...it's just an understanding and protecting what it is that we've got for the next generation and the next visitor and that can actually mean putting on limitations and the tourism industry will support this... (NG4TCWA)

Despite the concerns, the conflicts and the different perceptions that stakeholders expressed during the interviews, it was evident that the majority of stakeholders believed that any planning and policy development must ensure that the values associated with the river system are managed. The RecfishWest stakeholder for instance stated that there needs to be an understanding of the attitudes of the community to the river believing that:

There's very very little stuff done on site on what those attitudes are and how those attitudes are shifting towards the stewardship responsibilities of the Swan River and we don't want to see the situation where incrementally, the water quality and the amenity values of the Swan River deteriorate to the stage of the Seine, or the Thames river or the Potomac. (CO4RECF)

There was a degree of scepticism by stakeholders as to the ability of a general planner to ensure that natural resources were maintained. One Conservation Council respondent argued in terms of the connections in the system and strongly argued that:

> The trouble with planners, they really don't understand anything about basics in the environmental systems. And you know it's a hard concept. You know I've got a really good background because of my biochemistry. Biochemistry is all about networks...the thing about environment is all networks. You don't change something without altering something and planners just don't understand this. (NG2CCWA)

Planning by other stakeholders was viewed as both a necessity to ensure sustainable use of the river and as a means to retain values as the following comments suggests:

> Planning is key- you must look at all the important sites to leave alone. The pressures of development are there all the time. Needs to be places to interact along the river, without planning mechanisms in place, we well keep encroaching on the visual amenity of the river. (GO8TWA)

A common agreement existed amongst stakeholders, that planning was essential for the river. However, a number of themes emerged throughout the research period, which related to influences on planning processes and these will be presented in the following section.

8.3   Issues Influencing Planning Process

Table 8.2 highlights a number of key underlying stakeholder issues surrounding planning that can be regarded as leverage points or triggers within the complex system of the Swan River. These triggers have the ability to produce turbulence and result in changes within the system. Once identified and understood, intervention measures can be adopted to ensure positive outcomes for the system. The issues identified, include a lack of awareness of *Riverplan,* differences in the stakeholder visions for the river, the perceptions of tourism development along the river, stakeholder communication and the perceived conflicts between and amongst stakeholder groups.

Table 8.2   *Issues Influencing Planning Processes*

Respondent	Riverplan	Development Issues			Stakeholder consultation and communication		Conflicts				Vision				
		Planning & Impact aware	Development Positive	River Underutilised	Required	Not required	B/w Tourism & Agencies	B/W Operators	B/W tourism & other groups	B/w agencies	Greater Tourism Development	Lack of Vision	Nodes	Opportunities	Values Managed
TO1BO	N	■			■			■			Y	■			
TO2BO	N		■	■	■		■		■		Y	■			
TO8BO	N	■							■		Y		■		
TO11BO	N	■			■		■		■		Y				■
TO12BO	N	■			■		■		■		N		■	■	
TO10REST	N		■	■	■		■				Y				■
TO13REST	N										Y				
TO14REST	N		■	■	■						Y				
TO9ACC	N	■				■					Y			■	
TO15ACC	Y	■		■	■						N				
TO16ACC	Y	■			■						N				
TO17ACC	N	■			■						Y				
TO3ST	N	■			■		■				Y				
TO4ST	N	■			■						N				■
TO7ST	N	■			■						Y				■
TO5ATT	Y				■						Y				
TO6RET	N		■		■		■	■			Y	■			
GO1CSC *	Y				■						N	■			
GO2DPI	Y		■	■	■				■		Y			■	
GO3CSP	Y	■									N	■	■	■	■
GO4SCC	Y				■						N		■		
GO5COP	N								■		N	■	■	■	
GO6TPF	N	■	■	■	■				■		Y				
GO7CALM*	Y	■			■				■		N				■
GO8TWA	N	■	■		■			■			Y	■			■
GO9DIA	N				■				■		N			■	
GO10SRT	Y				■				■		N				
NG1CBA	Y								■	■	Y	■			
NG2CCWA*	Y	■			■						N			■	■
NG3WWF	Y	■			■						N	■			
NG4TCWA*	N			■	■						Y				
NG5FACET	N				■				■		N				
NG6NTWA	N				■						N	■		■	
NG7WAITOC	N								■		N				
CO1KAY	N	■									N	■			
CO2CG	Y	■			■						N	■	■		
CO3CYC	N		■	■					■		Y			■	
CO4RECF *	Y	■			■				■	■	N	■		■	■
CO5PB *	N	■			■						N				
CO6YC*	N	■			■						Y			■	■
CO7SA	N	■			■						N	■			

Key: ***** = Two Respondents Interviewed   **Y**= Aware of Riverplan   **N**= Not aware of Riverplan

Codes for Respondents: **TO = Tourism operators**   **BO** = Charter Boat Operator
REST = Restaurant/Café/Bar   **ACC** = Accommodation Provider   **ST** = Scenic Tour Operator
ATT = Attraction   **RET** = Retail Operator

GO=**Government Departments**   **NG**=**Non-government**   **CO**=**Community**

*Note: The table indicates whether a stakeholder identified a particular issue or an issue was implied from comments via a shaded square.

8.3.1 *Riverplan*

As Chapter 5 discussed, the *Riverplan* document released by The Swan River Trust in 2004 is regarded as a comprehensive management plan, aimed at providing a framework for the coordinated environmental management of the Swan and Canning River (Swan River Trust, 2004a, p.3). Up until August 2004, there had been no overall management strategy for the Swan River. *Riverplan* identified key issues and pressures related to the river, including erosion, algal blooms, boating and boat wash (cf: Chapter 5, Section 5.6 -Table 5.1 and 5.2). Stakeholders interviewed in this case study identified many similar issues which were perceived to be management and planning issues that needed to be addressed.

Interestingly, the majority of stakeholders had not heard of the *Riverplan* document, nor were they aware of the consultation process that had occurred twelve months prior to the release of the document (Table 8. 2). This finding suggests that stakeholder communication may be an issue, particularly as the majority of the tourism stakeholders had not been aware of the document. It also raises the question of how well impacts of tourism development are understood by the broader community and the lack of understanding of the importance of including tourism in any planning or management strategies on the river. One tourism stakeholder explained with a hint of sarcasm that:

> tourism operators, tourism industry in general, gets used to be being overlooked by bureaucracy. (TOBO)

Those stakeholders who were aware of the consultation process or indicated an awareness of *Riverplan* appeared to be quite sceptical about the document. For instance, one community stakeholder stated passionately that:

> ...we sat at a couple of these Riverplan meetings and they had all these grand motherhood statements, we're going to do this and we're going to do that. And the question we raised 'well who's going to take responsibility for it?' and there wasn't a hand that went up in the room, so I think that's going to be where the problem's going to lie, it's who's going to take responsibility and who's going to fund it, which is the other issue.. (CO4RECF)

A local government respondent was also sceptical about the document, explaining:

> *Riverplan* is a major document and that's great that the state government has done that and that's given a little bit of direction, but it's a bit unclear in what local government needs to pick up and there's a lot of pushing the buck down to local government and there's the realisation of the lack of resources at our level and who is picking up what.... (GO1CSC)

Despite the scepticism about the *Riverplan* document, it was generally agreed amongst stakeholders that an overall management strategy for the river was a good starting point. However, it was evident that consideration of tourism planning was not a priority within the strategy and this will be discussed next.

8.3.2 *Planning Responsibilities*

One of the key findings of this research, which potentially will influence sustainable tourism development outcomes on the Swan River, was the absence of a tourism development plan for the river and lack of a common tourism vision statement. The issue of visions will be discussed further in Section 8.3.5. As Hall (2000b) suggests, planning enables potential negative impacts of tourism to be minimised, whilst maximising the economic benefits and therefore planning is essential if sustainable tourism development outcomes are to be achieved.

Tourism Western Australia (TWA) is the government's statutory authority which has the responsibility to promote Western Australia's tourism industry. Their sole responsibility is to market the state in order to increase tourism growth. In fact, the mission statement for the TWA is to 'accelerate the sustainable growth of tourism for the long term benefit of Western Australia' (Tourism Western Australia, 2005c). One of their key objectives is to 'grow Western Australian tourism faster than the national average' (Tourism Western Australia, 2005c). The tourism agency has no responsibilities linked to tourism planning of the Swan River. Tourism strategies for the Swan River, are in fact not included in any of the plans developed by the government agencies interviewed for this case study. Recreational activities were identified in plans written by the Department of Conservation and Land Management

(CALM), but no specific plan addressed tourism development. However, tourism as an activity was identified as a possible negative impact on the river in several government strategies such as the *Swan Region Strategy for Natural Resource Management 2004* which was discussed in Chapter 5.

Interestingly, the respondent from the Perth City Council, which fronts the northern foreshore of the Swan River, acknowledged that council had not considered a connection between the river and tourism commenting that:

> …to be honest with you, the City of Perth hasn't addressed the river as a tourist attracting facility. I ….before meeting with you, looked through our strategic plans, now isn't this interesting, neither the Swan River or the word tourism appear in the City Strategic Plan...1998-2002, a four year strategic plan. (GO5COP)

The City of Perth respondents went on to say that:

> ...the reality is that we've waited so long for any major planning for the river to happen that we've never seen serious long term vision to plans produced by the City of Perth. It's always this adhockery stuff.... (GOV5COP)

The respondent from the South Perth council, situated on the southern foreshore of the Swan River, also acknowledged that there was no tourism plan for the river at a local government level. Despite acknowledging the lack of planning, both the City of Perth and City of South Perth council respondents indicated that there were tourism opportunities for council to initiate along the foreshore. In fact since the interviews were undertaken, City of Perth has proposed a large tourism development adjacent to the Barrack Square precinct.

While Tourism Western Australia (TWA) does not have any responsibility for tourism planning, the respondent from this agency believed that ad hoc development was occurring along the river. The respondent commented that 'there was no planning for Perth's foreshore at this stage' (GO8TWA) and also indicated that there was a need for planning mechanisms to be put in place. Other government agencies also indicated that an integrated approach to tourism planning for the river was required. The comments support Hall's (2000b), assertion, as noted in Chapter 2, that the lack of government agency responsibility leads to ad hoc responses to development. This appears to be the case with the Swan River.

Tourism stakeholders' comments revealed that a similar attitude existed regarding the necessity of tourism plans. One accommodation operator stated that:

> It does need to be some bigger picture that is agreed upon and set in stone in such a way that successive governments stick to the same planning scheme, rather than everyone having their own iconic idea of what's going to be there and building something appropriate to their scheme. (TOACC)

A non-government tourism association representative, whilst agreeing that an overarching tourism plan for the river was required, indicated that ad hoc plans had persisted in the past. The respondent expressed frustration at planning attempts, explaining that:

> It would be cheeky to say it needs a plan, we've had enough damn plans...I was involved, Perth City Council had a major study of the Perth foreshore about 15 years ago. A Massachusetts architectural planning firm got the job. They were criticised. It went out of town...it didn't go to local people. Hundreds of people were involved, I was on the tourism technical group and...it was huge....nothing has ever happened. (NGTCWA)

While there was a general agreement across all stakeholder groups that tourism planning for the Swan River was required in order to prevent ad hoc development from occurring, there was not the same level of agreement as to who should be responsible for that planning.

As discussed at the beginning of this section, the government tourism agency responsible for marketing the state has no planning authority. The Tourism Western Australia (TWA) respondent stated that the TWA should have an advisory role with whoever took on the task for tourism planning, but could not, as a tourism agency, be responsible for it. Other tourism stakeholders agreed with the agency's role as a marketing body arguing that:

> The Tourism Commission's *(Tourism Western Australia)* charter is one of promoting development or also to, in some cases, proves viability but its primary responsibility is to market Western Australia as a destination, not to get involved in the lobby process of operators wanting to run businesses that may involve the river... (TOACC)

However, there were stakeholders, such as the respondent from the Department of Indigenous Affairs, who suggested that planning should be a part of the role of TWA, saying that:

> My basic view on that is I guess that in terms of tourism full stop, you should start with Tourism WA and they should be the key people...then you should come down to more specific grouping. But there's obviously a considerable number of stakeholders who should be involved.... (GO9DIA)

Other government stakeholders argued that tourism planning was not their responsibility. The Swan River Trust, the overall managers of the river and the planning decision making authority of the river, indicated that Tourism Western Australia should be involved in tourism planning along the river.

In contrast, there were stakeholders who disagreed vehemently with the idea of the TWA being involved in tourism planning. A number of tourism operators and community stakeholders indicated their frustration with the perceived lack of understanding of tourism on the river by the TWA. For instance the president of the Charter Boat Association complained that:

> The Tourism Commission, (*Tourism Western Australia)* they wander off. They are like in fairy land or la la land sometimes. They're just out of touch with reality. No focus to speak of...they haven't even made an approach to us.. (NG1CBA*)*

Many stakeholders, including tourism stakeholders, believed that The Swan River Trust (SRT), should be involved in tourism planning providing that there was input from other river stakeholders. The SRT have the ultimate power to approve development plans and activities linked to the river. As stated above, The Swan River Trust believed that it was not their responsibility to plan for tourism, however they acknowledged their agency was involved in the approval process for any potential tourism development that occurred along the river. According to the SRT respondent, the agency's role was viewed in terms of a coordinating role, explaining that:

> I think the SRT has to be engaged right through that process, hopefully, to a lesser and lesser degree as you get into more detail. I suppose our ambition is for us to have in other public authorities, institutionalise principles and standards so that we are not the universal policemen. (GO10SRT)

Several community stakeholders believed that integrated planning was required and should involve a range of government departments, including agencies such as the Department of Conservation and Land Management (CALM) and Main Roads. They also stipulated that local government should also be involved in the planning process. Some stakeholders, who were apprehensive of local government involvement in tourism planning, expressed an opposing view. One community stakeholder in particular was adamant that local government should not be involved stating that:

> I don't think Perth City Council should have any control over it *(reference to river)* whatsoever, it just so happens that ...it just comes under their heading. I don't think that gives them any right to any thing at all. I think they should keep out of it. I mean they've got the city, they've got this and they've got that, but I don't think that gives them the right to do anything on the river at all.......I think the river shouldn't belong to anyone....the councils should have no rights as far as I'm concerned. (CO1KAY)

This particular stakeholder believed that the government tourism agency should be involved in tourism planning. Interestingly, this respondent was opposed to any further tourism development along the river.

By contrast, there were non-government stakeholders, representing environmental interests who believed that neither tourism nor planners should be involved with the river. One Conservation Council respondent, for instance, argued strongly that:

> I don't think the tourism industry should be involved at all. I think that those sort of decisions must be made, not even by planners of any sort. I think they have to be made by ecological or environmental managers or we're dead as far as the river is concerned. (NG2CCWA)

The comment reflects the strong ecological values and ecological perception of STD that were expressed by this respondent.

Another non-government stakeholder representing environmental interests believed that it was important for non-government organisations (NGOs) to be involved

in the planning process in order to represent and protect the interests of the broader community. It was felt that without input from NGOs, only perspectives from state and local governments and development proponents would be included in the plans. The respondent also believed planning was required to establish where developments could occur or should not occur along the river and to ensure that environmental impact assessments were conducted prior to any development approval.

Overall, despite the diverse range of opinions of who should be responsible for tourism planning, there was a general agreement that a holistic approach to planning was required. The following comment is indicative of the level of awareness of the need to incorporate a diverse range of stakeholders in the planning process and the awareness of the potential for tourism to impact on these stakeholders:

> ...there are a number of stakeholders that probably have a right to have a say. The community at large, various self interest groups, or special interest groups along the way. There's a number of yacht clubs that would be very keen on putting forward their point of view. Big users of the river, the powerboat people, canoeing clubs, all of those sort of river users, recreation fishermen, all the windsurfers and kayaks and all those types of activities that happen on the river, and we're lucky that we can do those sorts of things. But they would be very interested in having their say in tourism development and it's going to impact on the yacht clubs if there's twice as many cruise boats running up and down the river. It's going to impact on them if they start building things that encroach out on to the river... (TOACC)

The need for a holistic approach to tourism planning in relation to governance will be discussed further in Chapter 9. Another issue which was raised by stakeholders that has the potential to influence planning and policy development is that of stakeholder communication. This will be discussed in the following section.

8.3.3   *Stakeholder Consultation and Communication*

Balancing the needs of stakeholders when implementing any planning process is considered important (Burns, 1999). Planning for the Swan River is complex because of the diversity of stakeholders involved either directly or indirectly in the river. As one non-government stakeholder stated, tourism is but one stakeholder whose needs should be considered. In a complex system, each component has the ability to influence or be influenced by another component and bring about a change to the system. Effective communication is therefore important to ensure that stakeholder needs are considered in planning that is undertaken for the river, including tourism planning. The majority of stakeholders agreed that stakeholder consultation and communication is required when it comes to tourism planning (Table 8.2). As Section 8.3.1 discussed, knowledge and awareness of *Riverplan* appears to suggest that communication between government agencies and stakeholders appears to be an issue.

The non-government stakeholders were particularly vocal and emotive about the need for community consultation regarding any proposed tourism development involving the Swan River. Stakeholders believed that identification of community values through consultation and a sense of ownership could be created by the process as the following comments illustrate:

> ...because the community really does value the river as a part, for a wide range of reasons, it is essential that the community be allowed to participate in the...decision making process. Planners tell you that and they have their system for trying to achieve that but when it comes to specific things like management of the Swan Canning River and ... future planning policy for the whole of Perth I think it's essential that the community be engaged in the whole dialogue, in their dialogue about what are our values now, what do we want to see in the future, what's acceptable to the community, what's not.... (NG3WWF)

> ...the very first thing they have to do ... they have to consult thoroughly and long and hard with the community... I think that a lot of that has been done, but I think that is one of the integral parts...because it has to be something that the community feel that they own, if they don't own it then forget it. It won't work, it won't work. ...the community underpins all this stuff of eco and nature based tourism (NG5FACET)

Tourism stakeholders believed that the importance of the river to the community dictated the need for planning consultation to occur. For example, one operator, who had business links with a charter boat operator, claimed that:

> In principle everyone uses the river or has some sort of affiliation with the river and in principle should be involved, which effectively, is the whole community as it is a very important asset. So in theory, everyone should be involved. Everyone who has an interest, whether it's personal, business, spiritual. (TOST)

In contrast to those espousing greater consultation, a number of stakeholders expressed hesitancy about such an approach, with some respondents indicating that there were too many stakeholders connected to the river and believed that 'too much consultation results in disarray. Chaos.' (NG6NTWA) Some tourism stakeholders also indicated a perception that community members were anti-development and in fact were 'stifling development' on the river. This was linked to the perception that the river was underutilised as discussed in Chapter 7. Those respondents, who were hesitant, agreed to some form of consultation with the community arguing that representative groups or experts should facilitate the community consultation process.

In addition to the different perspectives associated with community consultation in the planning process, many tourism stakeholders expressed frustration and anger at their perceived exclusion from consultation in general by government agencies at a more local level. These strong emotions were expressed particularly by the tourism stakeholders who operated out of Barrack Square. The main grievance was linked to maintenance and upgrading work being undertaken by the Perth City Council and Main Roads at Barrack Square, which involved redevelopment of parking infrastructure. As a result of works, a number of sections of the area had been cordoned off to redirect pedestrians and many businesses were facing economic impacts. As one retail respondent emphasised:

> I think the big problem that I see is they do not talk to stakeholders with regard to any development. On this big thing they are doing at the moment *(referring to the road works)* it's cost me about 50% of my business and they have gone and done it at the worst time of year. ... They need to talk to stakeholders. I mean if it was me, I would put all the car park under the Belltower – they could have had a three storey car park there. The City Council would have been getting the money for it and we wouldn't have all these car parking problems....it comes to the point where they don't listen anyway. (TORET)

Charter boat operators were also emotional about the perceived lack of consultation, claiming:

> I know we're not consulted, I know we're not listened to, alright. They do not take any attention to what our suggestions are.....number one is the first thing that should be done is that no decisions should be made about tourism without the tourist operators having the final say. (TOBO)

> We're happy to communicate but they want to do what they want to do. They don't want to do what suits and what works... they just want to do whatever they want to do. That's fine! Nothings going to get done. We have to live within those rules. (TOBO)

While stakeholder communication can influence effective planning processes, conflicts, whether perceived or actual, between and within stakeholder groups can also impact on the process. Conflicts, which can be a useful indicator to identify stakeholder needs, should be considered in the planning process. The following section presents some of the perceived conflicts that were discussed by stakeholders which may impact on any tourism planning process.

8.3.4   Conflicts

Conflict, although having negative connotations, can be used to bring about positive outcomes for planning and policy development when working with stakeholders (Hall, 1994; Lovelock, 2002) and is a very important aspect of complex systems ability to evolve as Chapter 3 discussed. The presence of conflicts between stakeholder groups or within stakeholder groups reflects the different agendas, values and perceptions of stakeholders (Jamal & Getz, 2000; Reed, 2000). Conflicts, however, have the ability to hinder planning processes if they are not identified and understood.

In the Swan River case study, perceived conflicts were identified between and within various stakeholder groups that should be considered not only in tourism planning but for overall river planning. Stakeholders across all groups identified conflicts that either had occurred or could occur between tourism and other stakeholder groups (Table 8 2).

Non-government organisations that represent environmental interests highlighted potential conflicts if holistic tourism planning was not undertaken. For instance, one Conservation Council respondent believed their organisation's role was to act as a lobby group to conserve the Swan River from inappropriate development. The respondent argued that their organisation should be represented on any stakeholder group dealing with planning for the Swan River and claimed that there was a perception by some stakeholders that conservation should not be represented. The respondent gave an account of a recent steering group meeting associated with planning for the river where the composition of the group was discussed and commented that:

> We need to be there because prior to now, ecosystem management or total management hasn't been looked at and this is where the agencies are going wrong. They're all there with their vested interests... there was considerable debate at the last meeting ... and I was happy to provide input into a debate from the tourism commission .... they think they could ... represent the environment quite easily. Now we would object to that... I very passionately opposed!
> (NG2CCWA)

Although the meeting referred to by the Conservation Council respondent was not related to tourism planning, the response indicates the potential conflicts between groups with different agendas if there is no agreement over planning.

Three of the community respondents, who represented recreational groups, raised the issue of conflicts between tourism and recreational activities occurring along the river. The representatives from RecfishWest and the Department of Fisheries were particularly emotive about the impact that tourism had on their activities, namely recreational fishing. Commenting on the Barrack Square development for instance, one respondent argued that:

> We have issues, all sorts of issues with that. I think the first one was the fact they've gone and built all this lovely area and then said to rec fishers, you can't fish there ... our guys come and fish, and bring their boats near Barrack Street jetty, and they're casting north because there's some good bream there and they get these security guards who will do everything except do their Dirty Harry thing,. 'Right you, get out of the way', and people are going 'oh look there's fish here, he's catching fish, hey Mark come and have a look, get the camera'. But they don't want to work together in terms of the total picture, they see small picture stuff. The businesses there are putting pressure on the fact that one customer once complained that a fisherman got in their way, so therefore they want all fishing banned. (CO4RECF)

Conflicts for this particular community group surrounded not only tourism related impacts, but also management and planning implications from the Department of Conservation and Land Management (CALM), the agency responsible for managing Western Australia's lands and waters for conservation of biodiversity. CALM management plans restrict fishing access to the Marine Park Sanctuary portions of the Swan River that are governed by the department. There are also conflicts with other groups which were highlighted by RecfishWest such as the Racing Turf Club, which had caused pollution of the river in 1998 resulting in significant fish stock losses.

Interestingly, by comparison, there were stakeholders who had concerns about the activities of recreational fishing and the impacts it was having on the river's foreshore. For example, stakeholders highlighted issues such as people digging for worms, littering and trampling of native vegetation. These issues were in fact acknowledged by the respondents from RecfishWest and the Department of Fisheries

who explained they were working with government agencies to establish education programs for their members to minimise such impacts.

The Swan River Trust respondent discussed tourism planning in a broader context and believed that potential conflicts between tourism and other stakeholders were in their infancy. The respondent explained that:

> At its most fundamental, I think it *(reference to planning)* turns on two themes. One is whose river is it anyway and the other is the relationship between those tourism activities and the environmental management. I think the environmental management one is probably the simpler of the two, the really difficult one is whose river is it anyway. Is this fundamentally a river for 'Joe Public', a recreational or community asset, or a facility that is going to be primarily used to derive and to support tourism? And we are beginning to see the emergence of conflicts between those two things. We would like to think those two things are compatible,... but there are certainly situations where maintaining compatible relationships are difficult and I think it is going to be increasingly difficult. The amenities and facilities that 'Joe Public' may want are not necessarily those that are going to be the ones that services the tourism industry and the facilities and functions of the tourism industry are not necessarily going to be supporting those values and benefits. (GO10SRT)

Potential conflicts were also identified with tourism and recreational activities, and the growing residential developments along the river's foreshore. A respondent from The Department of Conservation and Land Management (CALM), for instance, discussed the increase in residential and infill development along the foreshore and the corresponding increase of complaints from residents regarding noise from Jet Skis that were being dealt with by their agency. It was suggested by the CALM respondent that active recreational activities would eventually be replaced by more passive recreational activities. The Ski Association respondent also raised the issue of residential developments impacting on their activities, stating that:

> I think they have to be very careful of what they are going to plan. It's like East Perth canals (*referring* to *a new high density residential development on the Swan River*) over there, you know, they don't like boating in the area, like the noise of speed boats, this lakes area, *(a residential development being constructed at the time of interviews)* the high rise. They're going to have the same complaints...this is an area we've had since '68, ...they're going to build and all of a sudden say, hang on we don't want those guys there, now let's get them off the water… (CO7SA)

The Swan River Trust (SRT) respondent, confirmed the concerns raised by the Ski Association, indicating that their agency had received complaints from residents living along the foreshore regarding noise from charter boat operators. Another example included residents campaigning to the SRT to restrict licensing of a bar situated on the river foreshore. The SRT respondent was sympathetic to the tourism operators arguing that residents had unrealistic expectations of river living and they 'cannot buy into a river environment and expect exclusive peaceful use' (GO10SRT). The complaints illustrate that residents moving to the river location have different values associated with living on the river foreshore that will influence the river system and its components and therefore must be considered in planning processes.

In addition, conflicts surrounding the environmental impacts of river use were identified. For example, as Chapter 7 noted, a number of stakeholders highlighted the impact of wash from tourism charter boats, pointing out the damage to the river banks. However, the tourism stakeholders who discussed boat wash impacts suggested that the impacts were a result of wash created by private vessels rather than commercial operators. One charter boat operator believed that charter boats were unfairly targeted for causing boat wash or for speeding and claimed that private boats:

> ...can kick up a bow wave bigger than a ferry this size complying to all the regulations and they're hammering away on the banks, you know, and we all know about the degradation of the bank...but they don't seem to concentrate on that, they go screaming along and they bounce every boat on their mooring down there. Our guys go 2 knots over right, and they're served with a warrant. (TOBO)

Despite charter boat operators arguing that they were not responsible for boat wash, stakeholders highlighted the impacts of commercial vessels on their particular activity. One Powerboat Association representative explained that:

> ...when the big ferries come through and have a high wash, we have to stop until the water clears because our boats travelling at excessive speed have to have fairly good conditions. (CO5PB)

Many perceived conflicts identified by stakeholders reflect issues within the stakeholder groups. For instance, the Transperth Ferry respondent, cited conflicts between the two local governments with whom the ferry service had to deal. The ferry service essentially travelled from the City of Perth to the City of South Perth using a north/south route for its service. Disagreements existed between the two councils regarding operating services during special events, which the respondent claimed affected both tourists and residents alike. The respondent also argued that neither council believed the ferry was their responsibility and therefore would not contribute to the running of the service, despite the tourism benefits both councils received from the service. The ferry service respondent argued that if local government contributed to the cost of running the ferry services could be extended and greater economic benefits would result.

Respondents also discussed conflicts within the tourism stakeholder groups. These conflicts were largely between the charter boat operators who had businesses at Barrack Square. One boat operator was quite vocal about the conflicts, saying:

> We have a major problem down here, there used to be all-in wars and brawls down here on the jetty in days gone by. I was physically bitten by another operator, which went to court. (TOBO)

Other charter boat operators interviewed substantiated the conflicts which appeared to be linked to two specific operators. Whether this conflict was competition based or not, could not be established due to the operators not wanting to expand upon the issue. However, it appeared that the conflict had been an ongoing one, with one charter boat company attempting to buy out the other company at one stage.

Conflicts between tourism stakeholders and government agencies were highlighted and evoked substantial emotions from the tourism respondents. The CALM respondent believed that conflicts would continue to increase stating that:

> I guess user conflict will become increasingly an issue around the river in the future. You get more people and there will be more conflict if it's not planned in a big picture sense. (GO7CALM)

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Many of the issues raised in this section relate closely to issues of governance and will be discussed in Chapter 9. However, it is important to note that the perceived conflicts between tourism and other stakeholder groups, whilst relating to governance issues, will also impact on any tourism planning process. The conflicts identified by stakeholders may reflect the fact that there is no clearly identified and shared vision for tourism development on the Swan River. Findings from the research indicate that differing stakeholder visions for sustainable tourism development of the river exist and these will be presented in the following section.

8.3.5 Tourism Vision

The issue of tourism developments along the Swan River produced diverse opinions from the stakeholders interviewed who held different perceptions of what would be regarded as sustainable tourism development. The majority of tourism stakeholders agreed that tourism development should occur on the river and that the river was currently underutilised (Table 8. 2). However, amongst these operators, there was a belief that the natural amenity of the river should be retained. Government, non-government and community stakeholders were less enthusiastic about tourism development occurring on the river, fearing that the natural features of the river would be destroyed. This attitude is consistent with findings that the natural values of the river were important to these stakeholders. It is also consistent with their ecological perceptions of sustainability. One community stakeholder commented that:

> I just think we should have a different vision for where we want to go. So instead of having all the Perth city foreshore being all restaurants stuck on the river and you know, no trees, no sedges, no nothing, you know, I think...that they should be in certain specific spots and we should look at, have a different vision for what we can do for the rest of the foreshore… (CO2CG)

A local government stakeholder, also advocated enhancement of the natural features of the river, and discussed council plans for a section of the Perth foreshore that had been redeveloped into a wetland area. The area was developed with the purpose of nutrient stripping in conjunction with attracting tourism and recreational activities. A similar stance was taken by a non-government stakeholder who believed that natural developments, such as the wetland development, would attract tourists by differentiating

the Swan River from other urban rivers, not only from Australian cities but from cities around the world. The respondent argued that a sense of place could be established by a well managed river, not only for tourists but importantly, for the local community. It was also pointed out that there was a need for people in urban areas to be provided with an opportunity to connect with nature, explaining that:

> …watching birds and watching bird life and the whole issue, now developing a wetland zone down there, where people in the city, where people who live in the city, can walk down at night, they don't need necessarily to have the café culture right there, it's nice to have it, there is some there, but they would have just as much pleasure …in certainly from a tourism point of view. I travel a lot, I stay in motels, to walk along a river that's well sign posted, well lit up, a bit of diversity in it, is a very good situation for a sense of place. (NG6NTWA)

One community stakeholder, representing the Water Ski Association, also advocated keeping the river as natural as possible, from both an ecological perspective and to prevent impacts on their particular activities. In addition this stakeholder held the perception that the carrying capacity of the river had been reached. The respondent stated that:

> We don't have a problem with any development as long as it doesn't impact on us, you know…and I think leaving the river as much as it is in its natural state, is I think, the best thing for it. I really do… and for us it suits us for the wash to dissipate...I don't think we would like to see too much development because I think with development it creates more boat use and the use of the river at the moment is really at a maximum at the moment. (CO7SA)

Tourism stakeholders pointed to the economic benefits of an urban river which retained a natural landscape, reflecting their economic values and perceptions of sustainable tourism development. A charter boat operator emphasised the importance of the natural landscape of the Swan River, as an urban river, for their particular operations in the following statement:

> I've been involved in tourism all my life and I always market the river and its foreshore and the context which the city and the suburbs in relation to the river, and I'm talking all of the river and…I mean this is the only place in the world that I know of where you can get on a boat and forty five minutes you can be in a major wine growing area from the city, you can be down river it's just fantastic, and all the way you're looking at greenery, parkland, the whole bit, even the houses we point out are houses, they're not high rise, they're not towers…..To me the whole set up, my operations that we operate here doesn't

depend on more restaurants or more cafés, we don't go to restaurants and cafes… (TOBO)

Overall, there was a common agreement that the natural landscape of the river was beneficial from a number of perspectives, including future tourism development, the environmental aspects of the river and for the broader Perth community. This general attitude appears to be a common connection between stakeholders, including the tourist stakeholder group and is consistent with the natural values associated with the river by these groups. This common vision, could be utilised in future planning processes.

Apart from the stakeholders who wanted to retain the natural features, there were tourism stakeholders whose vision for the river was increased tourism development along the foreshore. Again, these suggestions reflect the strong economic values associated with the river that tourism stakeholders held. The argument from stakeholders proposing this view was set largely in economic terms. As stated in Chapter 6 (Section 6.6.2), a number of operators at Barrack Square were struggling financially with their business operations and it was argued that increased development would be economically sustainable. One restaurant owner stated that:

> …you need other drawcards for people to come down…..I don't know what is happening to the hotel * that was supposed to be built down there ... it's been on the cards right? It's supposed to have started in August last year, never happened…. that's why we took this over and it's not happening, so it's been very hard. It's not easy business at the moment… we need more competition, we need more for people... maybe not more eateries, because we've got enough…but maybe something for the kids so that families will come down this way as well, especially on weekends… (TOREST) *†

Another tourism stakeholder explained their vision for the river in terms of the perception that the river foreshore was underutilised, commenting that:

> Personally, I don't think Perth utilises its waterfront as much as it should do…I'm very surprised. I've moved here 7 years ago and I'm very surprised that it hasn't been done before….I've been to other cities around Australia and they

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* The hotel the respondent refers to began construction in August 2005-12 months after the interview took place.

do utilise their river foreshore. I just can't work out why Perth hasn't done it yet. I think they should. (TOREST)

Stakeholder visions within the tourist, government, non-government and community groups also focussed on the river itself, not just the foreshore. One common theme was for greater river transport to be allowed to be developed, giving greater access points along the length of the river. The government licensed ferry service, Transperth Ferry, currently runs two transport routes throughout summer which is reduced to one route for the remainder of the year, from Barrack Square on the north shore to the south shore. The ferry operator believed that new jetties should be established along other sections of the river stating that:

> the boats along the river they belong together, there's just not enough places along the river to utilise boats... (GO6TPF)

A community stakeholder believed that an expanded ferry system could take passengers, locals and tourists to designated stops along the river and should be linked to the greater Perth public transport system. The respondent from the Department of Planning and Infrastructure (DPI), which licenses charter boat operators, pointed out that investigations had been carried out by the department in the late 1990s, as to the feasibility of an increased ferry service but had concluded that economically it was not feasible. Despite these findings, the DPI stakeholder supported the vision of greater river usage stating that:

> ...I like to see people attracted down to the river, that's what it's all about. I'd like to see a lot more river traffic that utilises the river with the boats because it's already there… (GO2DPI)

A charter boat operator also wanted greater river access through increased development of jetties along the river. He cited the building of a Convention Centre adjacent to the river and near Barrack Square as an incentive to increase transport development along the river, stating that:

There's very few jetties that allow boats on the Swan River….with the Convention Centre opening in August this year, our numbers of enquiries for large charters, has gone up three fold. We have now got ten conferences booked in October this year with anything from 300-700 people involved. Some want to go to places along the river that our ferries can't get into. That's more and more ...over the years and less and less facilities for the boats to use. (TOBO)

The same operator indicated a perception that increased river use would create minimal impacts on the river, stating that:

I am not too high up, particularly in environmental concerns, in regard to the Swan River. I do think there is a reasonable big area for expansion as far as tours or cruises on the river that don't impact on the river too badly. Certainly compared with commercial operations and compared to use of private vessels on the Swan River. Commercially it's the way to go to benefit locals and tourists alike. (TOBO)

Although different visions existed within and between the stakeholder groups, there appeared to be a general agreement that tourism development should not occur right along the length of the river's foreshore. Many stakeholders suggested tourism nodes as a sustainable way to develop the river as a means of retaining the natural, public open spaces along the foreshore. One of the local government respondents, agreeing with the concept of nodes, stipulated that the core values of the river must be retained and not threatened by tourism development and argued that:

It must be commercial development that takes advantage of those natural values of the river and we do want something that is not crass....isn't cold structures with corrugated colour bond, have a nice outlook, there's something special down there that specially addresses that sense of place (GO5COP)

The catchment group respondent argued that tourism nodes were not only better for the river, but were economically sustainable explaining that:

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I suppose it's a bit like strip shopping centres,.....it makes it better if you have a node, it makes it much more financially or economically viable for the businesses if someone can drive there and visit ten businesses within walking distances than if they're all spread out along five miles of road you know... they have to drive from one to the other...so in the same way I think develop nodes along the river and allow the rest of the river to not to be under that pressure to develop. (CO2CG)

Stakeholders saw opportunities for tourism development of the river, in terms of utilising what have been deemed sustainable forms of tourism, such as ecotourism and nature based tourism. The local government stakeholders, believed that the development of wetland habitats, good interpretive signs and walkways would provide ecotourism and nature based tourism activities for visiting tourists and for local use. The respondent from the Department of Indigenous Affairs (DIA), advocated the development of a walking trail to interpret the indigenous cultural aspects of the river and believed this would educate tourists and locals alike.

It is important to note that a number of stakeholders were totally opposed to any further tourism development occurring along the river, including the two environmental non-government organisations and the Swan River Trust respondent who believed that:

We need to resolve this question of vision for the river; we need to understand what the environmental and social carrying capacity is...we need to establish almost a statement of rights and obligations. If you take the statement ... 'the river is underutilised'...which is often used when someone wants to go and develop something ...If I go out on Melville Water *(A section of the river adjacent to Perth Water)* on a Saturday or Sunday there is no way in the world that river is underutilised.... if I'm sitting with a book amongst the reeds on the Canning River, that river is not underutilised because that river is providing me with the peace and quiet and ambience of that section of the river. If I'm there and my enjoyment depends on it being peaceful and quiet or whatever, then it is not underutilised (GO10SRT)

The SRT respondent's comments highlight the need to understand the values that people associate with the river. Within the planning process, the very questions of values, as intimated by the previous respondent, will need to be considered in establishing a shared vision and future tourism planning mechanisms. Governance of

the river will play an important role in whether tourism planning is effective in achieving sustainable outcomes and issues surrounding governance will be discussed in the following chapter.

8.4   Conclusion

This chapter revealed findings which suggested that numerous underlying management issues exist which need to be addressed in planning processes. The issues of river access, infrastructure and pollution, boat speed and licensing, monitoring and carrying capacity are interconnected and have the potential to impede sustainable tourism development outcomes and influence behaviours of the complex system of the river. Underlying planning issues also have the ability to influence the behaviour of the system and these were identified in this chapter.

River access was the most important management issue highlighted across all stakeholder groups, although different perceptions regarding this issue were evident. Tourism stakeholders spoke of river access in terms of providing sufficient general public access to their businesses. In other words, an economic position was taken, which correlates with the strong economic values that were emphasised by individuals within this stakeholder group and the economic focus related to their perceptions of sustainable tourism development. Government, non-government and community on the other hand referred to the need to provide continued access to the general populace of Perth, almost as a given right. Tourism developments were perceived as a possible impediment to retention of this access.

Chapter 6 revealed a number of best practice issues raised by stakeholders in relation to sustainable tourism development. Findings from this chapter suggest that a lack of infrastructure along the river failed to support best practice by tourism operators. This chapter illustrated that possible discrepancies exist amongst tourism operators as to whether pollution from tourism activities was significant or otherwise.   The government, non-government, and community stakeholders relayed their genuine

concerns that the river was impacted upon by pollution at a local and broader scale. The attitudes towards pollution concerns correlate with the common ecological values that were associated with the river by these stakeholder groups and the ecological perception of sustainable tourism development that was evident amongst stakeholders within these groups.

Issues surrounding boat speed and licensing of private vessels, along with monitoring of tourism activities on the river were identified by tourism and community stakeholders in particular.

Carrying capacity was highlighted across tourism, government and non-government stakeholders although different perspectives were evident. Tourism stakeholders discussed carrying capacity in terms of economic viability of operators, reflecting their economic perceptions of sustainable tourism development and their economic values. Non-government and government stakeholders in contrast, emphasised carrying capacity in terms of impacts to the river and its values.

Findings of this chapter, pointed to the lack of any tourism planning for the Swan River and the lack of agency responsibility for tourism developments. An overarching management plan, in *Riverplan*, exists for the river and tourism is recognised as a potential threat to the river in the document. However, no tourism planning mechanisms are in place to minimise those threats. Conflicting viewpoints exist on who should be responsible for tourism planning from those advocating that the State tourism agency should be responsible to those who believed that all planning for the river should be in the hands of the overall environmental managers of the river, the Swan River Trust. Despite the apparent conflicts between stakeholders, it was evident that stakeholders believed that holistic planning and management was required, and this will be discussed in Chapter 9.

The need for stakeholder consultation and communication was a common issue amongst the case study respondents. The majority of stakeholders believed that effective tourism planning required consultation and communication processes to be in place. Importantly, stakeholders agreed that stakeholder values associated with the river

must be considered and incorporated into future planning processes. Contrasting views were expressed by some stakeholders, who expressing hesitancy about consultation processes, believing that too much consultation can be problematic.

Conflicts were cited by stakeholders across all stakeholder groups, and included conflicts between tourism and government agencies; tourism operators themselves; tourism development and other stakeholder groups; and between government agencies. Issues ranged from who should be responsible for management of the river, recreational users access to the river; and increased development on the river impinging on current users of the river. Different values and perceptions on sustainable tourism development exacerbate these conflicts. The conflicts highlighted the lack of a common plan and common vision for the river.

Finally, it was evident that a number of different visions for tourism exist amongst stakeholders. Tourism stakeholders believed that greater tourism development along the river was required, while government, non-government and community stakeholders largely agreed that greater development was not required. Despite these apparent disparate visions, there were common elements amongst stakeholders when discussing a tourism vision. Firstly, stakeholders believed that opportunities for tourism existed along the river, and advocated ecotourism or natural tourism experiences to be developed. Secondly, tourism nodes, which would continue to allow access to the river foreshore and protect the visual amenity of the river, were an agreed concept amongst stakeholders. Thirdly, stakeholders agreed that the values of the river must be managed and considered in planning processes. The three common elements appear to correlate with the most common values associated with the river and the common perceptions of sustainable tourism development. Although differences in the focus of values and sustainable tourism development perceptions exist, these common connections may assist in developing an effective planning process.

Development of an effective planning process will be dependent on the effectiveness of the governance structures for the river. Issues surrounding governance will be presented in the following chapter.

CHAPTER 9

GOVERNANCE ISSUES

It's not the lack of effort, or lack of will, or even lack of instruments that hampers health of waterways, but a lack of coordination or integration of activities. (GO10SRT)

9.1   Introduction

In today's global environment, multi-level, network governance is increasingly evident, requiring government policies at all administrative levels to be coordinated and linked (Saunier & Meganck, 2004). As pointed out in Chapter 2, the need for governance to include networks with interdependent actors, emerged from the inability of governments to meet required social targets (Whittaker et al., 2004). In addition, the recognition that complex environmental issues cannot be solved in isolation has resulted in the application of network governance to natural resource management (NRM), leading to an integrated effort to address problems (Whittaker et al., 2004). When managing a natural resource, network governance requires holistic thinking and a multi-level approach to address issues connected with that resource (Carley & Christie, 2000). A natural resource, such as the Swan River, comes under the jurisdiction of numerous government agencies at a state and local level. In addition, diverse non-government and community stakeholders have a significant connection and interest in the river. Establishment of governance structures creating networks between government, non-government and community stakeholders is necessary to ensure that various needs are addressed, and commonly agreed upon sustainable goals are worked towards.

As a result of understanding the benefits of network governance, many governments are increasingly developing stakeholder participation processes by establishing avenues for both private and non-government participation in the governance process in order to achieve effective outcomes (Saunier & Meganck, 2004; Whittaker et al., 2004). Through effective governance processes, planning and policy

problems, influenced by global, regional, national and/or local issues, can be addressed at a local community level to ensure sustainable outcomes. Understanding governance and its associated issues therefore, is an important aspect of understanding sustainable tourism development of a natural resource such as the Swan River.

This chapter discusses governance issues which emerged from the Swan River case study. Findings suggest that, from a tourism perspective, governance networks are limited and stakeholders hold a negative perception of how the Swan River is currently managed (Table 9.1). This negative perception is particularly evident amongst government and non-government stakeholders, but also amongst tourism stakeholders. Whilst perceptions are generally negative, it is evident that the reasons for stakeholder dissatisfaction are varied and these will be discussed in this chapter. The key governance issues that were identified have the capacity to impact upon the complex system of the Swan River and sustainable tourism development outcomes (Figure 9.1). These issues are interconnected, and influence components within the complex system as the following discussion will illustrate.

Firstly, stakeholder perceptions of holistic management of the river and related issues that impact on governance are discussed. Secondly, perceived stakeholder issues surrounding the development application process along with the perception of bureaucracy associated with governance of the river are presented. Stakeholders identified issues surrounding the influence of politics on tourism, an area of tourism research that according to Hall (1994) and Elliot (1997) is lacking. Governance is a concept describing the exercising of power (Saunier & Meganck, 2004, p. 116) and politics is often about how that power is utilised. The stakeholder perceptions surrounding the influence of politics are discussed along with the perception by tourism stakeholders that there is a lack of understanding of tourism by government agencies. Finally, governance networks identified through the case study are presented.

Table 9.1   *Governance Issues*

Respondent	Perception of River Management		Holistic Management		Role of Agency				Awareness of SRT as Managers
	Positive	Negative		Values	Tourism by NRM	Tourism Managers	NRM -River focus	Tourism + Agencies	
TO1BO		█	█		█				█
TO2BO		█							█
TO8BO		█							N
TO11BO		█	█		█			█	█
TO12BO *		█			█				
TO10REST		█					█		
TO13REST									█
TO14REST		█				█			N
TO9ACC		█	█		█				█
TO15ACC		█							█
TO16ACC				█					█
TO17ACC		█	█			█			█
TO3ST		█							N
TO4ST		█	█	█	█				N
TO7ST		█	█						█
TO5ATT		█		█		█			█
TO6RET		█				█			█
GO1CSC *		█	█	█					█
GO2DPI		█							█
GO3CSP		█							█
GO4SCC		█	█		█				█
GO5COP		█							█
GO6TPF		█		█					█
GO7CALM *		█	█				█		█
GO8TWA		█	█					█	█
GO9DIA		█	█				█		█
GO10SRT		█	█				█		█
NG1CBA		█							█
NG2CC		█	█	█			█	█	█
NG3WWF		█	█						█
NG4TCWA		█	█						█
NG5FACET		█	█		█				█
NG6NT		█	█						N
NG7WAITOC		█	█						█
CO1KAY					█	█			N
CO2CG			█	█					█
CO3CYC									N
CO4RECF *	█	█	█	█					█
CO5PB *		█	█		█				█
CO6YC *		█						█	█
CO7SA									█

Key: * = Two Respondents Interviewed   **N**= Stakeholder not aware of Swan River Trusts Role

Codes for Respondents: **TO = Tourism operators**   **BO** = Charter Boat Operator
REST = Restaurant/Café/Bar   **ACC** = Accommodation Provider   **ST** = Scenic Tour Operator
ATT = Attraction   **RET** = Retail Operator

GO=**Government Departments**   **NG**=**Non-government**   **CO**=**Community**

*Note: The table indicates whether a stakeholder raised a particular issue directly or indirectly in the interview via a shaded square.
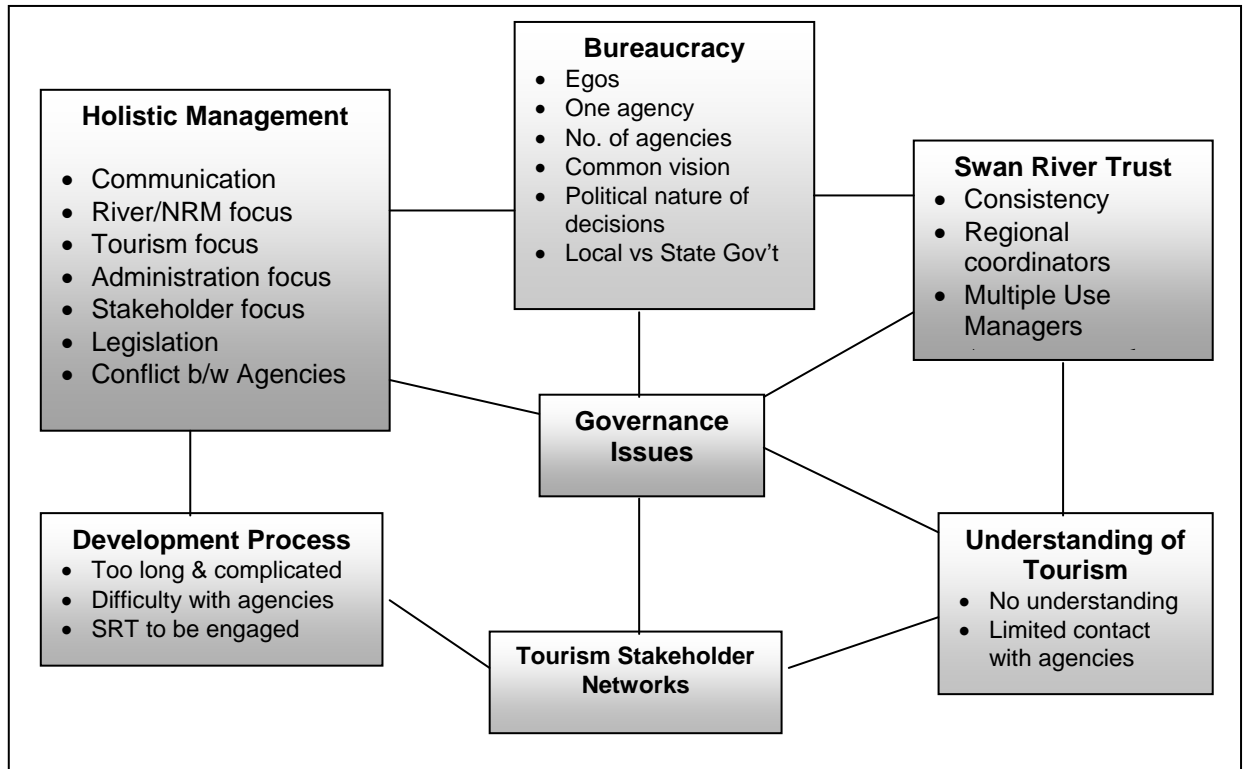
Figure 9.1 Stakeholder identified governance issues

9.2 Holistic Management

Stakeholders across all stakeholder groups, but particularly government and non-government groups, argued that holistic management of the river was required (Table 9.1). The need for holistic management of the river correlates with stakeholder perceptions that there is no common vision for the river, as discussed in previous chapters. Importantly, these same stakeholders believe that holistic management must involve managing the values stakeholders associated with the river. The different stakeholder values and the importance of those values have been discussed in Chapter 7. Many of the tourism stakeholders believe that the lack of holistic management of the river resulted in frustration and confusion amongst tourism operators, whilst the government and non-government stakeholders believe that it resulted in the ill-health of the river.

Holistic management of the Swan River was discussed by stakeholders from a number of perspectives. For instance, a natural resource management (NRM) perspective of holistic management was proposed predominantly by government and non-government stakeholders. This perspective reflects the ecological values associated with the river and the ecological perceptions of sustainability that were evident amongst both these stakeholders. One of the NRM agencies argued that management of the river system should be on a catchment basis; this includes the Perth Waters section of the river, which has a tourism focus.

> I think we should also look at, with the Swan River, I guess we all focus on the section in that part of the city but it's a part of the overall catchment and moving into natural resource management at the catchment level, so it's in a bigger context of natural resource management.... (GO7CALM)

Two respondents from the Department of Conservation and Land Management (CALM) believed that the key management issue for the river was managing catchment land use and the subsequent effects on the river. One CALM respondent explained that:

> ...if you've got poor environmental surroundings then you have flow on effects on recreation and amenity because it's such a focus for everyone, and you know very quickly when something is not right.... There is now a quite well known link between catchment land use and how it reflects in the water. (GO7CALM)

The respondent from the Swan River Trust (SRT), another NRM agency, agreed that the river should be holistically managed on a catchment basis. The respondent argued that the primary focus for management should be to understand the river from an ecological perspective and managing its health, as the following statement indicates:

> I think the key issues for management of the river is how do we maintain ecological function and amenity... ecological function and integrity in order to deliver the benefits and amenity the community appreciates... You then need to look at what are the sorts of biophysical elements that you need to manage in order to deal with all of that. Nutrients is one of them, I suppose, ...but you have to look at environmental management as a basket of goods or if you don't deal with all of the elements you are not likely to get your result....You have to look at the other factors, you have to look at the biophysical factors of form and shape of the river itself, water flows, bank stability, shape water movement, all of those things you have to look at... (GO10SRT)

Non-government stakeholders also expressed the need for holistic management in terms of the river's ecology or its health. These stakeholders had a particularly strong

emphasis on the ecological values of the river and on sustainability. The indigenous representative concurred with both CALM and the SRT respondents' views, by also suggesting that a catchment basis approach was required. The two respondents from the Conservation Council expressed perhaps the strongest view about the need for holistic management of the river and tourism's role in that management process. They stressed the need for ecological management of the river over other aspects such as managing social issues. One respondent suggested that their organisation would:

> ...like to see control for the Swan River handed totally to a river management authority, Swan River Trust or whatever you would like to call it, with ecological, environmental managers in control and only when the management functions have been fulfilled and carried out to ensure that the river is still there as a sustainable resource, would tourism be considered. I think tourism is a consumer and it is not appropriate for it to have a place in management; it has no skills, no expertise to add for keeping ecological systems surviving. (NG2CCWA)

In contrast to the government and non-government perceptions about holistic management of the river, many tourism stakeholders indicated that holistic management was required in terms of administrative issues connected to tourism development processes and stakeholder inclusion. Tourism stakeholders indicated a perception that government did not factor tourism 'into the decision making process of the various agencies that managed the Swan River' (TOACC) and also argued that tourism lacked a lobby group to elicit support from the various agencies. Charter boat operators believed that a specific representative body should be established, with one operator indicating that there was a need for one over-riding marine body to be set up specifically for boat operators to:

> ..consult the relevant local authority or local bodies. I believe that any boating business that wants to connect should have a proper business plan and go through that governing authority to be given guidance and assistance as to whether they can proceed. (TOBO)

The tourism stakeholders' perceptions of holistic management focussed on measures to ensure economic growth of their activity. This focus by tourism stakeholders appears to correlate with the strong economic values associated with the river and their economic perceptions of sustainable tourism development.

In addition to the tourism stakeholders' perception that they were not well represented in the management of the river, a local government respondent also referred to holistic management in terms of stakeholder inclusion. The respondent emphasised the importance of including local government representatives and commented that:

> I just think you have to have an agreed position about funding and management of the river, and you need to manage and plan, for this is critical. (GO5COP)

A third perspective related to holistic management of the river with implications for governance, is that of stakeholder communication. Many non-government and tourism stakeholders indicated effective holistic management of the river requires communication channels to be available. These same stakeholders expressed a willingness to work with agencies to address problems or issues that may relate specifically to their particular interest or activity. As Chapter 8 indicated, lack of communication in regard to the development of *Riverplan* appeared to be an issue. Effective governance of the river may depend on effective communication linkages between the various stakeholders, many of whom cited instances where working with government agencies lead to effective outcomes for the river. For example, one community respondent related the following example of working with an agency:

> We've done lots of work with people like the Swan River Trust. They came to us ...one day and said 'we're really worried about fishermen trampling the reeds'. And we said 'what are you talking about, we're not aware that this is an issue'. So they took us out, we had breakfast, we got all the angling media, we put a huge campaign out and huge numbers of people both either stopped because they didn't realise what they were doing, or they took personal responsibility to go up to someone and say 'look mate, please don't trample those, because they don't grow back.' There was a perception that like all grasses, they could take infinite trampling. So that worked. (CO4RECF)

The example cited by the community respondent illustrates Eckerberg and Joas's (2004) view of governance, discussed in Chapter 2, as a sharing of responsibilities between government and non-government stakeholders to solve NRM issues.

The three different perspectives of holistic management identified through the research have implications for governance of the river and should be understood by management agencies responsible for the river. Figure 9.2 displays the correlation between the stakeholder perceptions of holistic management and the relationship to their values and perceptions of sustainable tourism development. The government and non-government respondents' perceptions of holistic management relate to their ecological values, whereas tourism respondents' perceptions are more in line with their economic values. Although non-government and tourism have a communication focus in common, the underlying values influencing the perceptions are different.
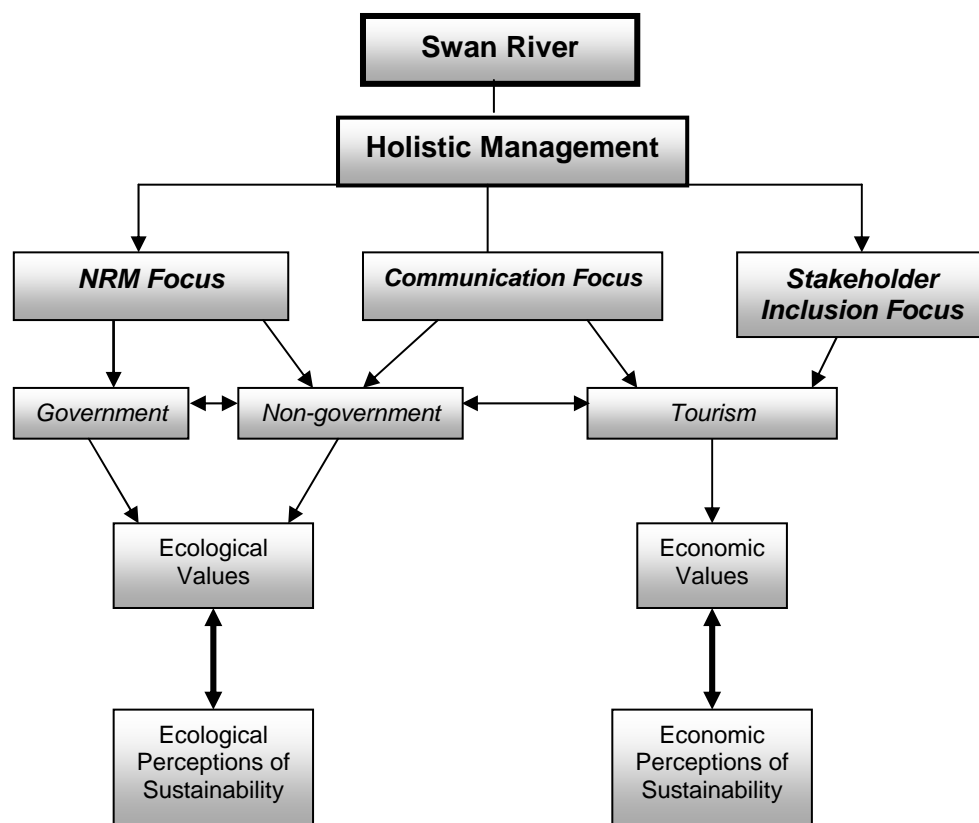
Figure 9.2   Correlation between stakeholder perceptions of holistic management, values and perceptions of STD

Different stakeholder perceptions of holistic management mean different expectations from stakeholders which potentially can lead to misunderstandings and conflicts between stakeholder groups.

In addition to the differing perceptions, three issues commonly cited by stakeholders perceived to impact on holistic management of the river were government responsibility, legislation and conflicts between agencies. These governance issues, which are discussed in the following sections, have the capacity to impinge on attempts to manage the river effectively and holistically and keep the system in a state of fluctuation.

9.2.1   Government Agency Responsibility

Stakeholder perceptions of the need for holistic management for the river were linked to the question of which government agencies should be responsible for managing tourism on the river. There are some seventeen state government agencies and additional statutory authorities that have jurisdictional responsibilities for the river and sixteen local government stakeholders, which add to the complexity of managing the river holistically (Appendix 6 - 6.4).

As was pointed out in Chapter 8, stakeholder perceptions of which agencies should be responsible for strategic tourism planning for the river varied amongst stakeholders with findings suggesting that there was no clear agreement by stakeholders. Many stakeholders believed that tourism should be managed by NRM agencies and believed that tourism should in fact be incorporated into their management strategies. Most stakeholders indicated that the SRT should be responsible for tourism management. Interestingly, while stakeholders indicated an understanding that the SRT was managing the river, a number of stakeholders were unclear of the Trust's responsibilities (Table 9.1). Perhaps in contradiction to stakeholders' perception of who should manage tourism on the river, the SRT, along with two other government

agencies, indicated that a NRM focus for the river was required by agencies, rather than a tourism focus.

To support their argument that the SRT should be the overall manager of the river, including tourism activities, stakeholders pointed out inconsistencies in decision making by agencies currently involved with the river and in the level of uncertainty with the decisions being made. A respondent from the City of Swan Council explained that a level of uncertainty existed within government agencies as to who was responsible for the ultimate decision making regarding the river, commenting that:

> ..there's this whole SRT need to tick off on a development approval, so the city council is ticking off and the SRT and it's like if we give conflicting opinions, whose opinion is the overriding one? (GO1CSS)

Non-government stakeholders expressed the belief that tourism should be managed by tourism organisations and NRM agencies, although the emphasis from these organisations lay in managing the river's health (Table 9.1). This perspective again correlates with their ecological value associated with the river and ecological perceptions of sustainability. In contrast, only one tourism stakeholder argued that tourism should be managed by both tourism and NRM agencies. No government or non-government respondent indicated that tourism should be managed by tourism agencies alone. Perhaps surprisingly, tourism stakeholders overall, did not argue that tourism on the river should be managed solely by the government tourism authority, Tourism Western Australia (TWA). In fact, most tourism stakeholders expressed anger and frustration at the perceived lack of support and understanding of operators by the TWA. The tourism stakeholder's view of who should be responsible for tourism was discussed in terms of simplifying the administrative processes of the river rather than a particular NRM focus. This perception correlated with their perceptions of holistic management which was in terms of administrative processes. There was a clear negative perception of the TWA's management role by tourism stakeholders and some community organisations such as RecfishWest.

The overall perception by stakeholders that the SRT should manage tourism on the river and that tourism needs to be included in their strategies, may have implications for governance of the river. As was noted in Chapter 2, Hall (2000b) attests that a lack of government responsibility for tourism potentially leads to ad hoc responses to tourism development which results in unsustainable scenarios.

Findings from this research indicate that at the present time, no government or non-government agency or authority accepts responsibility for managing tourism development on the river. Whilst there are development guidelines from various state and local government agencies, there is no one agency who indicated that tourism came within their jurisdiction or indicated that they should be responsible for its management. In terms of sustainable tourism development, this is an important finding and has implications for the holistic management and governance of the river.

Emerging from the research were issues surrounding the legislative framework that is associated with the river, which adds to the complexity of holistic management and governance of the river. Legislation also has the capacity to influence behaviours of the components of the complex system. Stakeholder perceptions of legislation are discussed in the following section.

9.2.2   Legislation

Linked to the perception of the need for holistic management of the river was the perception by some stakeholders for the need for greater legislative powers for the SRT. Stakeholders, such as RecfishWest and the Yacht Club, for instance, believed that the SRT did not have the necessary powers to enforce regulations or prosecute for non-compliance, or in other words, to act as a regulatory agency. The SRT as Chapter 5 explained, is constituted under the *Swan River Trust Act, 1988*. Government legislation was in fact in the process of being broadened for the SRT during the research period. The respondent from the SRT explained that:

Our legislation gives us the responsibilities to manage and protect the river. That currently is principally through the control of development in and adjacent to the water ways....The central focus of the Trust's activities is one of two, one being the development control, the other being the broader environmental management. We are embarking at the moment on a process of revising the legislation so that the broader environmental management role is more specifically within the functions of the Trust. At the moment it's arguable that we are not doing that. But we argue that it is an essential element in protecting and managing the waterways is in influencing activities that can affect the health of the waterways even when they are...external to the waterways themselves. (GO10SRT)

A *Draft Swan and Canning Rivers Management Bill* (Swan River Trust, 2005) released in July 2005 aims to establish a Riverpark which includes the riverbed, not currently under the control of the SRT, and Crown land within existing management control. Under its expanded legislation, the SRT would have more control over tourism developments occurring on or adjacent to the foreshore of the river. The SRT respondent went on to mention that the Trust did not view their main role as a regulatory role, as some stakeholders perceived. However, the SRT do have regulatory requirements under current legislation to ensure that compliance occurs with any condition attributed to development approvals. The main issue with the river's management, according to the SRT respondent, was the lack of holistic or integrated coordination of agencies linked to the river 'to ensure that their regulatory activities or decision making activities take into account the need to protect the waterways.' (GO10SRT). The *Draft Swan and Canning Rivers Management Bill* aims to provide a more coordinated approach to managing the river's activities.

The lack of coordination between agencies and the complicated legislative framework that tourism operators were required to understand as part of the development application process, was also an issue. Appendix 6 illustrates the current legislative framework that surrounds the Swan River, which includes both state and federal legislation. The legislation surrounding the river is diverse and is not understood by the tourism stakeholders interviewed in this research. There was a perception that legislative requirements created delays with development applications. However, one government agency, the Department of Indigenous Affairs (DIA), was highly critical of developers who did not understand legislative requirements linked to

the river before they began their application process. The DIA respondent argued that many tourism operators and developers did not understand that the Swan River is a designated Aboriginal site which is protected by the *Aboriginal Heritage Act (1972)* and believed that operators and developers needed to do their homework before proceeding with development applications. The DIA respondent believed that their agency, which is guided by the above Act, has 'dovetailed' their procedures to ensure that applications are processed more efficiently. The respondent claimed that:

> ...there's often times with Indigenous heritage, we constantly get blamed for holding up projects which is actually a lot of hogwash. Basically, it's because people don't actually plan properly and don't actually know that the legislation exists, which they should do. We have got awareness campaigns, our website's got all sort of stuff like that, there's no reason they shouldn't know and they should do it in parallel so it shouldn't really cause a delay. (GO9DIA)

Tourism stakeholders expressed frustration at what they claimed was the 'endless red tape' surrounding the legislation connected to the river and believed that streamlining of the present system was required, with many calling for a 'one stop shop'.

9.2.3 *The Development Approvals Process*

Governance issues surrounding the development approval process associated with the Swan River were discussed intensely by a number of stakeholders, particularly the tourism stakeholders, as indicated above. Under the present system, any development proposal that includes the river or its foreshore must go through numerous government agencies that have jurisdiction over different aspects of the river. Final approval for proposals is given by the SRT. As mentioned in Section 9.2.2, developers must be aware of relevant legislation in order to assess which agencies must be included in the application process. Issues surrounding the development approval process included the lack of communication, the length of response time and the inflexibility of agencies. A charter boat operator indicated that they would like to 'change the whole approval process to make it much faster than it is now. At the moment it takes four or five months to get approval'. (TOBO)

One accommodation operator asserted that the development process was so complicated that:

> If you're a tourism developer, ...and you want to take advantage of the location of the river from a tourism perspective, it's almost, I say almost, so daunting when you work out what you've got to do to get a yes or no, you think twice about actually making the application. (TOACC)

The respondent from the non-government tourism body, the Tourism Council of Western Australia (TCWA), explained that even small requests such as construction of information booths, seating or lighting were perceived to cause problems for operators. These smaller development applications were required to be sent to a number of agencies and the TCWA respondent fervently argued that:

> ...they'll discuss and argue and sometimes they find a compromise and, but that could take ages. Each council planning authority might only meet once a month. If you happen to get in the day after you have to wait another four weeks and then they want more information... (NG4TCWA)

Common to other tourism stakeholders, the TCWA respondent also expressed frustration at the development process. The respondent indicated the perception that the development process hindered tourism development because of the length of time for decisions to be made, explaining ardently that:

> You go and try to talk to the people who are trying to put a hotel on the Barrack Square site,...It finally got through all the regulatory processes and through all the rules and then it ...finally got to the last one, and they looked back and the first one had changed. Because the first one had changed, they had to go through it all again,....it just goes round and round and nothing ever happens..... the tragedy of a lot of it is, the process is so long that people just get worn out. It's almost like managing by default. It's so hard people just give up and say 'no we'll go and put our investment in Queensland, where you can do it much faster'....The rules are there and somebody looks like they can get round it or address it they'll just, ... drag on...so then you have to drag a politician in and then he or she becomes a champion and maybe you might get somewhere...
> (NG4TCWA)

A tourism respondent proposed that tourism operators required a representative organisation that could:

> Represent the interests of developers and people that may want to put in applications for development approval that may involve aspects of the river and foreshore and they can represent those particular cases. (TOACC)

Local government stakeholders, although understanding the development approvals process, also highlighted issues with the process and acknowledged the conflicts and the lack of coordination between government agencies. The City of South Perth respondent, for instance, explained their involvement in liaising with the Department of Planning and Infrastructure over a proposal to expand restaurant facilities on a jetty. The process, the respondent explained, was ongoing and had taken four years of negotiation with numerous government agencies, each of whom identified separate issues with the proposal. The City of Perth respondent also indicated that the development approval process was difficult. The respondent cited council's attempts to develop a site along the foreshore, stating that:

> ...at least ten applications were made by the developer for development of the site. None of which were deemed to meet the objectives of the Swan River Trust and the City of Perth. Some of which did, were given approval but then were not actually acted upon within the two year term that...is provided with the development approval. That two years to give effect to that approval and the developer failed to do so. (GOV5COP)

The frustration expressed by stakeholders at the present governance system was exacerbated by the perception that government agencies did not cooperate with one another resulting in conflicts. This issue is discussed in the following section.

9.2.4   *Conflict Between Agencies*

Conflicts between stakeholders that could potentially impact on tourism planning were highlighted in Chapter 8. It was evident from the stakeholders interviewed for this case study that there is also a perception that conflicts exist between government stakeholders which impact on governance of the river.

Several tourism stakeholders discussed perceived conflicts between government agencies, which they argued impacted on their business. The Transperth ferry respondent cited a number of conflicts that occurred between two local councils with whom they had contact, which led to indecision regarding their ferry activities. A tourism stakeholder expressed similar experiences with agencies and when discussing the number of agencies that they were required to deal with, fervently stated that:

> There is all sorts of people who have influence on how the river is evolving and yet they never seem to communicate with each other properly. And the ones that get left out, of course, is private enterprise. (TOBO)

Another charter boat operator also discussed the lack of communication between agencies, and between agencies and stakeholders, and attested that:

> Whoever is involved with the river, they fight each other instead of doing something properly. It's just a big dog fight.....it's the bureaucracy of government. One agency fights another agency and basically there's never going to be anything developed here in Perth. (TOBO)

Community recreational groups such as the yacht club commented on instances where conflicts between agencies were apparent at stakeholder meetings, which echoed the concerns of tourism stakeholders. For instance a yacht club respondent explained that at one meeting:

> One agency had done a huge amount research design work, engineering work for this particular project and at the meeting all the government agencies were involved and while I won't mention names, one said 'well this is nonsense, you can't do that, oh and you can't do that, no ones applied to the XXX', and in fact ...I stood up and said, 'chairman with the greatest of respect, may I suggest we close this meeting and those agencies involved, discuss this matter and then come back to us user groups?' I was absolutely hostile. (CO6YC)

Two non-government stakeholders summed up the issue of conflicts by referring to the egos that they perceived were associated with some people within government agencies suggesting that:

...in the past there has been clashes between...CEOs... in a period there when you....couldn't fit two heads in one room going, you know the egos were just fighting in there. (NG4TCWA)

Well that's the number one problem in most issues in government. I call it testosterone and ego. I'm at a wonderful point of my life where I'm not driven by either, that doesn't mean I don't have any it just means that I'm not driven by it. I'm at peace with myself and I'm at peace with the direction that we're going. Government agencies on the whole are not. And that's no disrespect to individuals that work there.... (NG6NTWA)

The perception that the lack of coordination and the existence of conflict between government agencies by stakeholders, may or may not be quantifiable, however if it is perceived to have impacts on river users, as the stakeholders suggest, then issues of credibility of agencies will arise. An issue of credibility has the potential to undermine any attempts at effective holistic management of the river.

In addition to the governance issues surrounding holistic management, legislation, the development process and conflicts, was the perception by stakeholders that the governance of the river was impeded by bureaucracy.

9.3   Perceived Influences on Governance of the Swan River

Findings from the research suggest that a commonly held perception amongst stakeholders from all groups was that governance of the river was over bureaucratised. Tourism stakeholders in particular were perceptibly emotive when discussing the bureaucracy associated with the river. Figure 9.3 displays issues that emerged from stakeholder interviews:
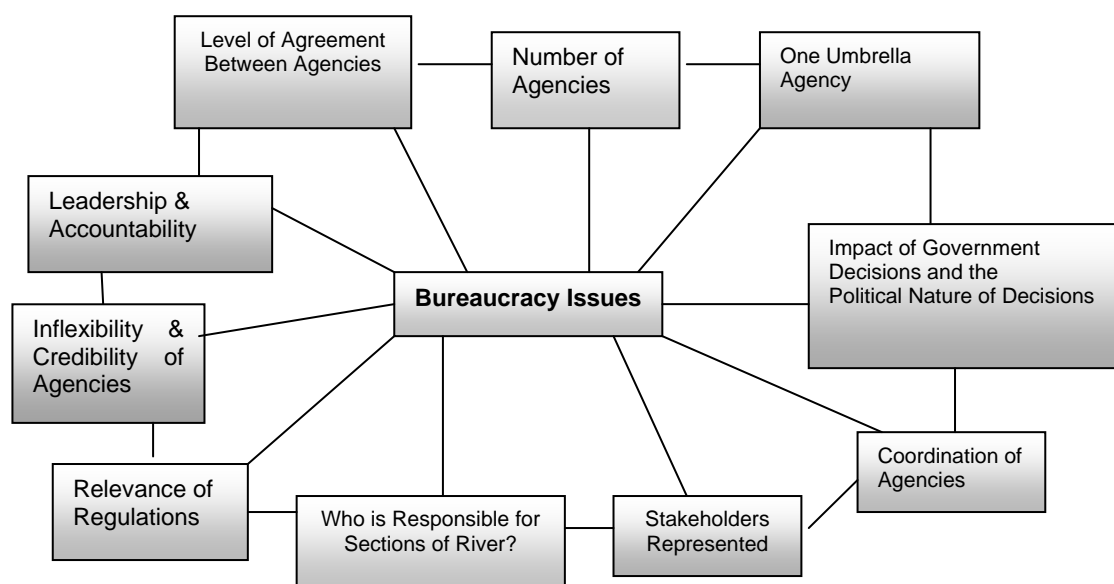
Figure 9.3   Stakeholder identified bureaucracy issues

Generally stakeholders agreed that too many agencies existed and an umbrella agency was required to simplify the governance of the river. Tourism stakeholders, expressed attitudes of exasperation at the number of agencies they were required to deal with regarding development application related issues as demonstrated in Section 9.2.3. Government and non-government agencies also saw the benefits of streamlining the development application process to cater for multiple uses and users of the river. The representative from the non-government tourism association, TCWA, believed the present system stifled development on the river arguing that:

> There are too many agencies, there is no one-stop shop in relation to what you might want to do on the Swan River...a definitive authority on the river, not a bunch of different people all having a say, all able to put their, you know, spoke in the wheel, put their hand in the wheel and stop it moving. That's what happens. Because you might clear with one and you move across to another and they have some other reason and in the end the project you start off with even if it gets through, isn't the same project you end with, you're pushed and pulled by so may things it just becomes.... (NG4TCWA)

Accommodation operators and charter boat operators expressed similar views. Operators pointed to the length of time it took for operators to plan functions and highlighted perceived inappropriate processes as the following statements indicate:

> If the Swan River Trust as a management authority can harness the resources of the other government agencies and have one decision making unit it would probably be a better way to go... If you want to do something, for instance for

Easter next year, a water festival, or something similar, you would have to start that planning now to achieve those outcomes and to me that just doesn't seem reasonable. (TOACC)

... if I wanted to put a sign up...to construct a sign there, theoretically, I have to go to the DPI, who are the landlord. I've got to go to the SRT, I have to go to State Development, because that's considered construction because its considered development. It goes on and on and on....It's just bloated bureaucracy... (TOBO)

Other tourism stakeholders discussed the financial and operational impacts of government bureaucracy on tourism operations. One tourism operator, who expressed anger at the inaction of agencies and the lack of decision making surrounding their activity stated:

I think at the moment there are too many regulating agencies and in my experience I have see the Perth City Council, the Swan River Trust, the lease holders of the land and the Tourism Commission *(Tourism Western Australia)*. All these people having a say in what happens to the city helipad and basically because of that, nothing is happening. Basically we are currently operating out of the city helipad which is determined an illegal development... we need regulations to protect the river, but I think at the moment it is probably too many people, too many interests, too much regulation, particularly on the part of the Swan River Trust. (TOST)

The respondent from one of the non-government tourist organisations also supported the stance that government decisions significantly impacted on businesses arguing that:

...these days the compliance that one has to do with government is just mind boggling, and there is no way you can operate out there in a level playing field of making a business pay and having all these government restrictions holding you back, you can't do it.... (NG5FACET)

This same respondent, however also stated during the interview, that regulations in some form were necessary because there were too many 'cowboys out there.'

The TCWA respondent, whilst lauding the need for one management agency, was sceptical about the ability of other government agencies to forgo some of their existing powers. The respondent commented that:

> ...it's going to be hard to take power away say, Perth City Council and East Perth, they have the high water mark to the edge, and this is one of the problems at Barrack Square, you've got DPI approving stuff that has to go across over the land base and you have council saying no, you do that here.... (NG4TCWA)

Recreational community stakeholders also believed that too many agencies involved in the governance of the river resulted in confusion for stakeholders and time delays for applications. For instance, the Ski Association respondent cited the experience of contacting a government agency in order to remove rubble from the river. The respondent explained that the association contacted the SRT first and:

> They referred us. They said 'yeah no problems', but before we do anything else we have to go to DPI and DIA and three or four different areas for one thing...and each have got a different section. So to do anything down there you have to liaise with five different departments, and that's...six months for each department,...and you can be going virtually chasing your tail for a long time. So I think it would be nice to have just one department that just controlled the river and that's it; from the way it's managed to the operations of the water users,...everything, ...it would be just so simple. (CO7SA)

The SRT respondent agreed that the present system impacted upon the users of the river and believed that the situation may be improved in the future with changes to current legislation which may alter the Trust's responsibilities. Importantly, this respondent demonstrated understanding of the need for legislation to enable coordination of the multiple uses and users of the river. According to the SRT respondent:

> The new legislation may change...in that the whole of the water ways system (*referring to the Swan and Canning rivers*) becomes a Park with the riverbed invested in the SRT in which case we would become the planning authority but also the managing authority in conjunction with the DPI which takes us further into that question of day to day operations....this is a multiple use. This is not something where you say lock it away it's for conservation, but it's a concept that recognises there are multiple uses. But there needs to be overall management and regional coordination of those uses across,...across all agencies and across the breadth of the river, the length of the river....I don't mean that that one agency does everything, but it has the responsibility of ensuring that it's either done or other people are doing it. That's clear; certainly not clearly there

now. The legislation and establishment of the Park are elements of trying to say okay there are multiple players here, there are multiple interests, there are multiple regulators, and managers, but at the end of the day the buck stops with the SRT and it has to operate in a way to make sure that all of the bits fit together properly. (GO10SRT)

The SRT respondent emphasised that in order for the concept of one management agency to work effectively, linkages between all key stakeholders of the river were required, which currently do not exist. For instance, linkages would need to be formed with the Tourism Western Australia, which currently has no formal association with the SRT. Under current legislation, namely the *Environmental Protection Act* (1986), the SRT respondent explained that:

> ...an obligation is placed on all public authorities whose activities may affect the river to take decisions and conduct activities in a way which supports the objectives of the Environmental Protection Policy. (GO10SRT)

It was hoped the changes in legislation would eliminate many of the issues that stakeholders currently experienced, including the perceived lack of coordination between agencies highlighted by stakeholders. According to the SRT respondent, the SRT was aware of the lack of coordination and its implications not only for users of the river but for the river itself. The respondent in fact cited an interstate report which stated that:

> It's not the lack of effort or lack of will or even lack of instruments that hampers health of waterways, but a lack of coordination or integration of activities. (GO10SRT)

The SRT respondent was also aware of stakeholder perceptions of the Trust and laughingly commented that:

> ..each one would say we are not doing enough, we are not exercising enough control of all activities, except theirs, And I would venture to say they are saying we are over regulating, interfering, and restricting their activities. (GO10SRT)

The National Trust of Western Australia (NTWA) stakeholder, believed that the role of the SRT as a regulator was in fact an issue and believed that they were in a difficult position. Although the respondent acknowledged they were uncertain of the exact role of the Trust, they explained that:

> ...the Swan River Trust is torn between a regulator's role and a community facilitator. You cannot be both... Be a regulator, there's nothing wrong with being a regulator. Being a regulator still doesn't mean you can't give incentives. You can't be both to all people and I think from political reasons and a number of others many regulators are scared to be regulators. (NG6NTWA)

Some stakeholders were sceptical about the impact of the proposed changes to the legislation on the issue of bureaucracy. For instance, one community stakeholder cited issues with agencies that their organisation has regarding recreational fishing on the river. The respondent who was passionate and angry about the lack of coordination and agreement between agencies, argued that:

> The real thing is that the Swan River should be able to sustain some recreational fishing. If it can't because the environment is inappropriate, you need to address that.... Even with the proposed changes to the Swan River Trust legislation, you still get these unbelievable inter-meshings of government departments, most of whom do this. They say, 'oh we agree with you it's a huge problem and we'd help if only it was our responsibility' but you find that somebody like the Soil and Land Commission, who don't care about most things, who say 'we'll act, if they act'.... (CO4RECF)

Stakeholders from both the community and non-government stakeholders argued that apart from coordination, there was a need for leadership and credibility amongst agencies to make decisions which would benefit the river and its users. The National Trust of Western Australia (NTWA) respondent in particular, spoke ardently about the need for people within government agencies to take a leadership role for the overall health of the river. The respondent believed that too many agencies hid behind bureaucracy so that they did not have to make hard decisions regarding the river or tell the community the truth about the condition of the river, and therefore lost credibility. The respondent argued that:

No one should hide the fact you know, if the Swan River is in trouble, for god's sake say it is in trouble and get on with it, make a big thing, it's in trouble, 'we're doing the best we can', and no politician is going to lose if they come out and tell the truth now. And if it doesn't get any worse, then pump some more resources, if resources are the answer... (NG4NTWA)

The NTWA respondent also pointed to the inflexibility of government departments when making decisions about the river which could impact on the perception of governance by stakeholders. The respondent was passionate about conserving and interpreting the Swan River's heritage values and explained that the organisation aims to support community, individual or corporate sponsorship projects involving the river. According to the NTWA, government agencies often cite a lack of financial resources as being an explanation for lack of rehabilitation programs for the river foreshore. However, the NTWA respondent cited two instances where substantial financial sponsorship was offered to government agencies by individuals for projects, with both organisations rejecting the offers. In one instance, $500,000 was offered to a state government agency by an individual to put towards rehabilitation of black swan (*Cygnus atratus*) habitat. In the second instance, an individual offered a substantial contribution to a local government for a foreshore project that was proposed, but was informed that the project was already included in the annual budget. The example cited suggests a lack of governance networks which enable an exchange of resources and structures whereby state and civil society share responsibilities for management issues, as espoused by those advocating greater governance networks (Eckerberg & Joas, 2004; Rhodes, 1997; The Global Development Research Centre, 2005).

Apart from the inflexibility of government agencies, the NTWA discussed the lack of understanding of the roles of non-government organisations. For instance, the NTWA respondent believed that a lack of understanding existed amongst government agencies of the National Trust's role and its capability to assist with management strategies for the river. The National Trust respondent indicated that the organisation has the ability to raise much needed financial assistance for river projects and the ability to access a large volunteer network and expertise, which would be willing to assist with projects.

The perceived limited connections or networks between government and non-government agencies inhibited the communication process, which may reduce the effectiveness of governance of the river. Networks between stakeholders will be discussed in Section 9.4.

Issues with bureaucracy emerged from the local government stakeholders included in the case study. Three local government stakeholders claimed that confusion exists about their exact responsibilities regarding the river. Two government councils adjacent to Perth Waters were particularly confused as to who was responsible for ongoing maintenance of the limestone wall which fronts the northern and southern foreshore of that section of the river. The City of South Perth respondent explained that:

> It's been an ongoing issue as to how that wall is maintained and there have been ongoing discussions with the...Swan River Trust and the City as to the maintenance of the wall and if it is safe.... (GO2CSP)

The City of Perth respondent also demonstrated that confusion exists, stating that:

> Nobody has wanted to own the river wall. We know that parts of the river are walled. Well when these walls need attention, which they do from time to time, the local governments in the area generally take the view that it's not their responsibility. They didn't build them, they don't own it. So they do a bit on the basis of all care but no responsibility sort of thing. (GO5COP)

Tourism stakeholders operating from Barrack Square articulated the view that although bureaucracy was a necessary aspect of river management, it was perceived that many restrictions or compliance issues were not relevant and instead wasted valuable agency resources. One charter boat operator commented that:

> ...it's great having bureaucracy, you have to have it whether you want it or not. But the bureaucracy has got to be controlled by other factors, the other people who are affected or influenced by that. (TOBO)

Other tourism operators perceived that an environmental emphasis lead to management agencies becoming pedantic about insignificant issues. A number of Barrack Square operators argued that the issue of signage, which required approval by several government agencies, was often dealt with unrealistically. One retail operator indicated they understood the need for signage not to detract from the river or the Barrack Square area, but argued that:

> ...when the stakeholders have got to survive to pay the rent, they need signage to make them [*customers*] aware. (TORET)

Another Barrack Square operator cited an example of where an operator had sought permission to place a sign on an entrance, with their business contact details. According to the respondent, the process of applying for permission was so long and complex that the operator eventually gave up. The respondent, who spoke passionately, argued:

> To me it would have been an appropriate sign. It's completely overkill. The SRT get involved in a lot of things that to me are, pedantics, deal with extremes, etc ...We need somebody like the SRT to look after the river and things that go into the river or come out of it and its near environs, but it seems to me that they take that to an extreme and then they concentrate on the extreme and the health of the river and all of these things, and then they are arguing about a sign, this big!....and I could go on, it's not just signage, and storage, a whole bunch of stuff.... the SRT in particular they over regulate and they don't seem to concentrate their resources and they're limited in the areas they could do most impact, and they tend to get involved in the pedantic, rather than real issues...in getting involved in those sorts of things with their limited resources, their obviously redirected resources in what could be more important issues of maintaining the river, testing it, making sure all of the flora and fauna are happy and all the ecosystems and all that sort of thing. (TOBO)

Overall, stakeholders believed that governance of the river was impeded by the bureaucracy of the river's management and was an issue that imparted emotion from stakeholders. Tied closely with the issues surrounding the bureaucracy of the management of the river, was the issue of politics and how it influenced tourism development on the river. This issue will be discussed in the following section.

9.3.1   Influence of Politics

According to stakeholders involved in this case study, the political nature of decisions associated with the Swan River influenced the management and governance of the river. RecfishWest, for example, believed that a bi-partisan approach to decisions made about the river was required if effective outcomes were to be achieved for the river's management. The respondent expressed the view that successive governments simply 'passed the buck' onto previous administrations, not taking responsibility for the river's condition. The respondent rather cynically commented that:

> Of course any government says 'oh well, it wasn't us, it was the last guys who were in power, don't hold us responsible, we're doing everything we can, look at *Riverplan* and when you look at *Riverplan* and you say 'Okay, tell me why', and ...'Tell me why in five years it's going to be different, or in ten years it's going to be different, and how are you going to cost it and come up with transparent performance criteria that we can go back as a community and assess you against in terms of government?...If you succeed, great. But we're worried that nothings going to happen. Well the status quo will remain. (CO4RECF)

Tourism stakeholders also discussed the political nature of decisions regarding tourism developments on the river. According to tourism respondents, the decisions about key tourism developments in Perth were more about satisfying political egos than a real desire to construct sustainable tourism developments. Tourism stakeholders expressed frustration and anger at the influence that government decisions had on their activities. The TCWA respondent cited the Barrack Square development as being a politically driven project, developed by one government and completed by a successive government. The respondent indicated a belief that the incoming government had no commitment to the project and as a consequence changes were made to the original design which, they believed, compromised the development. The compromises, according to some operators, resulted in economic impacts on their business operations. For example a Barrack Square restaurant owner lamented the lack of attractions to entice visitors to the area, explaining that:

> The Belltower was supposed to, ... the Belltower, was a museum and of course as soon as Labour came in, and because it wasn't their idea...it wasn't done, because it wasn't XXX, it was his idea. I just cringe, surely you're above all that because you are in power now. They were supposed to spend another $800,000 on that Belltower to make it a real tourist attraction, so what do they do? They stopped it. (TOREST)

Other Barrack Square operators expressed similar perceptions regarding the influence of politics in regard to tourism decision making emphasising that the original concept of Barrack Square was compromised because of the change in government that occurred when it was being constructed.

> It becomes too political. They lose track of it. The Belltower is an example. XXX built the Belltower- it was his thing. It wasn't decided by Planning *(DPI)* or some other committee. 'We have got these bells, where do we put them, let's stick them down here'. You know that sort of thing. So that was done in house so they did it...no real information. I can't see how that will change. (TOST)

> One government will come in and try to do something and the other government will knock it back, I mean the Barrack Street facilities are there, they do everything they can do to make the operations not work for the proprietors there, Whatever they can, they obstruct by building things wrong. The way the jetties are built, the boats don't work properly..... (TOBO)

The comments also reflect the fact that there are no overall tourism planning mechanisms in place for the Swan River or no agreed upon vision for the river, reiterating the findings on planning discussed in Chapter 8.

Operators believed the political framework, which governed decisions about the river, impeded any forms of sustainable tourism development. An accommodation operator illustrated their views by citing the example of applying to build a jetty on the river, which they acknowledge, resulted in a conflict with recreational users. The respondent argued that the jetty was designed to minimise impacts to the river and river users. The main issue surrounding the application was the political nature of decisions made about the river, as the following explanation portrays:

> There's about eight authorities- the aboriginal indigenous affairs group, the DPI, the East Perth Development Group, the ...each of these eight [*government agencies*] take it upon themselves to get into a fairly detailed analysis of it and then by the time they make some issues back and you try and meet all those independently and try and work out for yourself what the conflicting politics of the whole thing are, then it's, I think there's four ministers that these organisations all report to.

So there's another level of politics there and it just becomes, this is too hard, sort of attitude. I think if there is going to be sustainable development on the river, someone's got to come up with a way of short cutting all of that, not for the purpose of just letting developers do what they want but for the purpose of ensuring that you know that you can get to a decision in a reasonably timely fashion, no one wants to make a decision because it's all so political, so it's a very difficult process to work through. (TOACC)

The accommodation operator went on to explain that the Minister for Tourism at the time was also the Minister for Sport. Although there was one Minister, each portfolio had its own departmental staff members. According to the respondent, contradictory arguments were given by the two departments regarding issues surrounding building the jetty. The Minister's tourism staff had sent letters supporting the development while at the same time, the Minister's sporting staff, had stated that 'under no circumstances; there isn't going to be a jetty there.' (TOACC) The political influences of decision-making and therefore governance of the river, were significant to this particular operator.

This research found that there was a perception by tourism operators that tourism in general is not taken seriously by the government. The accommodation operator cited above, stated that:

I am surprised at how junior the tourism portfolio and the weight that it carries in the cabinet in Western Australia is. It's almost a lightweight nightmare. You know XXX's marketing budget is bigger than the Tourism Commission's *(Tourism Western Australia)* marketing budget... so how are you going to promote Western Australia with a budget smaller than the XXX's? So what it says to an operator .... if you are going to promote tourism, you've got to do it yourself. (TOACC)

Other tourism stakeholders expressed similar views and highlighted the lack of political will to provide adequate resources for tourism promotion. One operator, who was relatively new to the tourism industry, commented on their false impression of the government's commitment to tourism. The respondent believed that the Swan River was a major attraction for Perth, but felt that the river was not promoted, reflecting the wider attitude towards tourism. The respondents commented that:

The tourist industry is not as good as what I thought it would be and the general feeling is WA is very much lacking on our resources, as far as the tourist industry is concerned... I actually had a false impression, that the tourist industry was, leaving aside the SARS and the terrorism problems, was well funded and very well promoted, but that's obviously not the case and I'm finding otherwise...It's just unbelievable that our government has now chopped another $2 million out of the tourism dollar, whereas you look at places like Queensland and Tasmania...they're just pouring money in. It's all to do with basically, their river in Queensland and Noosa, where the tourism hot spots are... whereas the mentality here is just appalling. (TOREST)

This view was also expressed by a number of community stakeholders, one of whom argued that:

They're not doing anything about extension and promotion, they're not saying that Perth is a package, is a tourism package of which the Swan River is important... (CO4RECF)

The concerns expressed regarding marketing of tourism by the tourism stakeholders is indicative of their economic values associated with the river and economic perceptions of STD identified for these respondents.

The political influence of decisions was viewed as an important issue for sustainable tourism development and for governance of the Swan River in general. Stakeholders not only believed that there was a lack of real commitment to sustainable tourism development by the state government, but perhaps more importantly, perceived that government agencies associated with the river did not understand tourism. The lack of understanding of tourism will be discussed in the following section. The perception of tourism stakeholders that the political nature of tourism decision making impeded tourism development appears closely linked to their economic values associated with the river and their economic perception of sustainable tourism development.

9.3.2 *Understanding and Consideration of Tourism by State Government Agencies*

A critical issue for tourism stakeholders associated with the Swan River which emerged from the interviews, was the perception that the state government agencies that had jurisdiction over aspects of the river had no understanding of the tourism industry. Many tourism stakeholders in fact believed that this lack of understanding extended to a lack of commitment to tourism by the state government in general. Stakeholders argued that tourism makes a significant contribution to Western Australia's economy, which is unrecognised, and therefore an overall tourism vision needs to be developed and greater representation in government is required. The following comment expresses the common view of tourism stakeholders:

> My perception, rightly or wrongly, tourism is this little thing in the corner, under funded they're struggling for every dollar they can get to pay the bills let alone market the business you know... It seems as though this whole mining ethos is just, completely dominates all the decision making and tourism is just this pretend industry over there, it just creates a few casual jobs occasionally and it's not that important....the governments got to decide, tourism's an important industry to Western Australia and someone's got to do a plan or grand vision to say if we develop the tourism industry of Western Australia, it can be a second significant contributor of employment behind the mining industry. ...I think the industry itself needs to be less disparate and needs to have a more powerful voice, lobby group. (TOACC)

The perception of the government's lack of understanding of tourism was supported by a number of non-government and community stakeholders. One government stakeholder who was involved in the development of the Swan Region Strategy for Natural Resource Management, a key government strategy to manage the Swan River catchment area, stated:

> I mean in the strategy, tourism does come up, but I don't know anyone really who knows enough about it to document it well and things like that... (GO4SCC)

Other stakeholders supporting the perception of lack of understanding expressed the following opinions:

Western Australia overall has to develop a tourism industry, because it's the...it complements what our basic, not our lifestyle, but it complements some of our other areas of major economic activity like regional mining and things like that. (CO4RECF)

There is generally a lack of understanding of tourism in government altogether. People don't even think of tourism... (NG4TCWA)

Findings of the research suggest that tourism on the river is not considered by agencies in the governance of the river and as a result, there is a lack of networks and interlinking between tourism agencies and other government agencies. This is discussed in Section 9.4. Stakeholders identified that tourism representation on government agency boards or committees is negligible, which they attribute to a lack of understanding of the industry. Stakeholders expressed a need for understanding of tourism by the governing agencies in general, and importantly, a need to understand tourism on the river, as argued in the following comments:

I mean my understanding of the Swan River Trust is that the majority of people on their board, have got nothing to do with tourism. That they're all to do with environment, to do with transport, to do with water quality type people or whatever. It's not wrong, I don't think there are any tourist people on there which seems to me to be a bit odd. But if they aren't, then presumably there's no real body at present who deals with tourism and the Swan, and it's just probably fairly ad hoc. (GO9DIA)

I've always advocated that some of those agencies should be on the Board of Tourism WA, so they get a feel from it. We need to educate some of those other key decision makers. They'll go in and do things without any thought whether this has any tourism implication or value, not because they don't care, but because they don't understand. (NG4TCWA)

Well the problem is, we deal with the Department of Planning and Infrastructure, they are our landlords, they have a marine section and they understand boats. Where now we are going under the Swan River Trust, who, having looked through their board, have got no affiliation whatsoever with anyone involved with the marine industry. That's very disturbing. So someone is governing me who knows nothing about my industry. (TO1BO)

Along with the perceived lack of understanding of tourism by agencies, there was also a perceived lack of overall governance vision for the river by agencies.

Stakeholders identified that the river's role was not clearly identified by government agencies. As one accommodation stakeholder suggested:

> ...I got the impression when I came to Perth and you've only got to go down to the Barrack Street and the Perth Water there and see that the city is two blocks back and looks away from the river, just built a new entertainment and exhibition centre, it's got no windows facing the river...which I find hard to believe, you can't walk out of the exhibition centre and easily go for a walk along the river, the foreshore... it's not user friendly at all. So what really struck me since I've been here is this whole, what does the government, what processes has the government got in place to really identify along the river what role the river has to play. It's very confused. Now is it just, stay away from it at all costs and let Mr and Mrs Smith go for a wander along some sections of it. Is it to allow people to build houses on it or do we want to have the public access but also provide enough tourism and business infrastructure there to be able to improve it? And I don't think, there's no clear message coming. And I think that leads to the bureaucracy because somebody had to sit at the top there somewhere and say well the river is a natural asset, this is what it stands for and this is what we want to achieve with it. There's about five different views and they all fight with each other about it. (TOACC)

The perception by tourism stakeholders that there was a lack of understanding of tourism by government agencies highlights the need for greater communication between stakeholders associated with the river. As discussed in the previous section, stakeholders identified that one of the issues surrounding governance of the river, was the perceived lack of connections between government agencies and tourism agencies. Findings from the research, in fact, highlight the lack of connections or networks between stakeholders and this will be discussed in the next section.

9.4   Stakeholder Networks

Milne (1998) argues that connections or networks which influence the sustainability of the tourism industry add to its complexity, and therefore understanding these connections or networks is required. Findings from this research suggest that although the diverse stakeholders associated with the Swan River are capable of influencing sustainable tourism development in one form or another, clearly identified networks are not evident between tourism stakeholders and other stakeholders. The networks between tourism stakeholders, government agencies, non-government agencies or organisations, and community stakeholders connected to the Swan River are

limited and informal in nature (Table 9.2). Informal networks identified are based on a one-way connection between stakeholder and an agency or organisation which were instigated by the stakeholder. The informal networks were created by stakeholders enquiring about an issue with the river, or their particular activity on one or more occasions. The agency/organisation contacted, has no established ongoing connections or feedback mechanisms with that particular stakeholder. Formal networks indicate that formal channels, such as legislative requirements, accreditation programs or memberships link two parties on a two-way ongoing basis. Table 9.1 highlights whether a formal or informal network exists, via a coloured square.

Table 9.2 *Identified Stakeholder Networks*

Respondents	SRT	DOE	DPI	CALM	MRWA	DOF	DIA	DoAg	Dof Av.	TWA	W.Power	CASA	SCC	EPA	P TA	W C	COP	COSP	councils	Tour. op.	PCB	AHA	CBA	TCWA	CCWA	Comm. Grp	SCCO	C G	Ind.Comm.
TO1BO	I		F	I	I					I													F						
TO2BO	I		F							I							I												
TO8BO	I		F																							I			
TO11BO	I		F							I										I			F						
TO12BO*	I		F							I											I								
TO10REST	I		I							I							I												
TO13REST																				I									
TO14REST	I																I												
TO9ACC																	I			I	I	F		I					
TO15ACC										I							I					F							
TO16ACC										I							I					F		I					
TO17ACC	I		I							I							I					F		I		I			
TO3ST	I		I			F				I	I	F					I							F					
TO4ST										I										I				I					
TO7ST	I		I																	I									
TO5ATT	I																I							I					
TO6RET	I		I							I							I							I					
GO1CSC*	F		I							I			I											I		I		I	
GO2DPI	F			I		I							I				I									I			
GO3CSP	I		I		I					I							I									I			
GO4SCC		I	I	I		I		I					I					I										I	
GO5COP	I		I				I			I							I												
GO6TPF	I		I							I					I		I			I									
GO7CALM*	F	F	F				F			I			I				I	I											
GO8TWA			I		I						I						I	I											
GO9DIA	I	I	I												I											I			
GO10SRT		F	F	F		I	I								I		I									I		I	
NG1CBA	I			I						I																			
NG2CCWA*	I			I																									
NG3WWF	I	I	I	I									I												I	I	I		
NG4TCWA	I			I	I	I				F							I			I			I						
NG5FAC	I			I													I			I				I		I			
NG6NTWA	I	I	I	I			I			I						I													
NG7WAIT	I		I	I						I										I									I
CO1KAY																													
CO2CG	I	I	I										I			I													
CO3CYC																													
CO4RECF*	I		I	I	I											I		I											
CO5PB*	I		I																							I			
CO6YC*	I		I	I																									
CO7SA	I		I	I																						I			

Key: * = Two Respondents Interviewed   **F** = Formal connection   **I**= Informal connection

Codes for Respondents: **TO = Tourism operators**   **BO** = Charter Boat Operator
REST = Restaurant/Café/Bar   **ACC** = Accommodation Provider   **ST** = Scenic Tour Operator
ATT = AttractionOperator   **RET** = Retail Operator

GO=**Government Departments**   **NG**=**Non-government**   **CO**=**Community**

- State Government Authority/Organisation
- Local Government
- Tourism Industry Associations
- Community/ Recreational/ Environmental Groups

*Note Acronyms for Above Table are in Appendix 10

Twenty nine different organisations or groups were identified throughout interviews with stakeholders, reflecting the diversity of connections. However, the table does not identify all stakeholders connected to the river that may exert influence over tourism operators or impact on sustainable tourism development. For example, non-government environmental groups such as the World Wide Fund for Nature (WWF) were interviewed for the research but were not mentioned by any stakeholder. The WWF is a lobby group, which lobbies the government about the health and management of the Swan River and therefore has potential influence over tourism development on the river. Each of the groups identified by stakeholders has the potential to influence decisions regarding tourism development on the Swan River.

Findings surrounding tourism stakeholders suggest that there are limited formal two-way networks with government agencies responsible for the Swan River. Figure 9.4 highlights the organisations that tourism stakeholders identified as having one-way informal and two-way formal networks. Formal networks for tourism stakeholders are predominantly with tourism associations, such as the Tourism Council Western Australia (TCWA). Networks are in the form of affiliation with the organisation's accreditation program. It is important to note that the tourism network organisations are not directly associated with the governance of the river, although may have influence over tourism development on it.

The main government organisation that tourism stakeholders have a formal network with is the Department of Planning and Infrastructure (DPI). The DPI is responsible for licensing charter boat operators and is the lessor of the Barrack Square development but has no management responsibilities for tourism operators situated on the site. The department is responsible for maintenance of infrastructure at Barrack Square and therefore has influence on sustainability issues associated with tourism development. One tourism operator had a formal network with the Civil Aviation Safety Authority (CASA), a statutory authority established by the Australian Federal government to conduct safety regulation of civil air operations in Australia. As a federal authority, CASA has no responsibilities with resource management or tourism development and as such has no connection to the management of the Swan River.
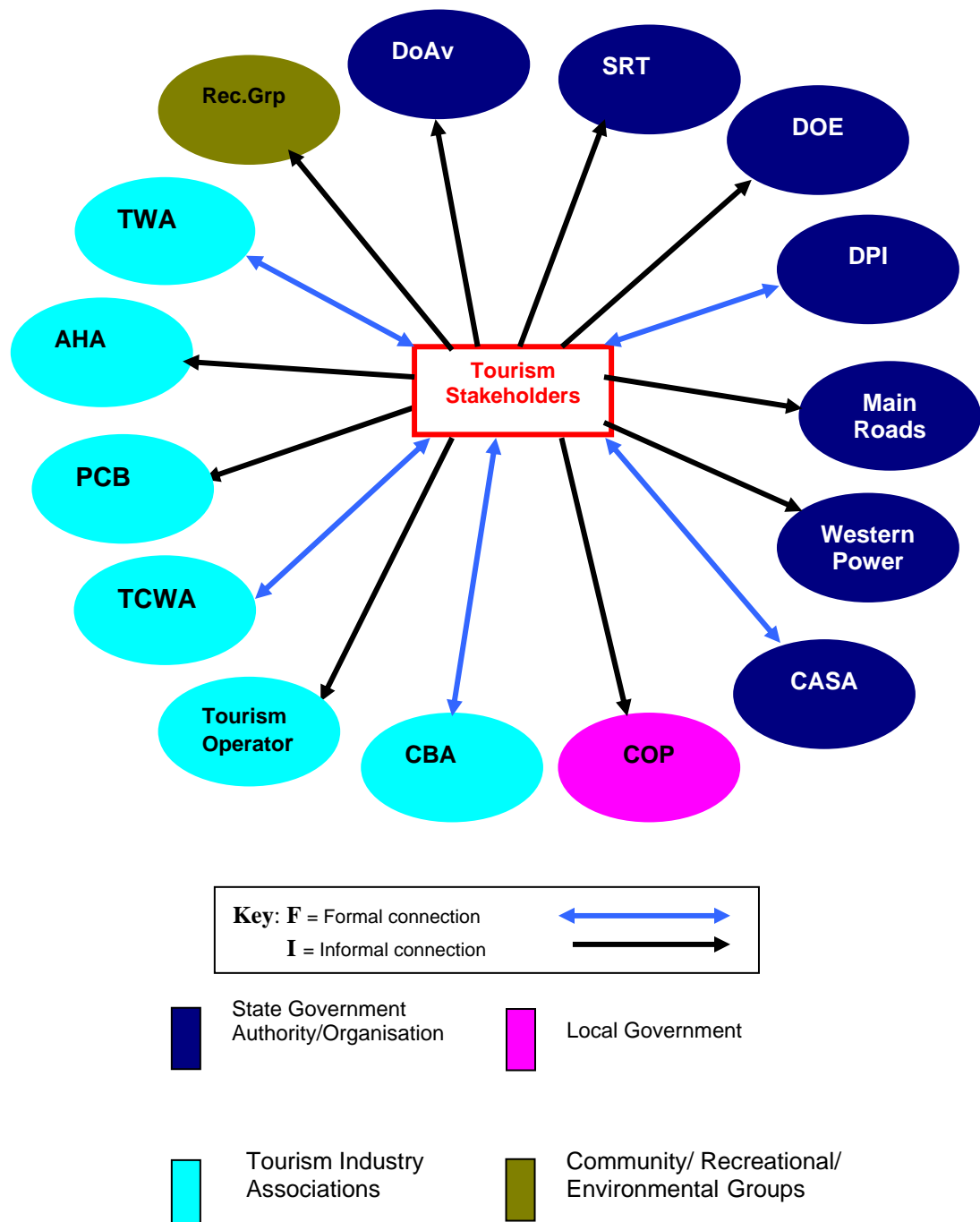
Note: Acronyms for above figure are in Appendix 10 / Shading corresponds to Table 9.2

Figure 9.4   Formal and informal tourism stakeholder connections

Tourism stakeholders overall, have no formal networks with the SRT, the main management authority of the river, nor with CALM which also has management responsibilities of the Swan River. Both SRT and CALM have the potential to significantly influence tourism activities and tourism development on the river.

Findings also suggest that non-government and community connections are also limited, despite the influence these groups may have on tourism development on the river.

The frustrations expressed by tourism stakeholders in Section 9.2.3 at the development approvals process and the perceptions of a lack of understanding of tourism by government agencies, may be indicative of the lack of governance networks and a lack of understanding of the complex legislative framework currently in place.

Importantly, findings of the research suggest that government, non-government and community groups do not have formal networks with tourism operators, suggesting that tourism on the river is operating largely in isolation from other stakeholders. If formal networks do not exist between stakeholders, communication levels are less likely to be established, perhaps creating avenues of conflict and misunderstanding between stakeholders. The lack of networks also limits the ability of tourism to be included in management strategies that are developed for the river, thus potentially impeding sustainable tourism development outcomes in the future.

9.5   Conclusion

Governance networks enable various key stakeholders connected to a natural resource to share the responsibility of managing issues surrounding that resource. This chapter identified numerous issues which impede the governance processes of the Swan River and impact upon stakeholders' use of the resource. The governance issues perceived by stakeholders to be influencing the complex system of the Swan River have the ability to influence sustainable tourism development outcomes and impact on components within the system.

Findings highlighted a common stakeholder perception that the river is not managed holistically. Stakeholders agreed that in order to manage the river holistically, the values associated with the river, must also be managed. However, it is important to understand that differing perceptions of holistic management existed amongst the stakeholders. Firstly, government and non-government stakeholders spoke of holistic

management in terms of a natural resource management and catchment basis focus. A second perspective evident was in terms of stakeholder inclusion, with tourism stakeholders in particular, believing that their activity was not considered in river management strategies. The need for communication channels between the different stakeholders was a third common perspective cited when discussing holistic management. The perceptions of holistic management reflected the stakeholder values associated with the river and their perceptions of sustainability. Tourism stakeholder's perceptions of holistic management correlated with their economic values associated with the river and economic perceptions of STD (Figure 9.2). Government and non-government stakeholders on the other hand focussed holistic management in terms of natural resource management, emphasising the ecological values associated with the river and ecological perceptions of sustainability.

Importantly, in terms of sustainable tourism development, a lack of governance responsibility for tourism on the Swan River was identified in the findings. At present no government agency is responsible for managing tourism on the Swan River. A common perception amongst stakeholders was that the Swan River Trust (SRT) should be responsible for managing the river, rather than the government tourism agency. Non-government stakeholders discussed the SRT role in terms of benefits to the river's health, whereas tourism stakeholders believed that having one agency manage activities would simplify the administrative process and would result in economic benefits. However, the SRT did not believe that tourism was their responsibility, which is consistent with their view that they should not be involved in tourism planning or management, as pointed out in Chapter 8. The lack of governance responsibility for tourism reflects the lack of planning and the lack of a common vision for tourism development along the river, which could lead to unsustainable outcomes.

The current legislative framework was another governance issue perceived to impact on stakeholders. Current legislation was perceived by stakeholders to be inadequate for the Swan River Trust to act effectively as a regulatory agency. Legislation connected to the river, was perceived to be complex and hampered by inefficient agency coordination, leading to frustrations with the development processes. The development approvals process itself, was viewed as a significant governance issue,

particularly for tourism stakeholders who believed that the present governance structure of the river impeded tourism development.

Conflicts between, and within, the various stakeholder groups were deemed by respondents as an important governance issue impinging on stakeholder activities and management of the river. The most commonly cited conflict was between tourism and other stakeholder groups (Table 9.1).

Common issues surrounding the bureaucracy associated with the Swan River emerged from the tourism and community stakeholders' discussion of the river. Issues ranged from the large number of government agencies involved in the river's management, to the lack of credibility of, and communication between, agencies. Confusion presently exists amongst government stakeholders as to responsibilities in regard to the river. The Swan River Trust respondent believes that future legislation will address this issue.

The political nature of decision-making linked to the Swan River was perceived by stakeholders to influence the river's management in general and specifically on tourism development. Tourism stakeholders believed that tourism was not taken seriously by political parties, and was instead used to score political points. Stakeholders believed that there was a lack of commitment to tourism which was reflected in the low government tourism expenditure and the fact that tourism did not have its own government portfolio. Tourism stakeholders' perception of the influence of politics on tourism decision making, appeared to be closely linked with their economic values associated with the river and the strong economic perception of sustainable tourism development.

Non-government and tourism stakeholders held a common perception that state government agencies connected to the river did not understand their particular stakeholder group. In a broader context, the tourism stakeholders did not believe the government was committed to tourism development in the state, financially or politically. In terms of the Swan River, this view appeared to be supported by the lack of inclusion of tourism in government agency policies and management strategies.

Tourism stakeholders believed that present governance structures contributed to the lack of an overall vision for the river.

Finally, this research found that there are limited network governance structures in place for the respondents involved in the case study. Networks between government, non-government, tourism and community stakeholders were informal in nature (Table 9.2). Tourism operators had no networks with any of the non-government respondents who were involved in this case study, and minimal networks with community groups. Formal networks with government agencies involved with the river were also limited. Tourism operators appeared to operate in isolation, with the main formal networks consisting of affiliation to tourism related organisations not connected with the river. The lack of network governance structures in place between tourism and other key stakeholders of the river contribute to the perceived lack of understanding of tourism by government and non-government organisations and more importantly, contribute to the lack of consideration of tourism in river management and planning processes.

Chapters 6 to 9 illustrate underlying issues that can be identified in a complex system that need to be understood in terms of behaviours that influence the system. Chapter 10 will discuss the findings of this research.

CHAPTER 10

DISCUSSION AND CONCLUSION

One of the major challenges facing the world community as it seeks to replace unsustainable development patterns with environmentally sound and sustainable development is the need to activate a sense of common purpose on behalf of all sectors of society. The chances of forging such a sense of purpose will depend on the willingness of all sectors to participate in genuine social partnership and dialogue, while recognising the independent roles, responsibilities and special capacities of each (United Nations Division for Sustainable Development, 1992).

10.1   Introduction

This thesis aimed firstly, to identify how a complex systems perspective could assist in the understanding of sustainable tourism development and secondly, to identify stakeholder values and perceptions that could influence the sustainable tourism development of a natural resource in an urban setting. Initial study of the tourism literature indicated that several gaps existed in relation to sustainable tourism development. One of these gaps was the lack of tourism research that ventured outside the realms of the tourism system itself in order to gain more holistic knowledge of the complex system in which tourism operates (Farrell & Twining-Ward, 2004, 2005; Hall, 2000b). In this regard, tourism research to date has been largely confined to researchers taking a reductionist perspective which assumes system predictability and stability, and concentrates on component parts of the system rather than the whole (Faulkner & Russell, 1997; McKercher, 1999). A second gap was that little attention has been given to urban based tourism which relies on natural resources such as urban rivers and the associated issues with sustainability (Dodds & Joppe, 2001).

The research did not intend to test complex systems theory. Instead, this research adapted a complex systems thinking perspective, and utilised a holistic framework to identify common and disparate connections between stakeholders, the interrelationships that occurred within a complex system, and the issues that could potentially influence sustainable tourism development of a natural resource. Complex

systems' thinking recognises that underlying behaviours influence systems and produce unpredictable behaviours. It is from this basis that tourism for this research was viewed. The research set out to achieve its aims and address identified gaps in the literature by undertaking a case study approach, focussing on a complex urban river system, namely the Swan River in Perth, Western Australia.

Implementation of sustainable tourism development outcomes have often proved to be problematic due to the complex interrelationships that occur between tourism components and other components within a system. Tourism system approaches to date, although recognising that tourism is complex in nature (McKercher, 1999), have centred on the tourism industry itself, concentrating on the interrelationships within the tourism industry rather than on the external system elements that influence tourism outcomes. As a result, the complexities involved in the complex system in which tourism operates are only partially understood. Consequently, tourism is managed with incomplete knowledge (Farrell & Twining-Ward, 2004). As McKercher (1999) points out, the assumption of tourism systems models is that tourism can be easily planned for and controlled, reflecting a reductionist way of thinking. Much of the tourism research found within tourism literature takes a reductionist perspective and assumes that adequate information and expertise, planning and policy development, along with regulation, will ensure sustainable tourism development outcomes. The assumption underlying this mechanistic approach is that the world operates in a machine-like environment that is predictable. Today it could be argued that it is increasingly evident that the world is not predictable and therefore new, more flexible approaches are required to understand that world. Under Newtonian, mechanistic approaches, the perspective of the bigger picture is often lost (Carley & Christie, 2000). It is an understanding of the bigger picture and an understanding of underlying influences of systems, which is required if sustainable tourism development outcomes are to occur.

Tourism does not operate in a predictable, mechanistic environment. Instead it is influenced by many unforeseen circumstances, such as terrorism, climatic irregularities, disease (eg. bird flu), government decision making or the whim of tourist behaviour. Tourism that utilises natural resources is exposed to the additional unpredictability of changes to the resource itself and to the activities or decisions of other stakeholders involved with that resource. Carley and Christie (2000) argue that

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sustainable development disputes arise because of the underlying values associated with a resource, including economic, ecological or social values. Stakeholder perceptions of sustainable development, and the divergent values that influence how they would pursue sustainable outcomes for a particular resource, have the potential to influence sustainable tourism development. Therefore a new tourism framework, which is non-linear in nature and does not assume that tourism operates in a predictable, machine-like world, is required in order to increase understanding of those interrelationships and the resultant issues.

A complex systems science view of the world understands that systems, whether they be natural, social or physical, evolve and have the ability to self-organise to become intelligent and adaptive (Connick & Innes, 2003). The evolutionary nature and self-organisation ability of systems alludes to limits of control within a system and the ability of small incremental impacts or errors in initial assumptions at a local level, to result in major impacts to the system (Arndt & Bigelow, 2000). In complex systems, adaptation and changes by agents within the system ensure that the system continues to survive. Key concepts that are associated with complex systems science, which explain these changes to a system include the butterfly effect, edge of chaos, strange attractors and conflict (cf: Chapter 3, Table 3.1). Individual agents within a system have the ability to create or close opportunities for other agents through their actions and reactions, and initiate major changes to the whole system, transcending individual contributions (Arndt & Bigelow, 2000, p. 36). This research aimed to understand the components of the complex system of the Swan River through identification of the values, perceptions and issues influencing sustainable tourism development, which is discussed in this chapter.

The values, perceptions and issues identified in the research are viewed in terms of strange attractors. Strange attractors have the ability to keep a system in the edge of chaos, with constant fluctuations and periods of stability. In order to understand why particular behaviours occur in a system, such as ongoing conflicts with the system, it is useful to understand possible strange attractors influencing those behaviours. Through greater understanding of the behaviours influencing a complex system, timely intervention may ensure that the changes to the system produce sustainable outcomes for the system as a whole and for individual agents within the system. As Farrell and

Twining-Ward (2004; 2005) argue, if there is a general acceptance that sustainable development is the way forward, then a more holistic way of thinking of tourism, such as a complex systems approach, is required.

Figure 10.1 illustrates the theoretical framework that was adapted from complex systems thinking and adopted to assist understanding of sustainable tourism development of the Swan River. Much like complex systems, the framework, initially proposed in Chapter 1, evolved throughout the research. The framework proposes that every component and element within the framework is connected and interrelated. A change in one element will impact on another element. By using this framework, a broad range of issues was identified including social, political and cultural issues that influence behaviours within the system. The framework is used at a micro level within a complex system to identify key behaviours within the system prior to implementation of planning and management processes. As Farrell and Twining-Ward (2005) argue, each complex system has its own characteristics, specific to a particular location. Although operating at a micro level, the framework allows stakeholder identification of macro issues that are deemed influential on the system. For instance, one tourism stakeholder in this research identified that global warming will impact on charter boat operators utilising the Swan River in the future with changing tide levels. Appropriate collaboration and/or intervention measures may be adopted to address the key issues that were identified to bring about positive outcomes to the system as a whole. These issues would not have been identified through adopting a tourism systems perspective which concentrates on the tourism component of the system in isolation.

Complex Systems Perspective of Understanding Sustainable Tourism Development (STD)

Natural Resource

Community

Tourism ↔ Government

Non-Government

Component Systems

Elements

Strange Attractors

Identification of Key Stakeholders
- Who are the government, non-government, tourism, and community stakeholders who influence STD?
- How can the natural resource influence STD?

Strange Attractors

Stakeholder Perceptions of Sustainable Tourism Development
Stakeholder context of STD?
i.e economic, social, cultural, ecological ?

Stakeholder Networks
What linkages exist between stakeholders of a natural resource?

Strange Attractors

Collaboration and/or Intervention Measures

Strange Attractors

Stakeholder Values & Perceptions Of Natural Resource
What are the values that stakeholders identify with the natural resource?

Natural Resource Management Issues
What are the key issues of the natural resource?
What are management issues identified by stakeholders?
What are the governance issues identified by stakeholders?

Strange Attractors

Planning & Governance Processes

Sustainable Tourism Development Outcomes
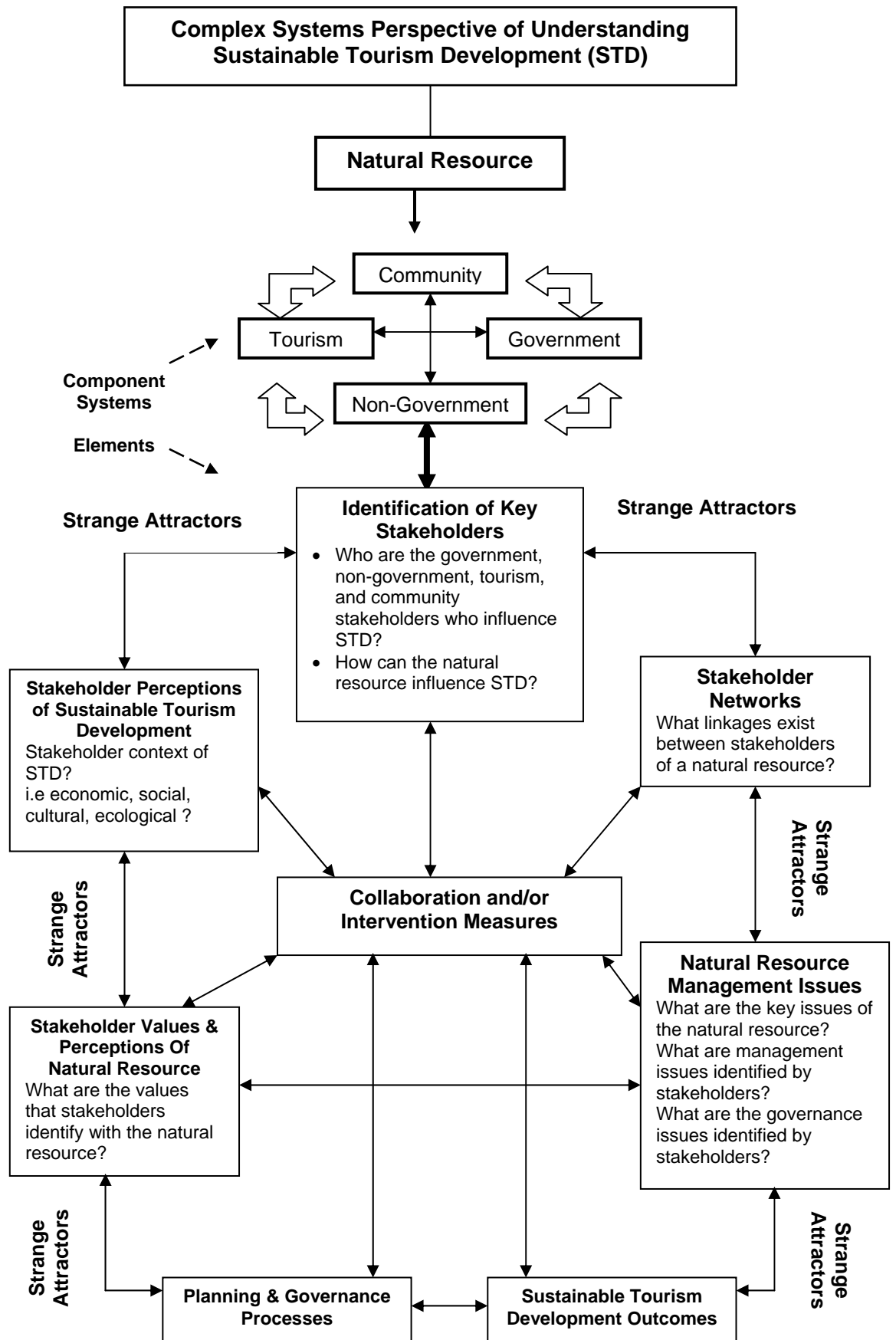
Strange Attractors

Figure 10.1   Complex systems perspective framework

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This chapter discusses the major findings of the case study which support the adoption of a complex system perspective. Recommendations for further research for the Swan River, along with the use of a complex systems framework for understanding sustainable tourism development will be discussed. Finally, the author reflects on the research process.

10.2   Major Findings

The discussion of the research findings begins firstly with a brief review of the importance of understanding stakeholder values and perceptions using a complex system perspective and reviews the case study chosen for the research. Secondly, the themes that were used to denote each of the findings chapters will be discussed; namely, perceptions of sustainable tourism development; stakeholder values and perceptions of the river; and planning and governance issues. This research identified underlying issues within the system of the river in terms of the concepts that are characteristic of complex systems, namely edge of chaos, butterfly effect, strange attractors, and conflict, that emerged as a result of taking a complex system perspective. These concepts relate directly to the themes that are discussed in this chapter.

According to Checkland (1999, p. 21), the world as perceived by stakeholders in a complex system is interpreted by ideas whose source is the world itself (cf: Chapter 1, Figure 1.1). Through these ideas and concepts, individuals develop methodologies to explain and think about their perceived world in which values and norms are established. In order to work towards sustainable outcomes for a given resource, it is imperative to have an understanding of how stakeholders view their world: a world which is the result of complex interactions at global through to local levels. At a micro level, understanding the different perceptions, values and issues that stakeholders associate with a given resource, can assist holistic management of that resource. This research concentrated on this micro level of interactions. Without understanding the values and perceptions associated with a resource at a micro level, and why people view the world as they do, management may be problematic and could result in unsustainable outcomes. Of equal importance, is the necessity to identify the connections between stakeholders' common values, perceptions or visions for a particular resource (Figure

10.2). Implementation of more robust planning and management strategies can address underlying issues related to these areas. The common themes that emerge can be used to build common visions and attainable goals.
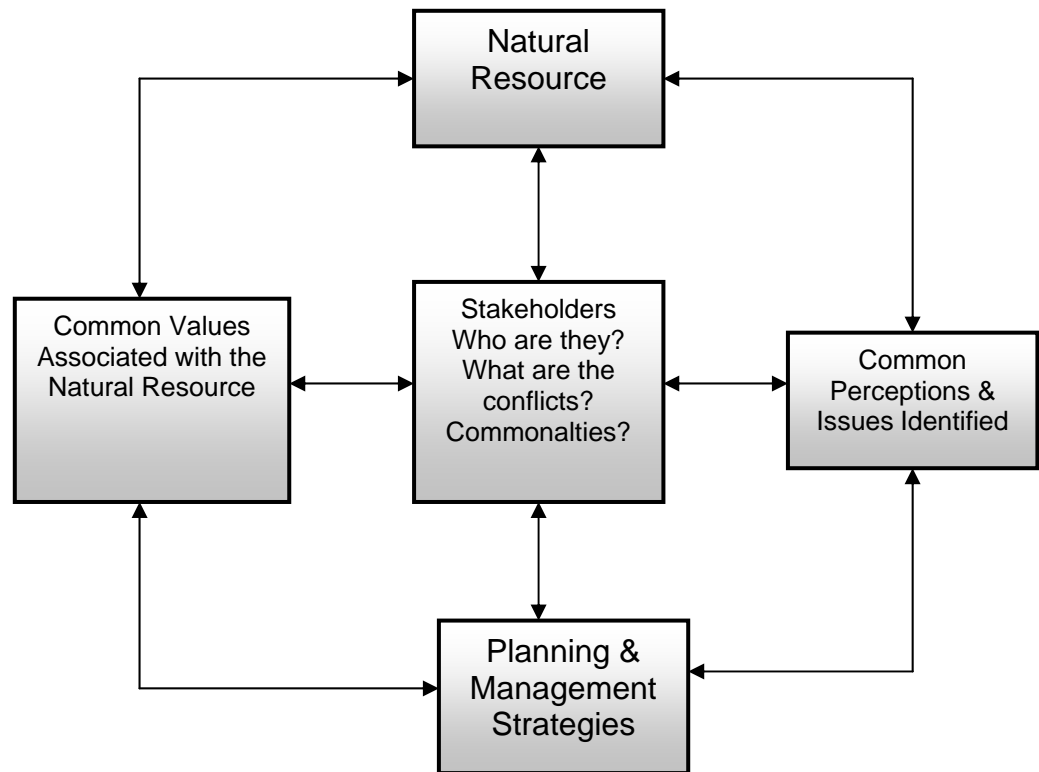

Figure 10.2   Complex systems framework of stakeholder values and perceptions

Management strategies will be more effective if all stakeholders within the system have a thread of agreement from which to begin the decision-making and management process. Perceptions between each group need to be acknowledged, understood and addressed, even if there is no initial general agreement as to whose perceptions are more relevant or more important than another. A complex systems perspective was a useful tool for this research. Key findings emerged, which otherwise may not have emerged had a more reductionist tourism system approach been undertaken. These underlying behaviours and issues, if left unidentified, have the potential to impact on sustainable tourism development and the system components.

The Swan River in Perth, Western Australia , is an emergent tourism setting and may be regarded as being in the early stages of Butler's (1980) lifecycle model. The river is affected by rapid change, including increased residential growth along the foreshore, increased river usage and changes to its ecology. The river's management is characterised by different values, numerous organisations and the lack of a well-defined inter-organisational process. The Swan River provided an opportunity to identify the connections between tourism stakeholders and other key stakeholders connected to the river, and the issues which may impact on stakeholders within the complex system and influence sustainable tourism development outcomes.

The literature review in Chapter 2 identified that numerous perceptions for STD exist, which influences how stakeholders approach STD outcomes. This research identified that stakeholders connected to the Swan River also have differing perceptions of STD. The perceptions held by stakeholders influence how they view development of a natural resource and are often connected to the values they associate with a resource. The perceptions of sustainable tourism development that were identified in this research will be discussed in the following section.

10.2.1 *Perceptions of Sustainable Tourism Development*

Hardy and Beeton (2001) argue that unless there is an understanding of stakeholder perceptions of sustainable tourism development, sustainable tourism may not be possible because important stakeholder issues may not be addressed. This research explored stakeholder perceptions of sustainable tourism development in the case study of the Swan River. Tourism's growing importance to Western Australia and the government's desire to ensure that the concept of sustainability is included within the state's tourism industry (Western Australian Tourism Commission, 2004a, 2004b), make this research timely.

The research identifies three important findings related to perceptions of sustainable tourism development on the river which require appropriate intervention:

negative perceptions of tourism exist amongst non-tourism stakeholders; divergent views are apparent on how sustainability and sustainable tourism development are perceived; and operational issues exist which will impact on the system. Each of these findings, viewed in terms of strange attractors, have the ability to keep the system in a chaotic state and indicate where intervention measures need to be adopted. As discussed in Chapter 3, Section 3.4, while there are periods of stability within a system, stability is never permanent due to the unpredictable outcomes of underlying patterns of behaviour. Conflicts (an underlying behaviour) within the system may occur between the various stakeholders when different perceptions of sustainability exist, leading to instability within the system and keeping the system in a state of fluctuation (Figure 10.3).
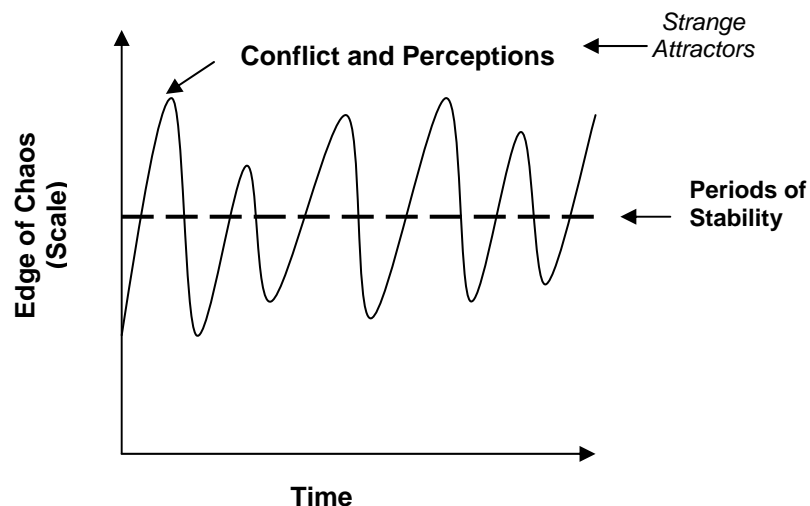
Figure 10.3   Conflict and perceptions as strange attractors

Firstly, this research suggests that negative perceptions of tourism on the river currently exist amongst government, community and in particular non-government stakeholder groups. Tourism is viewed as negatively impacting on the river and on other stakeholders who use the river for non-tourism activities. Some non-tourism stakeholders expressed emotions such as anger and frustration when they discussed the perceived impacts of tourism, either on the river or to their particular activity. Tourism is perceived largely as a sector that places its self-interests ahead of other stakeholders. Understanding these negative perceptions is important because of the influence and positions that non-tourism stakeholders will have on any proposed tourism

development, and perhaps just as importantly, because of the need to ensure a more positive image of tourism operations.

Tourism stakeholders acknowledge there are environmental issues surrounding best practices related to minimising pollution and erosion impacts to the river. However, no tourism stakeholder acknowledged that negative social impacts occur through tourism development of the river and may be unaware of the perceptions of other non-tourism stakeholders. The perception that tourism activities impact upon, and have the potential to impact upon, social and other values held by the river's stakeholders, is evident in the findings and, in the eyes of these stakeholders, is perceived to be unsustainable tourism. The social values associated with the river were the most commonly cited stakeholder value. Tourism stakeholders recognised this value but did not view that their activities threatened this value. Non-tourism stakeholders were unaware that tourism stakeholders in fact held strong social values for the river, which is a common connection. Creation of greater networks between stakeholders is required in order to address the commonly held negative perceptions as well as recognition of commonalities. Measures need to be adopted to firstly determine whether concerns are justified and then to work towards alleviating these concerns and address any misperceptions about tourism activities. Tourism operators on the river currently have no understanding of stakeholder perceptions and therefore cannot address these issues.

The second important finding is that divergent views exist amongst stakeholders with regard to how sustainability and sustainable tourism development are perceived, which supports the findings from the literature review in Chapter 2. These different interpretations have the potential to lead to disconnections between stakeholders within a complex system. One of the objectives of this research was to determine how key government, community groups, non-government and tourism stakeholders of a complex system perceive these terms, so that influences on the system could be understood. Although well discussed within academic tourism literature, the term sustainable tourism development is not well understood by the tourism operators or community members who participated in this research. In fact, there were respondents who claimed they had never heard the terms 'sustainability' or 'sustainable tourism development'. Those that had heard the terminology but were uncertain what it meant

in relation to tourism were not prepared to interpret its meaning. In contrast, it appears that government and non-government stakeholders display a level of understanding of the terminology and interpret its meaning in terms of protecting the river whilst using it in a responsible manner. It is evident that for those who claim an understanding of the terminology, there is the same degree of scepticism and cynicism regarding the use of the term that is found within the academic literature. Whilst finding a common understanding of the terminology may be problematic, it is perhaps more important to understand that different perceptions exist, and will continue to exist. Understanding the different stakeholder agendas and finding common ground to begin the process of finding agreeable outcomes for tourism development along the river, is an important step.

In this research government and non-government stakeholders' perceptions of sustainability and sustainable tourism development concentrate on the environmental aspects of the terms in contrast to those tourism stakeholders who focus primarily on the economic aspects of the terminology. Also, there are tourism stakeholders for whom sustainable tourism development is viewed in terms of a tourism-centric focus by reference to ongoing or continued growth of tourism. Numerous stakeholders also mentioned the social aspects of sustainability, although this was not viewed as a primary focus for them. Importantly, the majority of stakeholders do not highlight the cultural aspects associated with the river, in terms of European and Indigenous culture, as significant. This is despite the river's significance on influencing European settlement in Perth, and its subsequent growth as the state's capital, and the listing of the river on the heritage list as a significant Aboriginal site.

Figure 10.4 demonstrates the fundamental difference in the way that the stakeholders view sustainable tourism development which influence their perceptions about how the Swan River should be managed sustainably. Government and non-government stakeholders perceive tourism as operating within an ecological environment from which economic activity is derived. Tourism stakeholders however perceive tourism as operating in an economic environment first, which utilises the ecological environment.
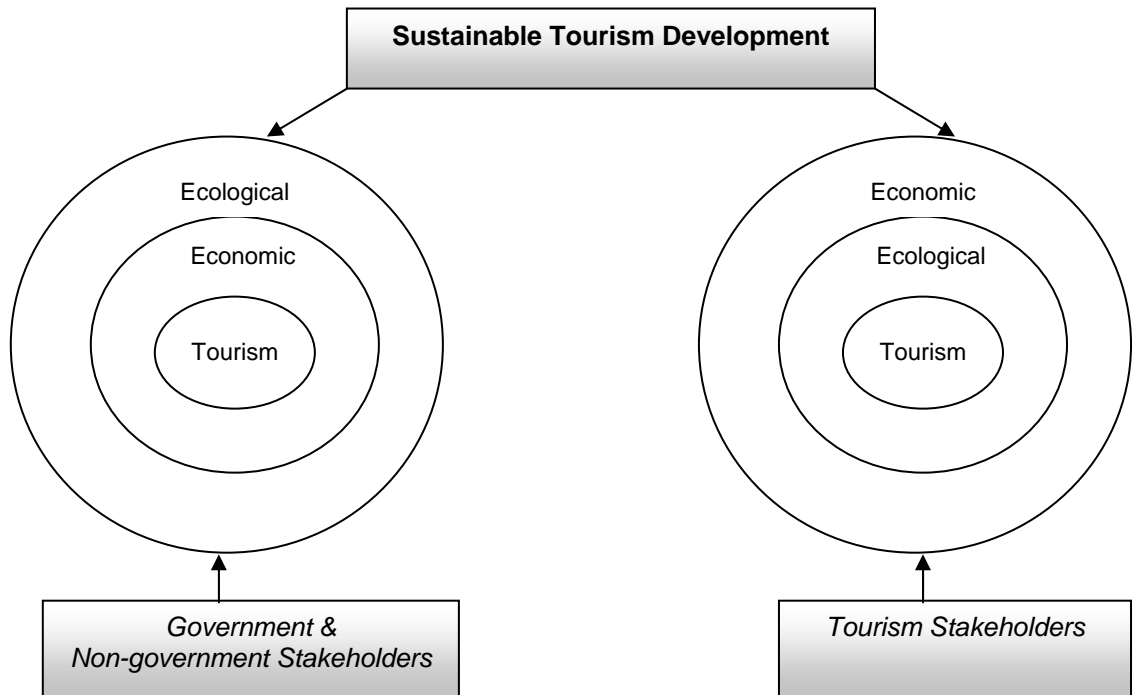
Figure 10.4 Stakeholder perceptions of sustainable tourism development

Although there is an indisputable common connection to the river by all stakeholders, their world view may result in confrontation when government management agencies attempt to implement planning or management strategies devised to produce sustainable outcomes for the river. Stakeholders arrive at the sustainability table with what may appear to be very different agendas. Tourism stakeholders for instance, want the Swan River to be managed to ensure that they can sustain positive economic outcomes whilst using the river. Non-government stakeholders on the other hand want the primary focus of management to be on the health of the river, to ensure that the environment is managed and then allow economic decisions to be made.

Despite the apparent differences in perceptions, connections exist between the stakeholders which can be used as a basis for devising tourism management strategies. By incorporating stakeholder values and perspectives, management strategies may be more effective and robust once stakeholders understand each other's perspective.

Thirdly, this research identifies a number of operational issues that have the potential to impact on the river. Chapter 7 points to the diverse stakeholder views regarding whether regulation or self-regulatory controls are necessary for tourism operators who utilise the river. Complex systems thinking, as stated previously, alludes to the limits of control within a system and therefore the question arises as to whether regulation alone is an effective mechanism to achieve desired outcomes. As the system evolves over time, unanticipated outcomes may occur which are not considered by regulations. In fact, external regulations themselves may prevent systems from self-organising and adapting to changes occurring within and external to the system. Arndt and Bigelow (2000) believe that surprising outcomes may be signs of life within a system that is evolving. This is not to suggest that guidelines should not be established. However, what is required is a flexible collaborative approach, whereby stakeholders work together to ensure that values are maintained for a particular common pool resource, and internal mechanisms are implemented to adhere to identified acceptable and consistent standards. For example, this study identifies that there is a need to address pollution and erosion issues linked to tour boat operations on the river. Charter boat operators have indicated that sullage and bilge water is being discharged directly into the river, despite regulations stipulating that this is illegal. These operators believe that the amounts discharged into the river would not have consequences for the river or other stakeholders and therefore regulations alone are not effective.

Chapter 9 illustrated that tourism operators in this study work largely in isolation, with limited networks connecting them to other stakeholders (cf: Chapter 9, Figure 9.2). Operating in isolation may lead to an incomplete understanding of the system within which they operate, such as the cumulative effects of discharge into the river which will impact on values associated with it. Tourism operators need to understand the different stakeholder values associated with the river, the state of the river's ecology and the perceptions of other stakeholders, and work in a collaborative manner for positive outcomes. By understanding the system in which they operate, tourism operators will be empowered to not only make decisions to protect the river, but also to protect the economic viability of their business. Guidelines or codes of practice could be developed by working in a collaborative manner with other stakeholders, which protect values associated with the river, but do not prevent businesses from evolving as the system itself evolves.

10.2.2 *Values and Perceptions of the Swan River*

Findings from this research demonstrate that stakeholder values attributed to a natural resource can be diverse. Each individual stakeholder views the resource from a number of perspectives, shaping the way they think about tourism development, along with management and the function of the resource. Importantly, this research identified the common and conflicting values associated with the Swan River and perceptions of the river which have the potential to influence sustainable tourism development. Stakeholder values are central to the sustainable development of natural resources and must be understood if sustainable tourism development is to occur. The values and perceptions, viewed as strange attractors in a complex system in which tourism operates can assist understanding why there is turbulence and conflict within the system, help explain why sustainable tourism development outcomes are problematic, and provide opportunities to intervene in the system.

As Section 5.7 in Chapter 5 pointed out, from the outset of the research, evidence of stakeholders' emotional connection with the Swan River emerged. In general, stakeholders believe that the river is a key attraction for Perth. Tourist surveys also indicate that tourists view the river as a key attraction for their visit and a key attraction to Perth. Common linkages exist between the stakeholders' values associated with the river. Ten separate values in total were expressed by stakeholders (cf: Chapter 6, Table 6.1), but most importantly, six of these values, which included social, economic, ecological, sense of place, natural and recreational, connected each of the stakeholder groups (Figure 10.5).
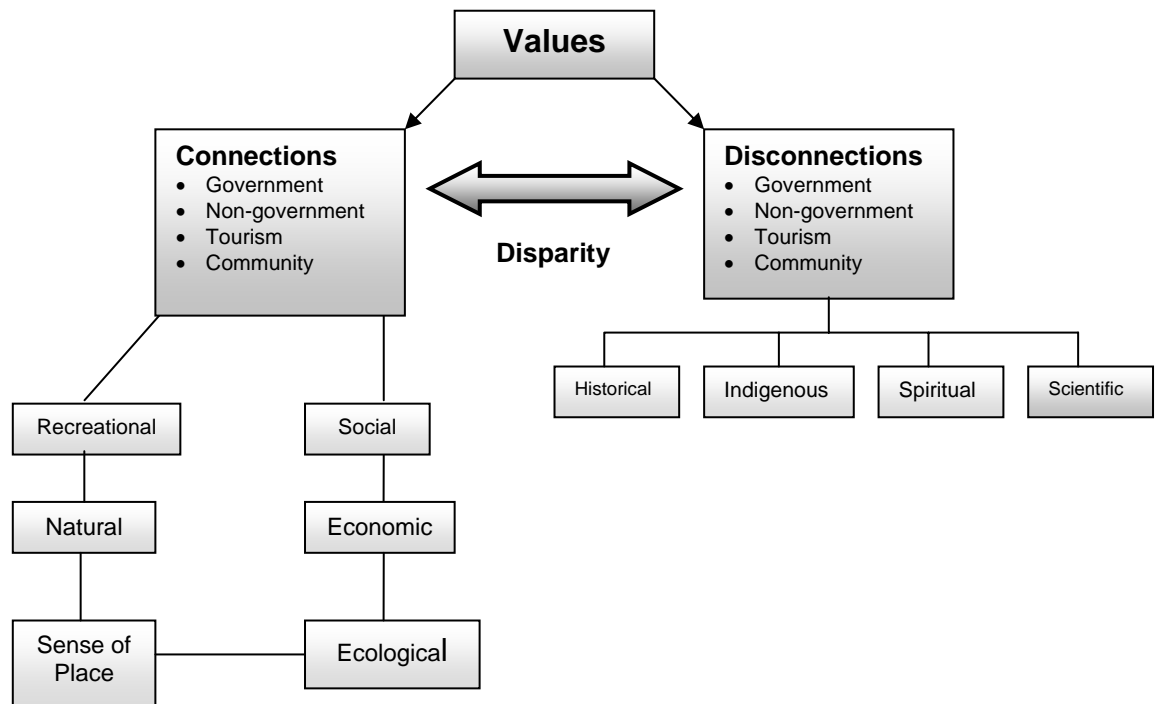
Figure 10.5   Connections and disconnections in stakeholder values

Stakeholder values associated with the river which form disconnections between stakeholders, as strange attractors, will influence STD outcomes of the river, especially when strong emphasis is associated with a particular value by a stakeholder. For instance, tourism stakeholders did not emphasise indigenous values associated with the river whereas the Indigenous community holds strong indigenous values for the river. As a designated Aboriginal site protected by the *Aboriginal Heritage Act* (1972), the Indigenous community can influence tourism development along the river. For example one indigenous respondent explained the strong belief that disturbances to the river, in the form of dredging or alteration to the river's form, will upset the Waugul and result in negative outcomes for the river. Any proposed tourism development perceived to alter the river by the indigenous community, will result in conflict if their values are not considered or understood. The government's *Riverplan* and *The Draft Swan and Canning Rivers Management Bill* documents discussed in Chapters 5 also identify and acknowledge the local Nyungar community's strong values associated with the river and state that these values must be recognised.

The social, economic, ecological and natural values are the most common values attributed to the river, which form a connection between government, non-government, community and tourism stakeholders. Stakeholders view the river as an important social setting and a place of recreation for the whole community. These connections that link stakeholders provide a basis for which sustainable tourism development outcomes can be devised.

Although connections exist between the values that stakeholders hold, it is evident that different perspectives associated with these values exist. Understanding that these underlying perspectives exist may help explain why those values vary and why implementation of STD outcomes are problematic. For example, the tourism stakeholders who attributed an economic value to the river as a primary value centre their perceptions on the river's ability to provide a livelihood for their particular business. In other words, extrinsic or anthropocentric values proved to be the focus for these stakeholders. Non-government stakeholders on the other hand, whilst acknowledging the economic values associated with the river, do not believe that the river should be managed for its ability to provide stakeholders with economic benefits. The primary value for non-government stakeholders are the ecological values or biocentric values of the resource. This finding supports Fairweather, Maslin and Simmons (2005) argument that people who assign anthropocentric values are more likely to support using nature for economic benefits, whilst those that assign biocentric values will argue that resource protection is foremost. (cf: Chapter 2, Section 2.7)

The underlying perceptions associated with values, can act as strange attractors, bringing about conflicts and different stakeholder behaviours. In other words underlying perceptions may over time produce unpredictable or unforeseen dynamics within the system which have the potential to keep the system at the edge of chaos, fluctuating in between periods of stability, leading to ineffective planning outcomes (Figure 10.6). Despite tourism and other key stakeholders agreeing that the river has economic values, conflicting viewpoints will exist if the river is managed solely with an economic focus. While tourism stakeholders would see that an economic focus would bring about sustainable outcomes in terms of their business success, non-government stakeholders would view that direction as leading to unsustainable ecological outcomes for the river. Managers of the river firstly need to understand the values that are

attributed to the river, and secondly to understand that the differing perceptions of those values will influence the system.
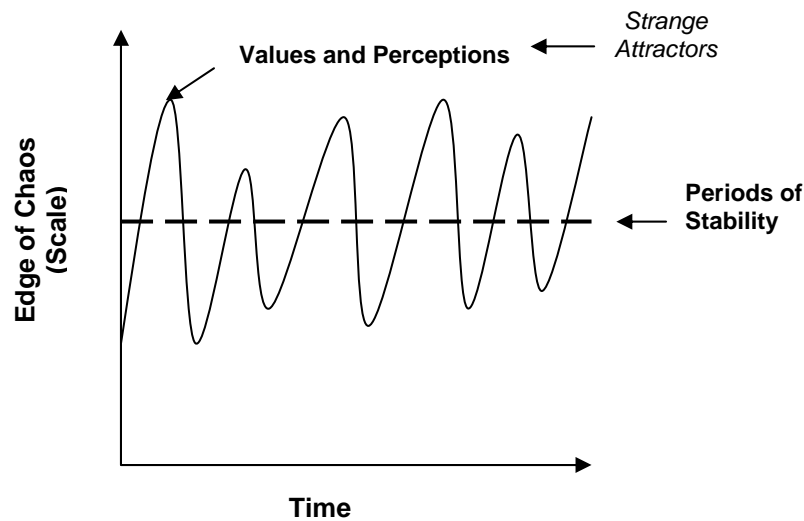

Figure 10.6   Values and perceptions as strange attractors

Understanding the differences in values and perceptions may lead to opportunities to work collaboratively to ensure that neither value is undermined and that sustainable options are discussed. Several government stakeholders spoke of opportunities for ecotourism type developments, such as creation of black swan (*Cygnus atratus)* habitat with boardwalks, and wetland creations along the river foreshore which could also be used as tourism attractions. These forms of tourism development may provide avenues for agreement between tourism and non-government stakeholders and opportunities for tourism operators.

Differences are also apparent between stakeholder perceptions of the ecological condition of the river, which influence the way they view the river. Community and tourism stakeholders in general believe the river is in good condition, with one tourism stakeholder going as far as indicating it is an almost 'pristine' river. Non-government and government stakeholders, in contrast, indicate a belief that the Swan River is a river under pressure and in crisis. In fact, government reports indicate that the river is not healthy and there are a number of issues that need to be managed. The Swan River Trust's 2003-2004 Annual Report indicates that the condition of the Swan River

displays signs of ecosystem stress and that climate change may have 'profound consequences' for the river system (Swan River Trust, 2004b, p. 19). The discrepancy in the perceptions of the river's condition may lead to conflicts between stakeholders due to misperceptions and needs to be addressed.

Effective communication and educative processes, based on factual information, are required in order to inform tourism stakeholders who are using the river of the river's actual condition. Measures can then be instigated to ensure that tourism operators take responsibility for their activities on and around the river by using appropriate best practices. The tourism stakeholders' positive perception of the river's condition, may lead to inadvertent impacts and prevent guideline initiatives being implemented to minimise impacts. Different perceptions of the river's ecology may give rise to conflicts between non-government groups, agencies who are attempting to manage the river to protect its ecological condition, and tourism stakeholders or local government who wish to develop the river's tourism potential.

Community stakeholders also hold a positive perception of the river which again may inadvertently result in impacts on the river. Although the Swan River Trust undertakes community-based environmental programs, it is evident that a lack of understanding of the actual condition of the river exists. In order to work towards sustainable outcomes for the river, a common understanding of the river's condition by stakeholders is required and should form the basis of any policy, planning and management strategy.

Once there is understanding of stakeholder perceptions of the river, avenues can be identified to address any misperceptions. If stakeholders understand the ecology of the river and how stakeholder activities can impact upon that ecology, and understand management issues associated with protecting the ecology, stakeholders' needs may be addressed through adoption of alternative development proposals. It is important that realistic, accessible and easily understood scientific data is provided to ensure broad understanding of the resources' ecological condition. A lack of stakeholder awareness of the actual condition of the river may result in unrealistic expectations of how the

resource can be developed in the future and place unrealistic demands on management agencies.

An important finding of the research, which may have implications for sustainable tourism development outcomes, is the perceived lack of impact of major ecological events, such as algal blooms, on tourism operations. Some tourism operators have indicated that the condition of the river has no economic impact on their business and are therefore not concerned about the algal blooms or the ecological condition of the river. If there is no economic incentive to implement guidelines or strategies into the operational side of their business, negative impacts to the river may occur. In contrast, those operators who indicated that their business was affected economically by the algal blooms are concerned about the condition of the river. There is an understanding by these operators that the ecological condition of the river has the capacity to impact on the river's tourism potential at the local, national and international level. These operators may be more inclined to initiate self-imposed guidelines and standards to minimise impacts to the river or be more open to the establishment of codes of practices for all tourism operators on the river.

The stakeholder values associated with the river, along with their perceptions of the condition of the river, will influence stakeholders' views of how to meet the goals of sustainable tourism development. Many tourism stakeholders argue that the river is largely underutilised and believe that there is a need for greater infrastructure and tourism development along the river, which is consistent with the economic values these respondents associate with the river. Some community stakeholders also support this view. Most government and non-government stakeholders are strongly opposed to increased tourism development because of the perceived impacts on an already stressed river. The reality for the Swan River is that tourism development is emerging along the river and will continue to develop in a self-organising manner and therefore, intervention measures are required to ensure that development is sustainable. Self-organisation will be derived from how the members within the system accept a shared set of values. Understanding that within a complex system, systems self-organise and continue to evolve, will allow forward thinking and the ability to intervene at critical points. In addition, understanding that underlying values act as strange attractors, keeping the system in a state of turbulence can assist in identifying when interventions

are required. Awareness of these values also assists understanding why sustainable tourism development outcomes are often problematic.

Common and disparate values can be used to connect stakeholders and bring greater understanding between stakeholders of each other's needs. Through this understanding, effective dialogue to develop a collaborative process and cooperation on how best to develop tourism on the river is possible. This research supports Goeldner, Ritchie and McIntosh's (2000) argument that identifying stakeholder values enables insight as to why there appears to be incompatibility in the pursuit of sustainable development goals by different stakeholders. When these values are identified it is often apparent that stakeholders, in fact, have very similar values, which can form the basis of agreement on how to achieve sustainable outcomes. If there are no common values, different visions for the resource and for tourism development may result in conflicts amongst different stakeholder groups. Conflicts can facilitate change and evolution in the system. They are a necessary component of a complex system. Identification of conflicts enables greater understanding and consideration of the perceptions of stakeholders and their values in any management process.

As a tool, the complex system perspective enables understanding of the underlying behaviours influencing the system and an understanding that important underlying stakeholder issues impact on planning outcomes for sustainable tourism development. The identification of these issues, discussed in the following two sections, allows timely and appropriate intervention within the system to occur.

10.2.3 Planning Issues Associated with the Swan River

Two key findings surrounding tourism planning which emerge from this research have implications for sustainable tourism development of the Swan River.

Firstly, no policy or planning processes are in place for tourism development on the river and, secondly and perhaps the more important finding, no overall tourism vision exists for the river. Again, both these findings can be viewed in terms of strange attractors and conflict, influencing the outcomes of the system. The findings seem to support Dowling and Fennell's (2003, p. 4) assertion that despite the growth of tourism and the recognition of possible negative impacts to the social and ecological integrity of destinations, there has been little progress by governments to stimulate policy development.

The research has also identified that no government agency or organisation takes full responsibility for tourism development on the river. Individual local government councils make decisions about tourism development in isolation from the state government agency responsible for the state's tourism industry. The state government tourism agency, Tourism Western Australia, has no legislative requirements to establish plans for tourism development for the river. The Agency's focus is to market the state's natural resources. The natural resource management agencies and planning agencies that contributed to this research indicate that they make decisions about developments, but are not responsible for monitoring or planning for tourism development. At the same time, the Swan River Trust identifies tourism development as a key challenge and threat for the river (Swan River Trust, 2004b).

Currently, tourism development is emerging along the river in an ad hoc manner, without an overarching plan or vision and without a government or non-government agency or organisation accepting responsibility. This development may indicate self-organisation within the system. In addition, negative perceptions of tourism exist amongst numerous stakeholders due to perceived impacts on other stakeholders involved with the river. The findings suggest that the current environment in which tourism is operating is not sustainable in the long term. Planning decisions by any of the current government agencies, who are largely operating in isolation from one another, have the potential to produce perturbations within the system, known as the butterfly effect in complex systems, which may influence sustainable tourism development outcomes. For example if one council allowed development of a large scale tourism development on the foreshore of the river, effects would be felt across the whole system.

A complex systems perspective understands that common and divergent visions amongst stakeholders for tourism development on the river will keep the system in a fluctuating state. Visioning should be regarded as an important part of the planning process. The stakeholder visions that were identified are diverse in nature, ranging from the view that there should be no more tourism development, to the view that there is a need for increased development. These visions are linked to the perceptions of sustainable tourism development and to the values that stakeholders associate with the river as has been discussed in section 10.2.2 and can be demonstrated visually in Figure 10.7.
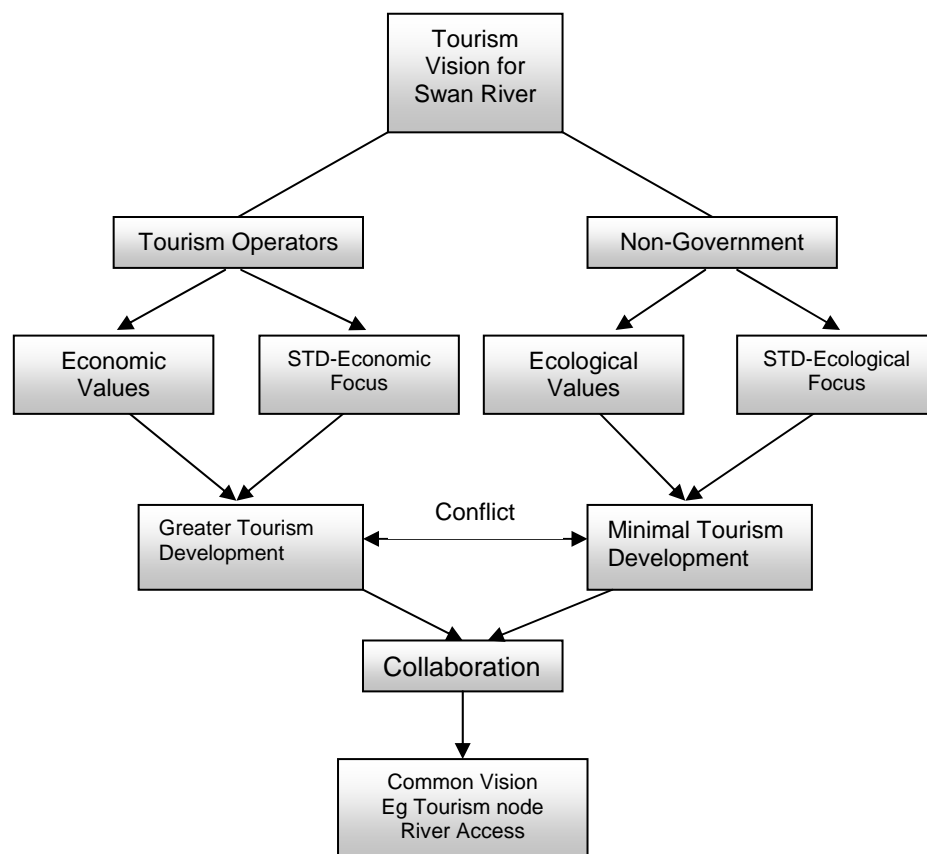

Figure 10.7 Tourism and non-government visions for tourism development

Despite apparent conflicts of visions, common visions are apparent amongst the stakeholders. For instance, stakeholders generally support the idea of key tourism nodes

along the river, allowing retention of the natural features of the river. As Figure 10.7 suggests, opportunities for collaboration between stakeholders may result in the development of a common vision. In order for tourism development to occur sustainably within a complex system, there is a need to incorporate stakeholder values in the common vision for that development. The concept of tourism nodes along the river may provide a beginning for a common stakeholder vision for tourism development of the river.

Other common stakeholder issues were identified through taking a complex systems perspective and need to be considered in terms of the impacts to the system as whole. One issue espoused across all stakeholder groups was that retention of public access to the river is a strongly felt need (cf: Chapter 8, Table 8.1). However, different underlying perspectives in relation to river access are apparent amongst stakeholders. For instance, tourism stakeholders discussed river access largely in terms of public access to tourism infrastructure on the river, whereas non-tourism stakeholders centred on the retention of access to the river for the general community. A planning process which aims to achieve sustainable tourism development outcomes will need to consider both perspectives. It is important that tourism stakeholders involved in tourism development along the river work with other stakeholders in order to ensure that river access is not restricted to one component within the system, that is, the tourism component. River access is important to all stakeholder groups and tourism development must ensure that broader community needs such as recreational and social access, are considered in tourism planning.

Issues of infrastructure, pollution, boat speed and licensing also emerged as commonly cited planning issues by stakeholders and can all be viewed in terms of strange attractors influencing system outcomes. This research identified a possible threat to the river due to the current lack of infrastructure along the river for waste disposal, including general rubbish, ballast water and sullage. It is apparent from the research interviews that few non-tourism stakeholders are aware that ballast water and sullage are being disposed directly into the river. There is a presumption that infrastructure is in place to prevent such actions. As discussed in Section 10.2.2 perceptions of the condition of the Swan River differ between non-tourism and tourism stakeholders. Tourism stakeholders, who perceive that the river is in good condition,

may believe that individual disposal of waste may have minimal impact on the river. But as Hardin's (1968) *'Tragedy of the Commons'* points out, the collective impacts may have major repercussions on the river.

In addition, common concerns exist in regard to boat speed and licensing. Tourism and non-tourism stakeholders lament the fact that private vessel owners require no license or testing of skills. This is perceived to be a safety issue on the river. Stakeholders claim that private vessel operators do not understand boat protocol or speed requirements along the river and are instrumental in creating wash that results in bank erosion. Since this research began the state government has recognised that issues surrounding private vessels need to be addressed and licensing and education procedures for these vessels are currently being developed (Department for Planning and Infrastructure, 2005) .

Identification of underlying planning issues, which have the potential to influence the complex system in which tourism operates along with system components, is important. Issues not identified may result in significant changes to the system leading to unforeseen problems. Once identified, implementation of appropriate intervention and planning strategies is possible to ensure achievement of sustainable outcomes for the system. An effective planning process for a natural resource such as the Swan River, needs to begin with the identification of common stakeholder values, visions and issues (Figure 10.8).
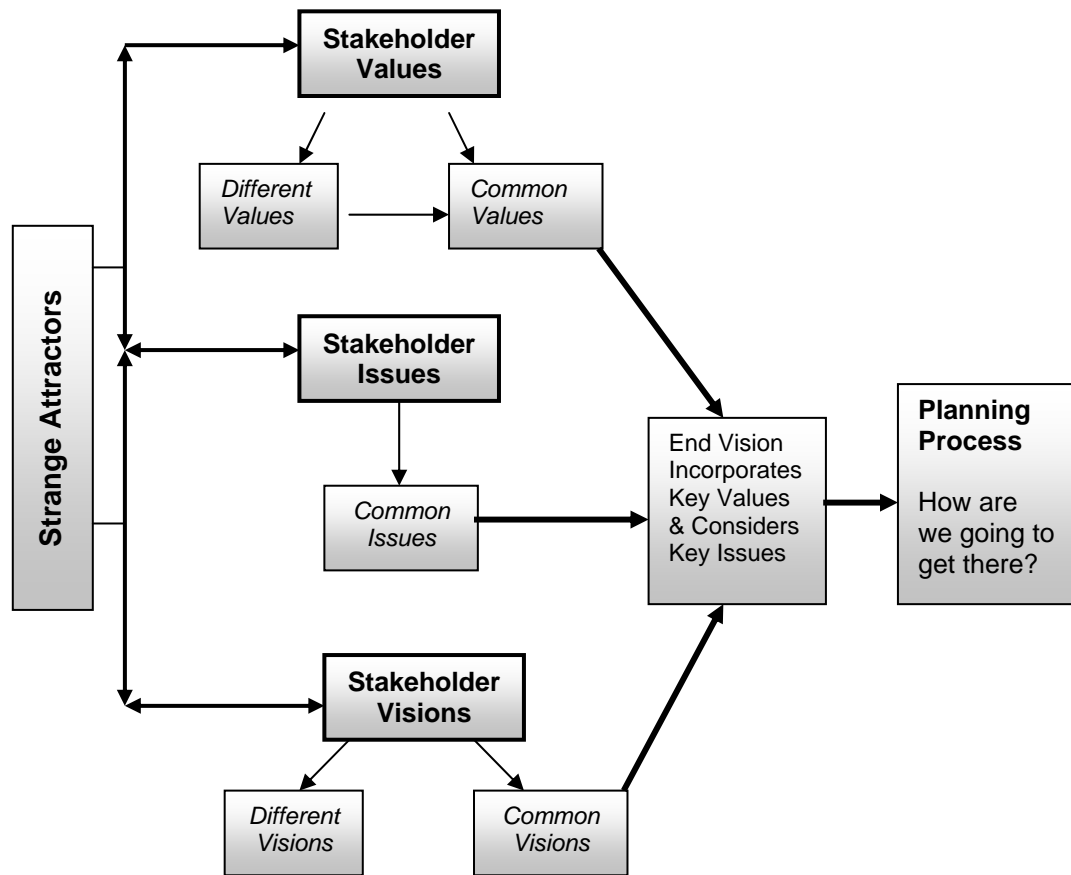
Figure 10.8 Pre-planning process

Reed (2000) argues that planning is essential for complex systems and requires an understanding of the complexities involved, the ability to ensure collaboration of stakeholders, and the identification of shared values. A complex system perspective achieves these aims through understanding of the interrelationships between, and identification of, the stakeholder values, visions and issues. A planning process can begin with an agreed set of values associated with a natural resource and acknowledgment and acceptance of the different perspectives. Once common connections between each stakeholder group have been identified, stakeholders can work from this basis to an agreed end point. That is, what is the common outcome for all users of the river or natural resources, and how does tourism development fit within that vision?

Of equal importance to identifying commonalities between stakeholders is the need to identify the conflicting values, visions and issues. An awareness of possible

conflicts will provide opportunities for stakeholders to understand each other's perspectives and to develop effective processes to consider the diverse perspectives. This may involve changes within the system so that it can evolve.

The values of non-tourism stakeholders connected to the river need to be understood prior to the commencement of any tourism planning process and be considered in any proposed tourism development. A common vision must be the starting point and the actual achievement of that vision is far more important than the path taken to achieve it. For sustainable tourism development outcomes to occur, the development of a shared vision for the natural resource and a shared understanding of each stakeholder's perspectives are necessary. While strange attractors will keep the system in state of fluctuation, and may lead to self-organisation within the system to produce a positive outcome, they may also lead to detrimental impacts to the components within the system, such as the total collapse of tourism. If strange attractors are not understood, or identified, the planning process may be ineffective. Although planning is necessary for common pool resources, a complex systems perspective also recognises that unpredictable outcomes may result due to underlying influences.

In order that an effective planning process can be implemented, effective governance mechanisms must be in place. The governance issues that arose from the research interviews are discussed in the following section.

10.2.4 Governance Issues Associated with the Swan River

Adoption of a complex systems perspective resulted in stakeholder identification of common governance issues that are influencing the system. Governance issues also have the ability to act as strange attractors in a complex system, such as the Swan River, influencing how the components within a system operate and influencing outcomes of the system over time and scale (Figure 10.9).
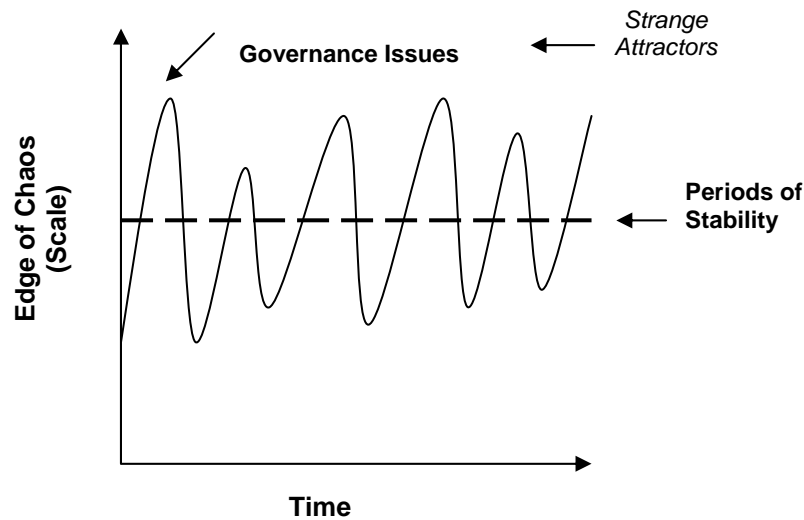
Figure 10.9 Governance issues as strange attractors

Reed's (2000) assertion that, in relation to tourism and natural resources, governance is complex due to the interrelated biological, physical, financial, political and social factors, has been substantiated through findings of this research. Key common issues identified in this research are the bureaucratic nature of the management of the river; a perceived lack of understanding of stakeholders within the complex system; the desire for holistic management of the river; and the perceived conflicts between management agencies. Importantly, for future sustainable tourism development, this research also found that tourism largely operates in isolation from other stakeholders. Each of these issues (strange attractors) influences the behaviours of the system and potentially influences sustainable tourism outcomes. Decisions made by government have the ability to create major shifts within the system (butterfly effect) and therefore it is important that governance issues are understood.

Effective governance requires both state and civil society to be involved and responsible for management issues within society (Carley & Christie, 2000; Eckerberg & Joas, 2004; The Global Development Research Centre, 2005). Interestingly, one of the most common issues surrounding governance of the river is the belief that the management of the river is over bureaucratised and that mechanisms are not in place to support input from non-government stakeholders, such as tourism, community or non-

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government organisations. In other words, there is still a perception that a 'command and control' type of governance process exists. The bureaucracy itself is perceived as a somewhat tangled web, producing unsustainable outcomes. Government decisions that are made about the river's management have repercussions for all stakeholders involved with the river, some of which may not be clearly identified due to the unpredictable nature of complex systems. Therefore, to ensure effective governance occurs, key stakeholders need to be involved in the decision-making process.

Tourism stakeholders in particular believe that there is a general lack of understanding by government agencies of tourism and tourism activities as reflected in the complex development approval process. Decisions made without understanding tourism have the potential to create economic impacts on tourism operations, which government agencies do not foresee. In addition, a perceived lack of understanding exists of the important role non-government organisations can play in the management of the river. Non-government organisations have the potential to improve governance of a natural resource due to their independent contact with community and ability to mobilise stakeholder participation (Streck, 2004). For instance, non-government organisations have the ability to mobilise volunteers to assist in habitat creation along the river or be involved in revegetation projects. This produces positive outcomes for all stakeholders associated with the river and the river itself. Overall, stakeholders believe that better coordination is required between the existing government agencies associated with the river, but more importantly, between all stakeholders and these agencies.

A desire for holistic management is a commonly held view linking all stakeholder groups, which, as Carley and Christie (2000) argue, is necessary to achieve effective outcomes for a natural resource. The stakeholder perceptions of holistic management identified in the research relate to:

1. Natural Resource Management - the river's health and ecology to be managed on a catchment basis;

2. Communication – effective communication mechanisms to be implemented between management agencies and stakeholders; and

3. Stakeholder inclusion - tourism to be included in management planning decisions.

Confusion exists amongst stakeholders as to the various responsibilities of the state and local government agencies in regard to the river's management. Government agencies themselves identified that confusion exists as to the responsibilities for sections of the river. For instance, the Department of Planning and Infrastructure states that it is responsible for decisions related to the riverbed, but not the river walls or jetties. The Department of Conservation and Land Management acknowledges responsibilities for some sections of the river foreshore and waterways, but not others; and local councils believe they have responsibilities for some sections of the foreshore, but not the river walls or jetties. Linked to this sense of confusion are the perceived mixed messages that stakeholders receive from the various government agencies, which are perceived as conflicts between agencies. An outcome of these perceptions is a loss of credibility of the government agencies and in the decisions that they make. Effective governance is diminished once credibility is lost. The conflicts that stakeholders perceive to exist between the various government agencies, in terms of responsibilities, may be alleviated if a more coordinated holistic approach to the river's management is undertaken.

The *Draft Swan and Canning Rivers Management Bill* (Swan River Trust, 2005) released in July 2005 claims to address some of the issues which the research identified. The draft Bill recognises that greater coordination between government agencies is required and that uncertainties about agencies' responsibilities exist. Proposed changes to existing legislation will expand SRT powers to enable it to coordinate and manage the river more effectively by involving public authorities and the community (Swan River Trust, 2005). The draft document specifically mentions that the Bill,

> requires the Trust to have regard to the community use of the rivers and their significance to the Nyungah community (Swan River Trust, 2005, p. 21)

Another important finding from this research is that tourism is largely operating in an isolated fashion. Tourism operators and the state government's tourism agency in particular, have limited linkages or networks with other stakeholders within the complex system of the Swan River. Conversely, there are limited networks between government agencies, tourism and non-government organisations (cf: Chapter 9, Table 9.2 & Figure 9.4). Without these linkages, stakeholder values, perceptions and issues surrounding the natural resource are not well understood. Meadows, Meadows and Randers (1992, p. 227) argued that networks were connections between equals that were held together by shared values rather than by force, obligation, material incentive or social contracts. Meadows et al. (1992) also argued that working together through these networks can achieve greater outcomes than could be achieved separately. This research concurs with these viewpoints and argues that connections between stakeholders and understanding values are vital in order to achieve sustainable outcomes for a natural resource.

Tourism stakeholders need to become more actively involved in the vision creation, planning and strategy development and decision-making process of natural urban environments, such as the Swan River. To do so will require tourism stakeholders taking responsibility and being willing to consider and understand other stakeholder values and sustainability perspectives. All stakeholders, including tourism stakeholders, need to understand that other perspectives do exist and that their particular activities on the river do not operate in isolation. An understanding of the influences that each stakeholder has on each other and on the river environment is also required by stakeholders.

In addition, governance structures must incorporate non-natural resource management stakeholders in their visioning and planning processes. As Fennell and Dowling (2003) suggest, flexibility is required in governance models to incorporate a collaborative decision-making approach. In order to achieve this approach, structures need to be implemented which provide for stakeholder and government agency interaction in order that values, perceptions and issues associated with the natural resource can be identified prior to implementation of a planning process (Figure 10.10).
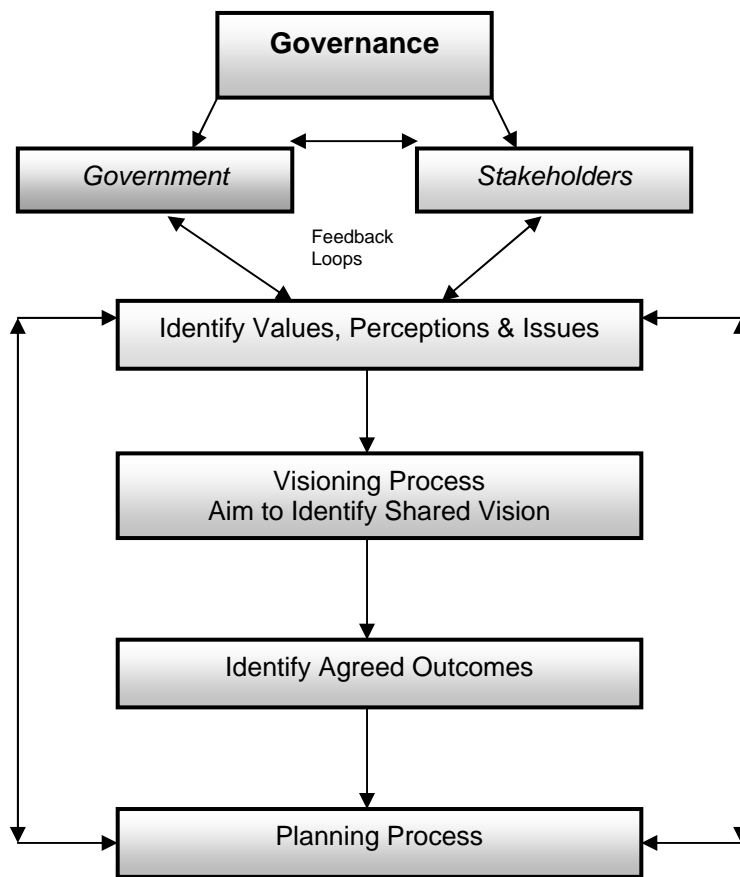
Figure 10.10 Governance process

Interaction of stakeholders will provide avenues for feedback loops to occur where learning takes place to produce creative ideas and strategies. The emergence of new ideas and strategies will result in adaptations to current stakeholder operations, in other words, to the system, thus moving the system forward. This characteristic of systems at the edge of chaos, where systems evolve, is a necessary process which will ensure the system survives (Arndt & Bigelow, 2000; Waldrop, 1992).

A complex system perspective recognises that a complex environment operates with interdependent agents influencing each other in one form or another. Individual agents in a networked system are able to experiment with different actions in which the whole system evolves. Complex systems can operate effectively in a self-organising way through distributed intelligence, rather than central guidance if there are effective networks linking the different agents. In order to create these effective networks there must be a willingness to devolve power from government agencies in order to work

collaboratively. A collaborative approach allows those stakeholders who have different viewpoints to work together with government agencies, to achieve mutually agreed upon outcomes. In fact, Morrison, Mc Donald and Lane (2004, p. 247) define collaboration as:

> A process by which parties that see different aspects of a problem can explore constructively their differences and search for (implement) solutions that go beyond their own limited vision of what is possible.

Collaboration recognises that differences between stakeholders do exist, and encourages a creative outcome which is important for the self-organising and evolving nature of a complex system. Therefore governance mechanisms which support the collaboration process are appropriate for natural resources, such as the Swan River. Governance is about shared purposes and responsibilities, which requires understanding between stakeholders of each other's needs, values and visions. Key stakeholders associated with the river, at this stage, have limited networks which inhibit the process in which shared purposes or shared responsibilities can be developed. Networks need to be developed between tourism stakeholders and non-tourism stakeholders associated with the river so there is an understanding of the commonalities and differences between each of the stakeholders' values and perceptions of STD. Collaborative processes can then move forward to reach shared goals and visions for sustainable tourism development outcomes.

The findings of this research have implications for the Swan River and for sustainable tourism development of natural resources. Several recommendations have been identified from the findings of this research and the research process itself which will be discussed in the following section.

10.3 Implications of Research Findings and Recommendations

A number of key implications specifically for the Swan River and tourism development, and more generally for sustainable tourism development of natural resources, emerged from this research. The consideration of these implications will

ensure that effective planning and governance mechanisms exist when developing sustainable tourism development outcomes of a natural resource.

10.3.1 Swan River

The research identified a number of important planning and management issues which need to be addressed in order for sustainable tourism development to occur on the river. These issues are discussed in the following points:

1. One of the most important implications of the research findings is the need to identify a common vision for the Swan River. This research proposes that in order for sustainable development of tourism to eventuate on the Swan River, it is necessary that all stakeholders have a clear purpose and vision for tourism development that is supported and understood, along with a set of clear principles and 'non-negotiable' facts surrounding tourism development. A process is required which brings government, non-government, tourism and community stakeholders together to identify their commonly held values and visions for the river. Stakeholders need to decide why the river is important and what they would like to see the river look like in the future. Conflicts will be an important part of the process which will encourage creative thinking. Once an overarching vision has been identified, a tourism planning process should begin.

2. Understanding the different stakeholder values for the Swan River and the values that are common to stakeholders is vital in order to achieve sustainable outcomes for the river. The various government authorities that presently have influence over the river must incorporate the clearly identified values that stakeholders associate with the river, into any planning and policy direction that is undertaken for the river. Tourism stakeholders need to understand the broader values other key stakeholders associate with the river. Values that the indigenous community, non-government, government and community hold for the river need to be recognised. Each of these groups has the potential to influence tourism development on and along the river and therefore potentially influence sustainable tourism development outcomes. At present there are negative

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stakeholder views associated with tourism development on the river and it is in the tourism stakeholders' interest to address the perceived issues associated with these negative perceptions. Understanding and considering other stakeholder values in any future tourism activities or future tourism development will assist in ensuring that other stakeholder needs and values are not impacted upon.

3. The Swan River is an important natural resource for stakeholders who directly use or influence outcomes for the river. For sustainable development of the Swan River to be successful, a holistic management approach is required. At present there is evidence of confusion amongst stakeholders as to who is responsible for the river's management, including the river's foreshore. Many stakeholders agreed that a natural resource management agency should be responsible for the river's management, but believed greater communication and input was required between the current management agency, the Swan River Trust, and the river's stakeholders. It is important to identify key stakeholders and whether they truly represent that group's interests.

4. Government agencies must include decisions regarding tourism in management decisions of the river, and tourism must be actively engaged with by the appropriate management agencies to ensure that mutual interests are being served. Tourism stakeholders highlighted the perception that there is no understanding by government agencies that have responsibilities for managing the river of how tourism operates. This may or may not be an accurate assessment. However, if tourism is to alleviate this concern, engagement with the management agencies in a collaborative manner is necessary.

5. At present there is no one government agency responsible for tourism development on the Swan River and therefore no agency has responsibilities for planning or monitoring tourism on the river. Management agencies acknowledge that conflicts are increasingly evident between tourism activities and other stakeholders, but no government agency takes responsibility for tourism. Conflicts between stakeholders are dealt with by individual operators and agencies, such as the Swan River Trust which attempts to mediate between

stakeholders. There needs to be one government agency responsible for holistic decision making about tourism development on the river. That agency must work collaboratively with management agencies responsible for the river.

6. Closely linked to the above point, and a key implication of this research, is the need for tourism planning. Tourism Western Australia, with its focus on tourism marketing, has no legislative powers to be involved in tourism planning. If tourism planning is not conducted by the peak government tourism agency, or any other agency, the question is whether sustainable tourism development outcomes are in fact possible. Plans are being written for the river by natural management agencies (Swan Catchment Council, 2004; Swan River Trust, 2004a), but tourism development is not incorporated into those plans. The state government espouses the ideal of sustainable tourism development in its State Sustainability Strategy (Government of Western Australia, 2003), yet no one agency is responsible for tourism planning. This must be addressed.

7. Tourism Western Australia presently works with the state's natural resource management agency, Conservation and Land Management, in relation to the state's protected areas and tourism in regional areas. However, there are no established networks between this agency and the Swan River Trust in relation to tourism development on the Swan River. This is despite the river being regarded as a significant urban natural resource, which is viewed as a major natural tourism asset by stakeholders. Networks between the two agencies need to be established to increase mutual understanding of natural resource management and tourism needs. Avenues can then be established whereby issues surrounding tourism activities can be addressed such as the need for understanding the river's condition and possible development of guidelines or codes of practice for tourism operations on the river. In general, greater communication and coordination is required between all government agencies that have the potential to influence tourism outcomes on the river.

8. Issues surrounding the development process and agency coordination are deemed by stakeholders to impede development and other activities associated

with the river. Concerns about the development process are highlighted not only by tourism stakeholders but also by recreational community groups. The main criticisms are the large number of agencies that are involved in the process and the lack of coordination between them that resulted in perceived unrealistic timeframes. One tourism operator suggested that an overview of development approval procedures and requirements should be available prior to individuals contemplating any development so that developers have an understanding of exactly what can and cannot be developed on the river. Stakeholders and the relevant government agencies need to work together to ensure that a clearly identified and workable development process is achieved which is, ideally, linked to the identified vision for the river.

9. Governance structures must be established in which a collaborative approach to decision-making and planning for the Swan River can occur. Specifically tourism stakeholders need to be actively engaged with the process to ensure that sustainable tourism outcomes are achieved. Research is required as to the most appropriate approach to achieve effective collaboration between stakeholders.

10. This research concentrated on the components of the system at the micro-level and did not explore the connections and interrelationships between the sub-systems within those components. Further research is required to establish the influence of these sub-systems on the complex system of the river.

10.3.2 *Sustainable Tourism Development of Natural Resources*

Although the research findings are attributable to the Swan River case study, there are broader implications for sustainable tourism development of natural resources which are discussed in the following points.

1. Natural resources that are utilised for tourism purposes can be regarded as complex systems. An understanding of complex systems recognises that limited government agency control will exist because of the naturally self-organising nature of systems. Subsequently, legislation and regulation of the resource will also have limited effects and may in fact inhibit the system's ability to evolve and adapt to changes to the system. That is not to say that legislation or regulation is not necessary to achieve sustainable outcomes. However, a flexible approach is required to allow the system to self-organise and adapt to changes whether they be local, regional, national or global. Collaboration is required between key stakeholders associated with the natural resource to address systems issues on an ongoing basis. These issues include unanticipated changes to the system relating to the natural resource itself, and/or to political, cultural or social dimensions that may arise. Appropriate feedback mechanisms need to be established so that issues are identified in a timely fashion and stakeholders can work together to ensure that positive outcomes result. Tourism stakeholders must be actively engaged in this process to ensure achievement of sustainable tourism development outcomes.

2. Tourism stakeholders must become more actively involved in the decision-making process of natural environments, in the vision creation, and in the planning and policymaking process. Tourism stakeholders must consider other stakeholder values for a given natural resource and work with other stakeholders to achieve sustainable outcomes. Governance structures need to be in place to allow this collaborative exchange of ideas.

3. Tourism has largely been viewed in isolation, as apart from the system in which it operates, not as a part of the complex system (Figure 3.4). Greater

connectedness is required between tourism and other interconnecting components of the system to ensure understanding, collaboration and cooperation results in sustainable tourism development outcomes. This researcher concurs with others (Farrell & Twining-Ward, 2004; Goeldner et al., 2000; Hall, 2000a) who believe that an interdisciplinary perspective to understanding tourism is necessary in order to achieve sustainable tourism development outcomes.

4. Values are central to achieving sustainable tourism development outcomes. Natural resource management (NRM) principles and sustainable tourism principles need to have common, interrelated values associated with these principles. Understanding the values that stakeholders associate with a given resource provides opportunities for sustainable tourism development outcomes, instead of simply opposing stakeholders who have differing views on how a given resource is utilised. Further tourism research is required to establish the importance of stakeholder values and perceptions of common use natural resources to achieving sustainable outcomes. The researcher believes that the theoretical framework developed for this research, could be applied to other natural areas, where there are diverse stakeholder values associated with a resource.

5. Tourism stakeholders need to be actively engaged in planning processes rather than maintain the fragmented characteristics for which it is noted (Goodall & Stabler, 2000; Pavlovich, 2003). In natural areas, whether they are urban or regional, governance structures must be established to incorporate non-NRM stakeholders in their policy visioning and planning process. It is unsustainable to ignore key stakeholders. By working together, creative ideas can be utilised to produce positive outcomes for all concerned.

6. Greater understanding of the complex systems in which tourism operates is required and a complex systems perspective will enable this understanding. A complex systems perspective allows understanding of underlying behaviours which influence system outcomes. Relationships between interdependent

stakeholders who influence and impact on each other in one form or another; connections between values and perceptions; and identification of key issues that are common to all stakeholders, can also be understood. With this understanding, and by working collaboratively, sustainable outcomes are achievable. The use of the theoretical framework developed from this research would provide a guide to identifying the influences on a particular system, whether they be natural or social systems. The framework could be easily adapted to a specific location, where greater understanding is required prior to planning processes being implemented.

7. The concept of complexity and a complex systems framework is a relatively new approach which is increasingly being explored to explain phenomena in divergent fields. Its application in tourism research has, to date, been minimal. Therefore further exploration of the concept to explain or understand tourism phenomena is required in order to fully understand the merits of using such an approach.

10.4   Reflections on Research Process

The qualitative approach using a complex systems perspective adapted in this research provides a holistic understanding of stakeholders who have key interests in sustainable tourism development of a natural urban resource. The research did not attempt to explore the complexities of sub-systems within the individual government, non-government, tourism or community systems nor attempt to mathematically represent patterns that occur within these systems. The research also did not attempt to explore the broader hierarchies of the system, that is the meso (national) or macro (global) environment in which tourism operates. Whilst both these areas provide avenues for further research and are acknowledged as important aspects of complex systems, this research concentrated on the micro level of the system in order to give a boundedness to the research process. The complex systems perspective, centred on the interactions, values and perceptions of key stakeholders and allowed a greater depth of

issues to emerge that may not have emerged had a reductionist, tourism system perspective been adopted.

Importantly, the flexible nature of the semi-structured interviews utilised in the research process allowed clarification of statements and further exploration of issues that emerged throughout the interviews conducted. Often researchers incorrectly make assumptions about the meaning of discourse. Through clarification of statements made by respondents during interviews or post interview, misunderstandings could be minimised and the social reality that is reflected in the findings is a more accurate representation of reality from the respondents' perspective. To achieve this clarification, stakeholders were sent transcripts of their interviews whereby they were able to make necessary changes. It should be noted that no changes were made to the transcripts, suggesting that the interviews accurately represented respondents' views.

It is also important to acknowledge that this research did not include all stakeholders who may have an interest in tourism development on the Swan River. The research attempted to obtain input from key stakeholder groups, which included government, non-government, tourism and community members. Key stakeholders from within each of these groups, which the researcher deemed important representatives of each group, were then identified but certainly do not represent an exhaustive list of those stakeholders who may have interests associated with the Swan River. Similar research may in fact produce different individual stakeholders which would provide opportunities for further research. For instance, increased residential development along the river may mean that residents will become key influences on the types of tourism activities that occur along the river foreshore and on the river itself. These stakeholders therefore provide further research opportunities.

The case study research setting does not include the whole reach of the river. This was due to personnel, time and budget constraints, however a holistic picture was obtained of the issues surrounding sustainable tourism development of the case study area of the Swan River within the urban Perth city setting, which is a key tourism node of the river. The research did adhere to Holliday's (2002, p. 38) five important criteria for choosing a research setting which were:

1   The setting must have a sense of boundedness;

2   The setting should provide a variety of relevant, interconnected data;

3   There should be sufficient richness;

4   The setting should be sufficiently small; and

5   There should be access.

The case study approach, complemented the complex systems framework that was undertaken (Hammersley & Gomm, 2002; Sarantakos, 1998). Complex systems have boundaries which are not clearly defined. Therefore while the case study had a sense of boundedness by centring on tourism development around Barrack Square and Perth Waters, there was recognition of interactions that occurred external to those boundaries. The non-government and community stakeholders for example were not connected to tourism at Barrack Square or specifically to Perth Waters, but had either a strong association with the river or with tourism on a broader scale.

The purpose of the case study was not to ascertain definitive answers, but rather to identify the issues surrounding sustainable tourism development outcomes of a natural urban resource and gauge the use of a complex systems perspective. As Stacey, Griffen and Shaw (2000) contend, complex systems thinking enables patterns of behaviour to be explained by taking into account individual freedom, and viewing the connections between diversity, conflict and creativity within the system. This research involved interviewing individuals, purposely selected from key stakeholder groups, who had diverse interests in the Swan River. Areas of connection and conflict through taking a complex system perspective were identified. Identification of these connections and conflicts enables greater understanding of the complexities involved in sustainable tourism development and also provides opportunities to develop intervention measures that may be required to ensure that sustainable outcomes for the river can be worked towards.

10.5   Conclusion

This research has been a journey, which, like complex systems, has evolved, self-organised and adapted to unpredictable occurrences. The research adapted a complex systems perspective to assist greater understanding of the complex nature of sustainable tourism development by answering two main questions:

1. How can a complex systems science approach assist understanding of sustainable tourism development issues? And;

2. How do stakeholder values and perceptions influence sustainable development of a natural resource?

A complex system science approach can assist understanding of the STD, by identifying underlying behaviours influencing a system and providing opportunities to intervene within a system to ensure sustainable outcomes can be worked towards. These behaviours can be in the form of values, conflicts, issues or perceptions. Stakeholder values and perceptions can serve to keep the system in a dynamic state of unpredictability over time, which can influence management processes. While the answer to these questions may appear to be simplistic in nature, they came about through understanding complex interactions of components and underlying behaviours within a complex system. Tourism needs to be understood in terms of operating within a complex system (Figure 3.4).

In the past, tourism research has relied on reductionist approaches whereby nature is viewed in a detached and analytical manner and regarded as an impersonal object which can be exploited by humans. As Carley and Christie (2000, p. 47) point out, reductionist approaches result in a world view that separates facts from values. A key premise behind this research is that sustainability and sustainable development are intrinsically linked to nature and recognises that humans and their values are a part of nature, not apart from nature. Therefore it is vital, as Farrell and Twining-Ward (2005) suggest, that tourism research attempts to understand both natural and social systems. Complex systems science provided an alternative way of viewing the world in which tourism operates and a way of understanding the problems associated with STD. This research adapted a complex systems science approach in an attempt to understand both

natural and social systems. The research considered the importance of values and connections between stakeholders of a natural resource and the influences on sustainable tourism development outcomes.

A complex system perspective was able to identify key common and disparate connections between stakeholders of the Swan River involved in this case study which have the ability to influence sustainable tourism development outcomes within the system. The influences can be viewed in terms of strange attractors which keep the system in a state of fluctuation and at the edge of chaos (Figure 10.11).
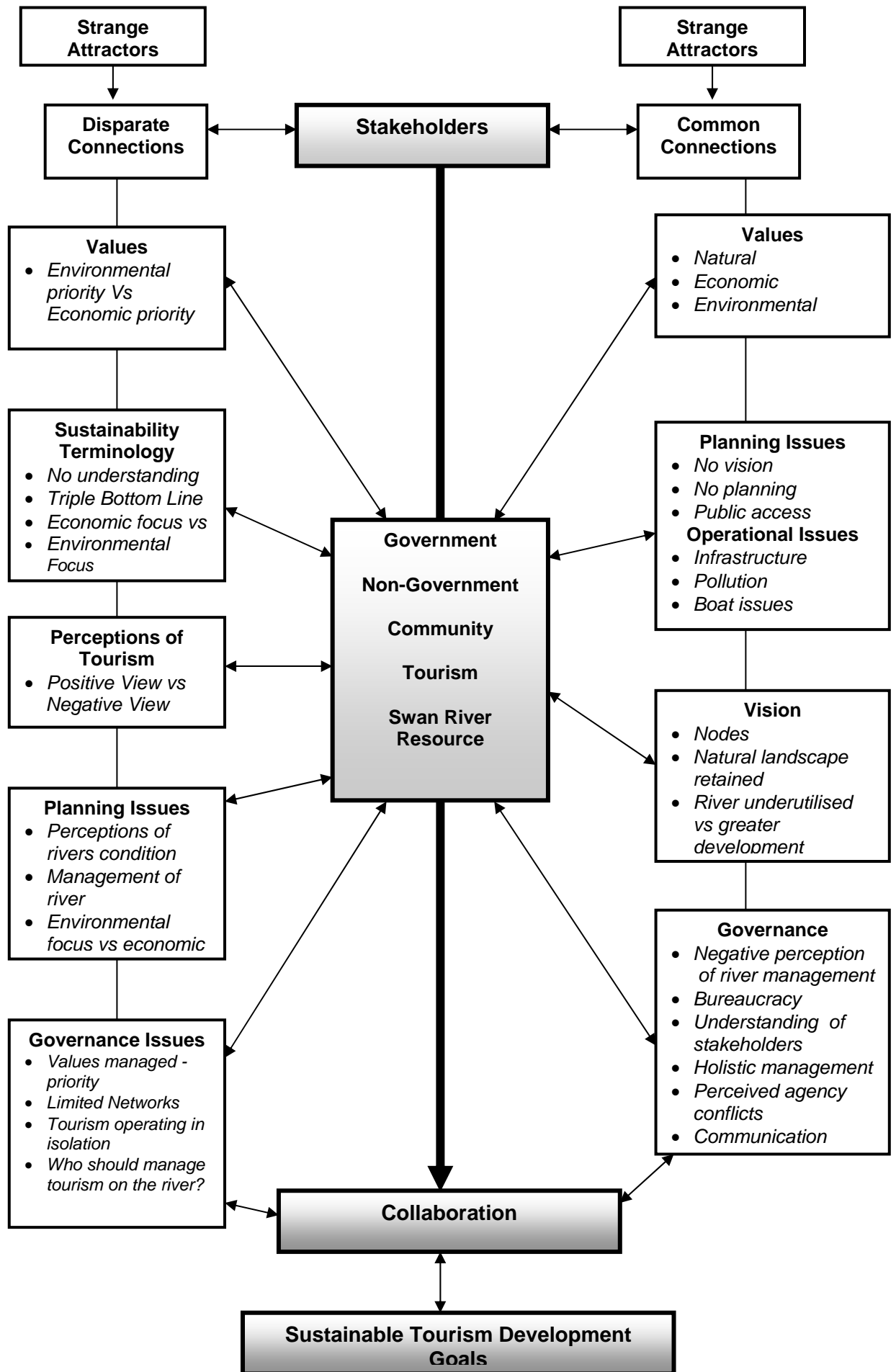
Figure 10.11 Summary of common and divergent stakeholder linkages

The behaviours and interactions of stakeholders within the system, have the potential to impact on each other and on sustainable tourism development of a natural resource, such as the Swan River. Decisions made or actions taken by stakeholders are connected to the values they associate with a resource and their perceptions. The identification and understanding of the connections allows timely intervention in the system to occur, which can be used to produce positive outcomes for the system as a whole. At the present time, the Swan River is evolving, as evidenced in the changes in types of activities occurring along the river's foreshore and in the river's ecology. Any changes to the river environs and to the river ecology will have a consequence on stakeholders, including tourism stakeholders. However, without the necessary networks in place to enable a greater common understanding between stakeholders, sustainable development outcomes are unlikely to occur. Specifically, tourism activity is occurring in an ad hoc and isolated manner and governance mechanisms are not in place to ensure that sustainable tourism development outcomes result. Carley and Christie's (2000) assertion, that sustainable development objectives for any field cannot be met unless there is government, private sector and non-government interaction, cooperation and understanding, is pertinent to this case study. Added to this assertion, should be the inclusion of community stakeholders, who have the ability to influence effective management outcomes, and the concept of collaboration in conjunction with cooperation, to meet sustainable development objectives.

Sustainable tourism development, as the literature review highlighted, is a concept that is problematic in terms of definitional and operational aspects. A complex systems perspective understands that goals of sustainable tourism development will be elusive, because of the dynamic environments in which tourism operates. Influences on the complex systems in which tourism operates include underlying values, perceptions and issues which can keep the system in conditions of constant change and unpredictability. Sustainable tourism development should not be viewed as an end goal. Tourism systems are not linear in nature; they are open systems which are influenced by complex interactions and interrelationships. Therefore there are no simple operational mechanisms that will result in a state regarded as being 'sustainable tourism development'. In other words, tourism cannot simply move linearly from an unsustainable state A to a sustainable state B. What is regarded as sustainable from one stakeholder's perspective may not be regarded as sustainable from another person's

perspective, and perspectives themselves may change over time. Individual values associated with a natural resource will influence stakeholders' views on what is regarded as sustainable. Sustainable tourism development should be viewed as a process, which is constantly changing and a complex systems perspective understands that transitions will continue over and over again. Outcomes of the process should not be regarded as an end state. Sustainable tourism development outcomes will and should, continue to evolve in a chaotic state at the edge of chaos, influenced by strange attractors to avoid death of the tourism system itself.

REFERENCES

Adams, W. M., & Infield, M. (2003). Who is on the gorilla's payroll? Claims on tourist revenue from a Ugandan National Park. *World Development, 31*(1), 177-190.

Adger, W. N., Brown, K., Fairbrass, J., Jordan, A., Paavola, J., Rosendo, S., et al. (2003). Governance for sustainability: Towards a 'thick' analysis of environmental decision making. *Environment and Planning, 35*(6), 1095-1110.

Ahn, B. Y., Lee, B., Lee, & Shafer, C. S. (2002). Operationalizing sustainability in regional tourism planning: an application of the limits of acceptable change framework. *Tourism Management, 23*, 1-15.

Allcock, A., Jones, B., Lane, S., & Grant, J. (1994). *National ecotourism strategy*. Canberra: Australian Government Publishing Services.

Anderla, G., Dunning, A., & Forge, S. (1997). *Chaotics. An agenda for business and society in the 21st century*. Twickenham: Adamantime Press.

Appleyard, R. T., & Manford, T. (1980). *The beginning: European discovery and early settlement of Swan River, Western Australia*. Nedlands, Western Australia: University of Western Australia Press.

Archer, B. (1996). Sustainable tourism: an economist's viewpoint. In L. Briguglio, B. Archer, J. Jafari & G. Wall (Eds.), *Sustainable tourism in islands & small states: issues and policies* (pp. 6-15). London & New York: Pinter.

Archer, B., & Cooper, C. (1998). The positive and negative impacts of tourism. In W. F. Theobald (Ed.), *Global Tourism* (2nd ed., pp. 63-81). Oxford: Butterworth-Heinemann.

Arndt, M., & Bigelow, B. (2000). Commentary: The potential of chaos theory and complexity theory for Health Services Management. *Health Care Management Review, 25*(1), 35-38.

Ashworth, G. J. (1992). Is there an urban tourism? *Tourism Recreation Research, 17*(2), 3-8.

Bellinger, G. (2000a). *Systems thinking. An operational perspective of the universe*. Retrieved 11/6, 2003, from http://www.outsights.com/systems/systhink/systhink.htm

Bellinger, G. (2000b). *Systems. Understanding the way*. Retrieved 11/6, 2003, from http://www.outsights.com/systems/systems/systems.htm

Berryman, I. (2002). *Swan River Letters.* (Vol. 1). Glengarry, Western Australia: Swan River Press.

Boo, E. (1993). Ecotourism planning for protected areas. In K. Lindberg & D. E. Hawkins (Eds.), *Ecotourism: A guide for planners and managers*. USA: Ecotourism Society.

Boschetti, F. (2003). *Characteristics of complex systems science*. Retrieved 02/06, 2003, from http://www.ned.dem.csiro.au/BoschettiFabio/CSF/what-is-ccs.htm#defin

Bosselman, F. P., Peterson, C. A., & McCarthy, C. (1999). *Managing tourism growth: Issues and applications*. Washington DC: Island Press.

Bouguessa, H. (1996, 12-14 September). *The council of Europe's activities.* Paper presented at the Colloquy organised by the Council of Europe (Directorate of Environment and Local Authorities) and the Slovenian Ministry of the Environment and Physical Planning. Sustainable tourism development: Concilliation of economic, cultural, social, scientific and environmental interests., Maribor, Slovenia.

Bramwell, B., & Lane, B. (1993). Sustainable tourism: an evolving global approach. *Journal of Sustainable Tourism, 1*(1), 6-16.

Bramwell, B., & Lane, B. (2000). Collaboration and partnerships in tourism planning. In B. Bramwell & B. Lane (Eds.), *Tourism collaboration and partnerships. Politics, practice and sustainability* (pp. 1-19). Clevedon, UK: Channel View Publications.

Bramwell, B., & Sharman, A. (1999). Collaboration in local tourism policy making. *Annals of Tourism Research, 26*(2), 392-415.

Bramwell, B., & Sharman, A. (2000). Approaches to sustainable tourism planning and community participation: the case of the Hope Valley. In G. Richards & D. Hall (Eds.), *Tourism and sustainable community development* (pp. 17-35). London: Routledge.

Briassoulis, H. (2002). Sustainable tourism and the question of the commons. *Annals of Tourism Research, 29*(4), 1065-1085.

Brown, D. (1998). Debt-funded environmental swaps in Africa: Vehicles for tourism development? *Journal of Sustainable Tourism, 6*(1), 69-81.

Brown, G. (1997). Sustainable tourism management: lessons from the edge of Australia. *Journal of Sustainable Tourism, 5*(4), 294-306.

Brown, G., Derrett, R., Korn, B., Oostdyck, W., & Redman, T. (1996). *Nature based and adventure tourism. A marketing and development plan for Tourism Holiday Coast*. Coffs Harbour, Australia: Centre for Tourism. Southern Cross University.

Bryman, A., & Burgess, R. G. (1994). *Analysing qualitative data*. London: Routledge.

Buckley, R. C. (2002). Tourism ecolabels. *Annals of Tourism Research, 29*(1), 183-208.

Burns, P. (1999). Paradoxes in planning. Tourism elitism or brutalism? *Annals of Tourism Research, 26*(2), 329-348.

Burr, S. W. (1995). What research says about sustainable tourism development. *Parks and Recreation, 30*(9), 12-26.

Burton, R. (1997). The sustainability of ecotourism. In M. J. Stabler (Ed.), *Tourism and sustainability. Principles to practice* (pp. 357-374). Walliingford, UK: CAB International.

Burton, R. (1998). Maintaining the quality of ecotourism: ecotour operators' responses to tourism growth. *Journal of Sustainable Tourism, 6*(2), 117-142.

Butler, R. (1980). The concept of a tourist area cycle of evolution: Implications for management of resources. *Canadian Geographer, 24*(1), 5-12.

Butler, R. (1993). Tourism - an evolutionary approach. In J. G. Nelson, R. W. Butler & G. Wall (Eds.), *Tourism and Sustainable Development: Monitoring, Planning, Management* (pp. 27-44). Waterloo, Canada: University of Waterloo.

Butler, R. (1996). Problems and possibilities of sustainable tourism: the case of the Shetland Islands. In L. Briguglio, R. Butler, D. Harrison & W. L. Filho (Eds.),

Sustainable tourism in islands and small states: Case studies (pp. 11-31). London & New York: Pinter.

Butler, R. (1998). Sustainable tourism- looking backwards in order to progress. In C. M. Hall & A. Lew (Eds.), *Sustainable tourism: A geographical perspective* (pp. 25-34). Essex, United Kingdom: Addison Wesley Longman Ltd.

Butler, R. (1999). Sustainable tourism: a state of the art review. *Tourism Geographies, 1*(1), 7-25.

Byrne, D. (1998). *Complexity theory and the social sciences*. London, UK: Routledge.

Caffyn, A., & Jobbins, G. (2003). Governance capacity and stakeholder interactions in the development and management of coastal tourism: Examples from Morroco and Tunisia. *Journal of Sustainable Tourism, 11*(2&3), 224-245.

Carley, M., & Christie, I. (2000). *Managing Sustainable Development* (2nd ed.). London: Earthscan.

Carlsen, J. (1998). *A systems approach to understanding ecologically sustainable development of tourism (ESDT).* Paper presented at the Progress in Tourism and Hospitality Research 1998. Proceedings of the Eighth Australian Tourism and Hospitality Research Conference, Gold Coast, Queensland.

Carter, R. W., Baxter, G. S., & Hockings, M. (2001). Resource management in tourism research: A new direction. *Journal of Sustainable Tourism, 9*(4), 265-280.

Caswell, T. (2001). Global sustainability: Expectations of a better world. The triple bottom line, plus one. *Australian Planner, 38*(3-4), 171-122.

Cater, E., & Goodall, B. (1997). Must tourism destroy its resource base? In L. France (Ed.), *The earthscan reader in sustainable tourism*. United Kingdom: Earthscan Publications Ltd.

Cater, E., & Lowman, G. (Eds.). (1994). *Ecotourism. A sustainable option?* Chichester, England: John Wiley & Sons, Inc.

Ceballos-Lascurian, H. (1993). Ecotourism as a worldwide phenomenon. In K. Lindberg & D. Hawkins (Eds.), *Ecotourism: A Guide for Planners and Managers* (pp. 12-14). North Bennington: Ecotourism Society.

Chadwick, B. A., Bahr, H. M., & Albrecht, S. T. (1984). *Social science research methods*. New Jersey: Prentice Hall.

Chalmers, L. (1997). *Swan River system. Landscape description. Report to the Swan River Trust.* (No. 28). Perth: Waters and Rivers Commission.

Checkland, P. (1999). *Soft systems methodology in action. Includes a 30 year retrospective*. Chichester, UK: John Wiley & Sons Ltd.

Cheng, A. S., Kruger, L. E., & Daniels, S. E. (2003). "Place" as an integrating concept in natural resource politics: Propositions fro a social science research agenda. *Society and Natural Resources, 16*(3), 87-104.

Cilliers, P. (1998). *Complexity and post modernism. Understanding complex systems*. London: Routledge.

Cleaver, M., & Muller, T. E. (2002). The socially aware baby boomer: Gaining a lifestyle-based understanding of the new wave of ecotourists. *Journal of Sustainable Tourism, 10*(3), 173-190.

Coccossis, H., & Nijkamp, P. (Eds.). (1995). *Sustainable tourism development*. Aldershot, England: Avebury.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data*. California: Sage Publications.

Commonwealth of Australia. (1991). *Ecologically sustainable development working groups. Final report-Tourism*. Canberra: Australian Government Publishing Services.

Commonwealth of Australia. (1992). *National strategy for ecologically sustainable development*. Canberra, Australia: Australian Government Publishing Services.

Commonwealth of Australia. (2004). *Steps to sustainable tourism. Plannning a sustainable furture for tourism, heritage and the environment*. Canberra, Australia: Department of the Environment and Heritage.

Connick, S., & Innes, J. (2003). Outcomes of collaborative water policy making: applying complexity thinking to evaluation. *Journal of Environmental Planning and Management, 46*(2), 177-197.

Constanza, R. (2003). A vision for the future of science: reintegrating the study of humans and the rest of nature. *Futures, 35*, 651-671.

Cooper, C. (1997). The contribution of life cycle analysis and strategic planning to sustainable tourism. In S. Wahab & J. Pigram (Eds.), *Tourism, development and growth. The challenge of sustainability* (pp. 78-94). London: Routledge.

Cooper, C., Fletcher, J., Gilbert, D., & Wanhill, S. (1993). *Tourism principles and practice*. London: Pitman Publishing.

Cottrell, S., van der Duim, R., Andersmid, P., & Kelder, L. (2004). Measuring the sustainability of tourism in Manuel Antonio and Texel: A tourist perspective. *Journal of Sustainable Tourism, 12*(5), 409-428.

Coveney, P., & Highfield, R. (1995). *Frontiers of complexity. The search for order in a chaotic world*. London, UK: Faber and Faber.

Craik, J. (1995). Are there cultural limits to tourism? *Journal of Sustainable Tourism, 3*(2), 87-99.

Curtin, S., & Busby, G. (1999). Sustainable destination development: The tour operator perspective. *International Journal of Tourism Research, 1*, 135-147.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks: Sage Publications.

Denzin, N. K., & Lincoln, Y. S. (1998). Introduction: Entering the field of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research*. Thousand Oaks, London: Sage Publications, Inc.

Denzin, N. K., & Lincoln, Y. S. (2000). Strategies of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 366-378). Thousand Oaks, California: Sage Publications, Inc.

Department for Planning and Infrastructure. (2003). *The official Western Australian boating guide. Fifth edition. August 2003*. Perth Western, Australia.

Department for Planning and Infrastructure. (2005). *Boating communities*. Perth, Western Australia.

Department of Conservation and Land Management. (1999). *Swan estuary marine park and adjacent nature reserves. Management plan 1999-2009*. Perth, Western Australia.

Department of Environment Sport and Territories. (1996). *State of the environment Australia. Executive summary*. Canberra, Australia: CSIRO Publishing.

Department of Premier and Cabinet. (2004). *175th Anniversary of Western Australia. Heritage Icons*. Retrieved January, 2004, from http://www.175anniversary.wa.gov.au

Department of Tourism. (1992). *Tourism, Australia's passport to growth. A national tourism strategy*. Canberra, Australia: Australian Government Publishing Services.

Department of Tourism. (1994). *National ecotourism strategy*. Canberra, Australia: Australian Government Publishing Services.

Diesing, P. (1991). *How does social science work? Reflections on practice*. Pittsburgh, USA: University of Pittsburgh Press.

Dodds, R., & Joppe, M. (2001). Promoting urban green tourism: The development of the other map of Toronto. *Journal of Vacation Marketing, 7*(3), 261-267.

Dolan, S. L., Garcia, S., & Auerbach, A. (2003). Understanding and managing chaos in organisations. *International Journal of Management, 20*(1), 23-35.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: concepts, evidence, and implications. *Academy of Management Review, 20*(1), 65-91.

Donmoyer, R. (2002). Generalizability and the single-case study. In *Case study method* (pp. 45-68). London, UK: Sage Publications Inc.

Dowling, R. K., & Fennell, D. A. (2003). The context of ecotourism policy and planning. In D. A. Fennell & R. K. Dowling (Eds.), *Ecotourism Policy and Planning* (pp. 1-20). Wallingford, UK: CABI Publishing.

Eagles, P. F. J., & McCool, S. (2000). *Tourism in national parks and protected areas. Planning and management*. Wallingford, UK: CABI Publishing.

Eckerberg, K., & Joas, M. (2004). Multi-level environmental governance: A concept under stress? *Local Environment, 9*(5), 405-412.

Ecotourism Australia. (2005). *Eco certification program*. Retrieved 22/8, 2005, from http://www.ecotourism.org.au/eco_certification.asp

Edwards, J. A., & Priestley, G. K. (1996). European perspectives on sustainable tourism. In G. K. Priestley & J. A. Edwards (Eds.), *Sustainable tourism? European experiences* (pp. 189-198). Wallingford, UK: CAB International.

Eisenhardt, K. M. (2002). Building theories from case study research. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 5-36). Thousand Oaks, California: Sage Publications, Inc.

Eisenhauer, B. W., Krannich, R. S., & Blahna, D. J. (2000). Attachments to special places on public lands: An analysis of activities, reason for attachments, and community connections. *Society and Natural Resources, 13*(5), 421-441.

Elliot, J. (1997). *Tourism politics and public sector management*. London: Routledge.

Fairweather, J., Maslin, C., & Simmons, D. (2005). Environmental values and response to ecolabels among international visitors to New Zealand. *Journal of Sustainable Tourism, 13*(1), 82-98.

Farrell, B., & Runyan, D. (1991). Ecology and tourism. *Annals of Tourism Research, 18*(1).

Farrell, B., & Twining-Ward, L. (2004). Reconceptualising tourism. *Annals of Tourism Research, 31*(2), 274-295.

Farrell, B., & Twining-Ward, L. (2005). Seven steps towards sustainability: Tourism in the context of new knowledge. *Journal of Sustainable Tourism, 13*(2), 109-122.

Faulkner, B., & Russell, R. (1997). Chaos and complexity in tourism: in search of a new perspective. *Pacific Tourism Review, 1*, 93-102.

Fennell, D. A. (2002). *Ecotourism programme planning*. Wallingford, UK: CABI publishing.

Fennell, D. A. (2003). *Ecotourism* (2nd ed.). London: Routledge.

Fennell, D. A., & Dowling, R. K. (2003). Ecotourism policy and planning: Stakeholders, management and governance. In D. A. Fennell & R. K. Dowling (Eds.), *Ecotourism policy and planning* (pp. 331-344). Wallingford, UK: CABI Publishing.

Fischer, C. T., & Wertz, F. J. (2002). Empirical phenomenological analyses of being criminally victimised. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 275-304). Thousand Oaks, California: Sage Publications, Inc.

Ford, R. C., Armandi, B. R., & Heaton, C. P. (1988). *Organization theory: An integrative approach*. New York: Harper & Row.

Forsyth, T. (1995). Business attitudes to sustainable tourism: self regulation in the UK outgoing tourism industry. *Journal of Sustainable Tourism, 3*(4), 210-231.

Forsyth, T. (1997). Environmental responsibility and business regulation: The case of sustainable tourism. *The Geographical Journal, 163*(3), 270-280.

Frame, B., & Taylor, R. (2005). Partnerships for sustainability. *Local Environment, 10*(3), 275-298.

Freeman, R. E. (1984). *Strategic management. A stakeholder approach*. Boston: Pitman.

Fyall, A., & Garrod, B. (1997). Sustainable tourism: Towards a methodology for implementing the concept. In M. J. Stabler (Ed.), *Tourism and sustainability. Principles to practice* (pp. 51-68). Wallingford, UK: CAB International.

Gee, C. Y., Makens, J. C., & Choy, D. J. (1989). *The travel industry* (2nd ed.). New York: Van Nostrand Reinhold.

Geldof, G. D. (1995). Adaptive water management: integrated water management on the edge of chaos. *Water Science Technology, 32*(1), 7-13.

Getz, D. (1992). Tourism planning and destination life cycle. *Annals of Tourism Research, 19*(4), 752-770.

Godfrey, K. B. (1996). Practicing responsible tourism. International case studies in tourism planning, policy, and development. In L. C. Harrison & W. Husbands (Eds.), *Practicing responsible tourism. International case studies in tourism*

planning, policy, and development (pp. 58-75). Toronto: John Wiley & Sons, Inc.

Goeldner, C. R., Ritchie, J. R., & McIntosh, R. W. (2000). *Tourism: Principles, practices, philosophies* (8th ed.). New York: John Wiley & Sons, Inc.

Goodall, B., & Stabler, M. J. (1997). Principles influencing the determination of environmental standards for sustainable tourism. In M. Stabler, J (Ed.), *Tourism and Sustainability, Principles to Practice* (pp. 279-304). UK: CAB International.

Goodall, B., & Stabler, M. J. (2000). Environmental standards and perfomance measurement in tourism destination development. In G. Richards & D. Hall (Eds.), *Tourism and sustainable community development* (pp. 63-82). London: Routledge.

Goodey, B. (1996). *Sustainable development projects: The main partners.* Paper presented at the Colloquy organised by the Council of Europe (Directorate of Environment and Local Authorities) and the Slovenian Ministry of the Environment and Physical Planning. Sustainable tourism development: concilliation of economic, cultural, social, scientific and environmental interests., Maribor, Slovenia.

Gossling, S. (2002). Human-environmental relations with tourism. *Annals of Tourism Research, 29*(2), 539-556.

Government of Western Australia. (2000a). *Future Perth. Scenarios of our future: Challenges for Western Australian society.* Perth, Western Australia: John Curtin International Institute. Curtin University of Technology.

Government of Western Australia. (2000b). *Future Perth. What's important to the community. Focus group outcomes*. Perth, Western Australia: Market Equity.

Government of Western Australia. (2003). *Hope for the future: The Western Australian state sustainability strategy*. Perth, Western Australia: Department of the Premier and Cabinet.

Grant, M. (1999). Tourism development. *Annals of Tourism Research, 26*(1), 235-237.

Green Globe 21. (2005). *Green globe 21*. Retrieved 18/8, 2005, from http://www.greenglobe21.com/

Griffen, T. (2002). An optimistic perspective on tourism's sustainability. In R. Harris, T. Griffen & P. Williams (Eds.), *Sustainable tourism. A global perspective* (pp. 24-34). Oxford: Butterworth-Heinnemann.

Guilfoyle, A. M., & Hill, S. M. (2002). Interviews in qualitative research: A resource kit for beginners. Perth, Western Australia: Edith Cowan University.

Gunn, C. A. (1994). *Tourism planning: Basics, concepts, cases*. Washington: Taylor and Francis.

Haig, I., & McIntyre, N. (2002). Viewing nature: The role of the guide and the advantages of participating in commercial ecotourism. *The Journal of Tourism Studies, 13*(1), 39-48.

Hall, C. M. (1994). *Tourism and politics. Policy, power and place*. Chichester, West Suffix, England: John Wiley & Sons.

Hall, C. M. (1995a). In search of common ground: Reflections on sustainability, complexity and process in the tourism system- a discussion between C.Michael Hall and Richard W. Butler. *Journal of Sustainable Tourism, 3*(2), 99-105.

Hall, C. M. (1995b). *Introduction to tourism in Australia* (2nd ed.). Melbourne, Australia: Longman.

Hall, C. M. (1998). Historical antecedents of sustainable development and ecotourism: new labels on old bottles. In C. M. Hall & A. Lew (Eds.), *Sustainable tourism. A geographical perspective* (pp. 13-24). Essex, UK: Addison Wesley Longman Ltd.

Hall, C. M. (2000a). Tourism collaboration and partnerships. In B. Bramwell & B. Lane (Eds.), *Tourism collaboration and partnerships* (pp. 143-158). Clevedon, UK: Channel View Publications.

Hall, C. M. (2000b). *Tourism planning. Policies, processes and relationships*. Essex, England: Prentice Hall.

Hallam, S. J. (1987). Aboriginal resource usage along the Swan River. In J. Jacob (Ed.), *The Swan River Estuary Ecology and Management. Proceedings of a Symposium on the Swan Canning River Estuarine System* (pp. 21-33). Perth, Western Australia: Environmental Studies Group, Curtin University of Technology.

Hames Sharley. (1998). *Draft masterplan for the redevelopment of Barrack Square*. Perth, Western Australia: Ministry of Premier & Cabinet.

Hammersley, M. (2002). Ethnography and realism. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 65-80). Thousand Oaks, California: Sage Publications, Inc.

Hammersley, M., & Gomm, R. (2002). Introduction. In M. Hammersley, R. Gomm & P. Foster (Eds.), *Case study method* (pp. 1-16). London, UK: Sage Publications Inc.

Hammersley, M., Gomm, R., & Foster, P. (2002). *Case study method*. London, UK: Sage Publications Inc.

Hardin, G. (1968). The tragedy of the commons. *Science, 162*(3859), 1243-1248.

Hardy, A., & Beeton, R. J. S. (2001). Sustainable tourism or maintainable tourism: Managing resources for more than average incomes. *Journal of Sustainable Tourism, 9*(3), 168-192.

Hardy, A., Beeton, R. J. S., & Pearson, L. (2002). Sustainable tourism: An overview of the concept and its position in relation to operationalisation of tourism. *Journal of Sustainable Tourism, 10*(6), 475-496.

Harris, R., & Leiper, N. (Eds.). (1995). *Sustainable tourism. An Australian perspective*. Chatswood, Australia: Butterworth-Heinemann.

Harrison, D. (1996). Sustainability and tourism: reflections from a muddy pool. In L. Briguglio, B. Archer, J. Jafari & G. Wall (Eds.), *Sustainable tourism in islands and small states: issues and policies*. London & New York: Pinter.

Hay, R. (1998). A rooted sense of place in cross-cultural perspective. *Canadian Geographer, 42*(3), 245-266.

Heinen, J. (1994). Emerging, diverging and converging paradigms on sustainable development. *International Journal of Sustainable Development and World Ecology, 1*, 22-33.

Herath, G. (2002). Research methodologies for planning ecotourism and nature conservation. *Tourism Economics, 8*(1), 77-101.

Heylighen, F. (1998). *Cybernetics and systems theory*. Retrieved 18/06, 2003, from http://pespmc1.vub.ac.be/SYSAPPE.html

Heylighen, F., & Joslyn, C. (1992). *What is systems theory*. Retrieved 18/6, 2003, from http://pepsmc1.vub.ac.be/SYSTHEOR.html

Hinch, T. D. (1996). Urban tourism: Perspectives on sustainability. *Journal of Sustainable Tourism, 4*(2), 95-110.

Hinch, T. D. (1998). Sustainable urban tourist attractions: the case of Fort Edmonton Park. In C. M. Hall & A. Lew (Eds.), *Sustainable Tourism. A Geographical Perspective* (pp. 185-198). Essex: Addison Wesley Longman Ltd.

Holden, A. (2000). *Environment and tourism*. London: Routledge.

Holden, A. (2005). Achieving a sustainable relationship between common pool resources and tourism: The role of environmental ethics. *Journal of Sustainable Tourism, 13*(4), 339-352.

Holder, J. S. (1996). Maintaining competitiveness in a new world order. In L. C. Harrison & W. Husbands (Eds.), *Practicing responsible tourism. International case studies in tourism planning, policy and development* (pp. 145-173). Toronto, Canada: John Wiley and Sons Inc.

Holliday, A. (2002). *Doing and writing qualitatve research*. London, UK: Sage Publications, Inc.

House, J. (1997). Redefining sustainability: A structural approach to sustainable tourism. In M. J. Stabler (Ed.), *Tourism and sustainability. Principles to practice* (pp. 89-104). Wallingford: CAB International.

Hovinen, G. R. (2002). Revisiting the destination lifecycle model. *Annals of Tourism Research, 29*(1), 209-230.

Hughes, G. (2002). Environmental indicators. *Annals of Tourism Research, 29*(2), 457-477.

Hunter, C. (1995a). Conclusions. In C. Hunter & H. Green (Eds.), *Tourism and the environment: A sustainable relationship?* (pp. 169-182). London: Routledge.

Hunter, C. (1995b). On the need to re-conceptualise sustainable tourism development. *Journal of Sustainable Tourism, 3*(3), 155-166.

Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research, 21*(1), 850-867.

Hunter, C. (2002). Aspects of the sustainable tourism debate from a natural resource perspective. In R. Harris, T. Griffen & P. Williams (Eds.), *Sustainable tourism. A global perspective* (pp. 3-23). Oxford: Butterworth-Heinnemann.

Hvenegaard, G. (1994). Ecotourism: A status report and conceptual framework. *Journal of Tourism Studies, 5*(2), 24-31.

International Union for the Conservation of Nature and Natural Resources. (1980). *World Conservation Strategy*. Morges: ICUN.

Jackson, G., & Morpeth, N. (2000). Local Agenda 21. Reclaiming community ownership in tourism or stalled process? In G. Richards & D. Hall (Eds.), *Tourism and sustainable community development* (pp. 119-134). London: Routledge.

Jacobs, M. (1991). *The green economy*. London: Pluto Press.

Jafari, J. (2000). *Encyclopedia of tourism*. London: Routledge.

Jamal, T., & Getz, D. (1995). Collaboration theory and community tourism planning. *Annals of Tourism Research, 22*(1), 186-204.

Jamal, T., & Getz, D. (2000). Community roundtables for tourism related conflicts: The consensus and process structures. In B. Bramwell & B. Lane (Eds.), *Tourism collaboration and partnerships* (pp. 159- 182). Clevedon, UK: Channel View Publications.

Janesick, V. J. (2000). The choreography of qualitative research design. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 379-399). Thousand Oaks, California: Sage Publications, Inc.

Janssen, H., Kiers, M., & Nijkamp, P. (1995). Private and public development strategies for sustainable tourism development of island economies. In H. Coccossis & P. Nijkamp (Eds.), *Sustainable tourism development* (pp. 65-84). Aldershot: Avebury.

Jennings, G. (2001). *Tourism research*. Milton, Qld: John Wiley & Sons.

Johnson, R. B., & Onwuegbuzie, A. (2004). Mixed method research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26.

Johnson, S. (2001). *Emergence*. London, UK: Penguin Books Ltd.

Jones, R. (1997). Sacred sites or profane buildings? Reflections on the Old Swan Brewery conflict in Perth, Western Australia. In B. J. Shaw & R. Jones (Eds.), *Contested urban heritage* (pp. 132-155). Aldershot, UK: Ashgate Publishing Ltd.

Kast, F. E., & Rosenzweig, J. E. (1977). General systems theory: Applications for organization and management. In K. O. Magnussen (Ed.), *Organizational design, development and behavior. A situational view* (pp. 47-65). Glenview: Scott, Forseman and Company.

Kitwood, T. M. (1983). *The study of persons and their values* (Vol. 3). Perth: The Western Australian Institute for Educational Research.

Knowles-Lankford, J., & Lankford, S. (2000). Tourism and sustainability- Can they be partners? *World Leisure, 42*(2), 4-10.

Lane, B. (1991). Sustainable tourism: A new concept for the interpreter. *Interpretation, 28*(29), 1-4.

Le Page, J. S. H. (1986). *Building a state. The story of the public works department 1829 - 1985*. Leederville, Western Australia: Water Authority of Western Australia.

Leiper, N. (1990). *Tourism systems. An interdisciplinary perspective.* Palmerston North: Department of Management Systems, Business Studies Faculty, Massey University.

Leiper, N. (1995). *Tourism management*. Melbourne: RMIT publishing.

Leiper, N. (2003). *Tourism management* (2nd ed.). Frenchs Forest: Pearson Education Australia.

Lew, A. (1998). Ecotourism trends. *Annals of Tourism Research, 25*(3), 742-746.

Lewin, R. (1992). *Complexity. Life at the edge of chaos*. New York: Macmillan Publishing Company.

Lincoln, Y. S., & Denzin, N. K. (1998). The fifth moment. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research. Theories and issues* (pp. 407-430). Thousand Oaks, California: Sage publications, Inc.

Lincoln, Y. S., & Denzin, N. K. (2000). The seventh moment. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 1047-1065). Thousand Oaks, California: Sage Publications, Inc.

Lincoln, Y. S., & Guba, E. (1985). *Naturistic Inquiry*. Beverly Hills: C.A. Sage Publications.

Lincoln, Y. S., & Guba, E. (2000a). The only generalization is: There is no generalization. In R. Gomm, M. Hammersley & P. Foster (Eds.), *Case study method* (pp. 27-44). London: Sage Publications Ltd.

Lincoln, Y. S., & Guba, E. (2000b). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 163-188). Thousand Oaks, California: Sage Publications, Inc.

Lindberg, K., Enriquez, J., & Sproule, K. (1996). Ecotourism questioned. Case studies from Belize. *Annals of Tourism Research, 23*(3), 543-562.

Liu, Z. (2003). Sustainable tourism development: A critique. *Journal of Sustainable Tourism, 11*(6), 459-475.

Lorenz, E. N. (1993). *The essence of chaos*. Washington, USA: University of Washington Press.

Loucks, D. P., & Gladwell, J. (1999). *Sustainability criteria for water resource systems*. Cambridge: Cambridge University Press.

Lovelock, B. (2002). Why its good to be bad; The role of conflict in contributing towards sustainable tourism in protected areas. *Journal of Sustainable Tourism, 10*(1), 5-30.

Magnusen, K. O. (1977). *Organizational design, development and behavior. A situational view*: Scott, Foresman and Company.

Manning, T. (1999). Indicators of tourism sustainability. *Tourism Management, 20*, 179-181.

Marcus, G. E. (1998). What comes (just) after 'post'? The case of ethnography. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research*. Thousand Oaks, London: Sage Publications, Inc.

Markey, D. C. (1977). *More a symbol than a success: Foundation years of the Swan River Colony*. Perth, Western Australia: Mount Lawley College.

Mathieson, A., & Wall, G. (1987). *Tourism: economic, physical and social impacts*. Harlow, Essex, England: Longman Scientific and Technical.

Maxwell, J. A. (2002). Understanding and validity in qualitative research. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 37-64). Thousand Oaks, California: Sage Publications, Inc.

Mbaiwa, J. (2005). The problems and prospects of sustainable tourism development in the Okavango Delta, Botswana. *Journal of Sustainable Tourism, 13*(3), 203-228.

McIntyre, G., Hetherington, A., & Inskeep, E. (1993). *Sustainable tourism development: Guide for local planners*. Madrid, Spain: World Tourism Organization.

McKercher, B. (1993). Some fundamental truths about tourism: Understanding tourism's social and environmental impacts. *Journal of Sustainable Tourism, 1*(1), 6-17.

McKercher, B. (1998). *The business of nature-based tourism*. Melbourne: Hospitality Press.

McKercher, B. (1999). A chaos approach to tourism. *Tourism Management, 20*(4), 425-434.

Meadows, D. (2001). *Dancing with systems*. Retrieved 8/2, 2005, from http://www.sustainabilityinstitute.org/pubs/Dancing.html

Meadows, D., Meadows, D., & Randers, J. (1992). *Beyond the limits: global collapse or a sustainable future*. London: Earthscan publications.

Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook. Qualitative data analysis* (2nd ed.). London: Sage Publications.

Mill, R. C., & Morrison, A. M. (1985). *The tourism system. An introductory text.* Englewood Cliffs: Prentice-Hall.

Mill, R. C., & Morrison, A. M. (1992). *The tourism system. An introductory text.* (2nd ed.). Englewood Cliffs: Prentice-Hall.

Mill, R. C., & Morrison, A. M. (1998). *The tourism system* (4th ed.). Englewood Cliffs: Prentice-Hall.

Miller, G. (2001). The development of indicators for sustainable tourism: results of a Delphi survey of tourism researchers. *Tourism Management, 22*, 351-362.

Milne, S. (1998). Tourism and sustainable development:exploring the global-local nexus. In C. M. Hall & A. Lew (Eds.), *Sustainable Tourism: A geographical perspective*. Essex, United Kingdom: Addison Wesley Longman Ltd.

Mintz, J. A. (2004). Some thoughts on the merits of pragmatism as a guide to environmental protection. *Environmental Affairs Law Review, 31*(1), 1-26.

Moore, S. A., Jennings, S., & Tacey, W. (2001). Achieving sustainable natural resource management outcomes on the ground: the key elements of stakeholder involvement. *Australian Journal of Environmental Management, 8*, 91-98.

Morrison, T. H., Mc Donald, G. T., & Lane, M. B. (2004). Integrating natural resource management for better environmental outcomes. *Australian Geographer, 35*(3), 243-258.

Mowforth, M., & Munt, I. (1998). *Tourism and sustainability. New tourism in the third world*. London & New York: Routledge.

Murphy, P. (1998). Tourism and sustainable development. In W. F. Theobald (Ed.), *Global tourism* (2nd ed., pp. 173-190). Oxford: Butterworth-Heinemann.

National Archives of Australia. (n.d). *Lieutenant Governor Stirling's instructions, 30 December 1828*. Retrieved February 16, 2005, from http://www.foundingdocs.gov.au/places/transcripts/

Nelson, A., & Pettit, C. (2004). Effective community engagement for sustainability: Wombat community forest management case study. *Australian Geographer, 35*(3), 301-315.

Neuman, W. L. (1997). *Social research methods. Qualitative and quantitative approaches* (3rd ed.). London: Allyn & Bacon.

Nijkamp, P., & Verdonkschot, S. (1995). Sustainable tourism development: A case study of Lesbos. In H. Coccossis & P. Nijkamp (Eds.), *Sustainable tourism development* (pp. 127-140). Aldershot: Avebury.

Pacific Asia Tourism Association. (1992). *Endemic tourism. A profitable industry in a sustainable environment. Towards a vision for Australia and the region.* Australia: PATA.

Pacific Asia Tourism Association. (2002). Now, back to sustainability. *Issues and Trends. Pacific Asia Travel, 7*(1), 1-4.

Paehlke, R. (1995). Environmental values for a sustainable society: the democratic challenge. In F. Fischer & M. Black (Eds.), *Greening environmental policy. The politics of a sustainable future.* (pp. 129-143). New York: St. Martin's Press.

Page, S. J. (2002). Towards sustainable tourism development and planning in New Zealand: The public sector response revisited. *Journal of Sustainable Tourism, 10*(3), 222-238.

Page, S. J., & Hall, M. C. (2003). *Managing urban tourism*. Harlow: Pearson Education Limited.

Page, S. J., & Thorn, K. (1998). Sustainable tourism development and planning in New Zealand:local government responses. In C. M. Hall & A. Lew (Eds.), *Sustainable tourism. A Geographical perspective* (pp. 173-184). Harlow, Essex, England: Addison Wesley Longman Ltd.

Palmer, K. (1990). *Aborigines, values and the environment.* Paper presented at the CRES Symposium 'Organising for an Ecologically Sustainable Australia' 8-10 May 1990, Canberra.

Pasquale, R. T. (1990). *Managing on the edge:how the smartest companies use conflict to stay ahead*. New York: Simon & Schuster.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). London: Sage Publications.

Pavlovich, K. (2003). The evolution and transformation of a tourism destination network: the Waitomo caves, New Zealand. *Tourism Management, 24*, 203-216.

Pearce, D. (1989). *Tourist development* (2nd ed.). Essex: Addison Wesley Longman Limited.

Pearce, D. (1995). From culture shock and culture arrogance to culture exchange: ideas towards sustainable socio-cultural tourism. *Journal of Sustainable Tourism, 3*(3), 143-154.

Pigram, J. (1992). Alternative tourism: Tourism and sustainable resource. In V. I. Smith & W. T. C. Eadington (Eds.), *Tourism alternatives, potentials and problems in the development of tourism* (pp. 76-87). Philadelphia: Pennsylvania Press.

Pigram, J. (1997). Best practice environmental management and the tourism industry. In C. Cooper & S. Wanhill (Eds.), *Tourism development: environmental and community issues* (pp. 117-128). Chichester, England: John Wiley and Sons.

Pigram, J., & Wahab, S. (1997). Sustainable tourism in a changing world. In S. Wahab & J. Pigram (Eds.), *Tourism, development and growth. The challenge of sustainability*. London & New York: Routledge.

Placet, M., Anderson, R., & Fowler, K. M. (2005). Strategies for sustainability. *Research Technology Management, 48*(5), 32-41.

Plog, S. C. (1974). Why destination areas rise and fall in popularity. *The Cornall Hotel and Restaurant Administration Quarterly, 14*(4), 55-58.

Plog, S. C. (1998). Why destination preservation makes economic sense. In W. F. Theobald (Ed.), *Global tourism* (2nd ed., pp. 251-266). Oxford: Butterworth-Heinemann.

Pollock, R., & Whitelaw, G. (2005). Community-based monitoring in support of local sustainability. *Local Environment, 10*(3), 211-228.

Price, I., & Akhlaghi, F. (1999). New patterns in facilities management:industry best practice and new organisational theory. *Facilities, 17*(5/6), 159-166.

Prideaux, B. (1998). *The resort development spectrum: An examination of the role of the market in resort development.* Paper presented at the Eighth Australian tourism and hospitality research conference.

Prigogine, I., & Stengers, I. (1985). *Order out of chaos. Man's new dialogue with nature*. London, UK: Flamingo. An Imprint of HarperCollins Publishers.

Reed, M. (1999). Collaborative tourism planning as adaptive experiments in emergent tourism settings. *Journal of Sustainable Tourism, 7*(3 & 4), 331-356.

Reed, M. (2000). Collaborative tourism planning as adaptive experiments in emergent tourism settings. In B. Bramwell & B. Lane (Eds.), *Tourism collaboration and partnerships* (pp. 247-271). Clevedon, UK: Channel View Publications.

Reid, D. G. (2003). *Tourism, Globalization and Development. Responsible Tourism Planning*. London: Pluto Press.

Reynolds, P. C., & Braithwaite, D. (2001). Towards a conceptual framework for wildlife tourism. *Tourism Management, 22*, 31-42.

Rhodes, R. A. W. (1997). *Understanding governance. Policy networks, governance, reflexivity and accountability.* Maidenhead, UK: Open University Press.

Richards, G., & Hall, D. (2000). Conclusions. In G. Richards & D. Hall (Eds.), *Tourism and sustainable community development* (pp. 297-306). London: Routledge.

Richardson, L. (2003). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and interpreting qualitative materials* (2nd ed.). Thousand Oaks, California: Sage Publications.

Riggert, T. L. (1978). *The Swan River estuary development, management & preservation.* Perth, Western Australia: Swan River Conservation Board.

Ritchie, J. (2000). Interest based formulation of tourism policy for environmentally sensitive destinations. In B. Bramwell & B. Lane (Eds.), *Tourism collaboration and partnerships* (pp. 44-77). Clevedon, UK: Channel View Publications.

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied research. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 305-330). Thousand Oaks, California: Sage Publications, Inc.

Rokeach, M. (1972). *Beliefs, attitudes and values. A theory of organization and change* (5th ed.). San Francisco: Jossey-Bass.

Ross, S., & Wall, G. (1999). Ecotourism: towards congruence between theory and practice. *Tourism Management, 20*, 123-132.

Roughley, A. (2000). Rainforests, reefs, and rising rents. *Australian Planner, 37*(1), 20-27.

Russell, R., & Faulkner, B. (1999). Movers and shakers: chaos makers in tourism development. *Tourism Management, 20*(4), 411-423.

Ryan, C. (2002). Equity, management, power sharing and sustainability-issues of the 'new tourism'. *Tourism Management, 23*, 17-26.

Ryan, G. W., & Bernard, R. H. (2003). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and interpreting qualitative materials* (2nd ed., pp. 259-309). Thousand Oaks, California: Sage Publications, Inc.

Sadler, D. R. (2002). Intuitive data processing as a potential source of bias in naturalistic evaluations. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 123-135). Thousand Oaks, California: Sage Publications, Inc.

Sancassiani, W. (2005). Local agenda 21 in Italy: An effective governance tool for facilitating local communities' participation and promoting capacity building for sustainability. *Local Environment, 10*(2), 189-200.

Sarantakos, S. (1998). *Social research* (2nd ed.). Australia: Macmillan Education.

Saunier, R. E., & Meganck, R. A. (2004). *C.H.A.O.S.S. An essay and glossary for students and practitioners of global environmental governance*. London, UK: Taylor & Francis Group.

Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism Management, 20*, 245-249.

Scheyvens, R. (2000). Promoting women's empowerment through involvement in ecotourism: Experiences from the third world. *Journal of Sustainable Tourism, 8*(3), 232-239.

Seddon, G. (1972). *Sense of place: A response to an environment. The Swan Coastal Plain.* Perth, Western Australia: University of Western Australia Press.

Seligman, C., Syme, G., & Gilchrist, R. (1994). The role of values and ethical principles in judgments of environmental dilemmas. *Journal of Social Issues, 50*(3), 105-119.

Senge, P. (1990). *The fifth discipline*. New York: Doubleday.

Senge, P. (1999). Sharing knowledge. *Executive Excellence, 16*(9), 6-7.

Sharpley, R. (2000). Tourism and sustainable development: Exploring the theoretical divide. *Journal of Sustainable Tourism, 8*(1), 1-19.

Silverman, D. (2000). Analyzing talk and text. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 821-834). Thousand Oaks, California: Sage Publications, Inc.

Slee, W., Farr, H., & Snowden, P. (1997). Sustainable tourism development and the local economy. In M. J. Stabler (Ed.), *Tourism and sustainability. Principles to practice* (pp. 69-87). Wallingford: CABI.

Sophocleous, M. (2003). Environmental implications of intensive groundwater use with special regard to streams and wetlands. In R. Llamas & E. Custodio (Eds.), *Intensive use of groundwater* (pp. 93-112). Lisse: A.A. Balkema Publishers.

Stabler, M. J. (1997). An overview of the sustainable tourism debate and the scope and content of the book. In M. J. Stabler (Ed.), *Tourism and sustainability. Principles to practice* (pp. 1-22). Wallingford: CAB International.

Stacey, R. D. (1996). *Complexity and creativity in organizations*. San Francisco: Berret-Koehler Publishers.

Stacey, R. D., Griffen, D., & Shaw, P. (2000). *Complexity management: fad or radical challenge to systems thinking?* New York: Routledge.

Stake, R. E. (2000a). Case Studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 435-454). Thousand Oaks, California: Sage Publications, Inc.

Stake, R. E. (2000b). The case study method in social inquiry. In R. Gomm, M. Hammersley & P. Foster (Eds.), *Case study method* (pp. 19-26). London, UK: Sage Publications Ltd.

Stewart, I. (1989). *Does God play dice? The new mathematics of chaos*. London, UK: Penguin Books Ltd.

Strauss, A. L. (1987). *Qualitative analysis for social scientists*. Cambridge: University Press.

Streck, C. (2004). New partnerships in global environmental policy: The clean development mechanism. *Journal of Environment and Development, 13*(3), 295-322.

Swan Catchment Council. (2004). *The Swan Region strategy for natural resource management*. Perth, Western Australia: Swan Catchment Council.

Swan River Trust. (1999). *Swan-Canning Cleanup Program action plan. An action plan to clean up the Swan-Canning rivers and estuary*. Perth, Western Australia.

Swan River Trust. (2000a). *The catchment of the Swan-Canning River System: A supporting document to the Swan Canning Cleanup Program Action Plan* (Government report). Perth, Western Australia: Swan River Trust.

Swan River Trust. (2000b). *The public attitudes and perceptions towards maintaining the Swan-Canning River*. Perth, Western Australia: Hides Consulting Group.

Swan River Trust. (2000c). *River science. Issue 5. Sources of nutrients to the Swan and Canning rivers*. Perth, Western Australia: Swan River Trust.

Swan River Trust. (2000d). *River science.Issue 15. Report on the 1999/2000 Swan barge oxygenation trial*. Perth, Western Australia: Swan River Trust.

Swan River Trust. (2000e). *Seasonal changes in the Swan River estuary*. Perth, Western Australia: Swan River Trust.

Swan River Trust. (2000f). *Swan River Trust resource sheet 5-2000. Seasonal changes in the Swan River estuary*. Perth, Western Australia.

Swan River Trust. (2001a). *The catchment of the Swan-Canning river system: A supporting document to the Swan- Canning Cleanup Program Action Plan*. Perth, Western Australia.

Swan River Trust. (2001b). *Seasonal water quality patterns in the Swan River estuary, 1994-1998, technical report. A supporting document to the Swan-Canning Cleanup Program Action Plan. SCCP Report no. 23*. Perth, Western Australia.

Swan River Trust. (2002). *River science. Issue 8. Seasonal nutrient dynamics in the Swan Estuary, 1995-2000*. Perth, Western Australia: Swan River Trust.

Swan River Trust. (2004a). *Riverplan. An environmental management framework for the Swan and Canning Rivers. Comprehensive management plan and*

implementation strategy for the Environmental Protection (Swan and Canning Rivers) Policy 1998. Perth, Western Australia.

Swan River Trust. (2004b). *Swan River Trust Annual Report 2003-2004*. Perth, Western Australia: Swan River Trust, Government of Western Australia.

Swan River Trust. (2005). *New era for the rivers. Draft Swan and Canning Rivers Management Bill*. Perth, Western Australia: Government of Western Australia.

Swarbrooke, J. (1999). *Sustainable tourism management*. Wallingford: CABI Publishing.

The Global Development Research Centre. (2005, 29 April 2005). *Urban Governance*. Retrieved 5/05, 2005, from http://www.gdrc.org/u-gov/index.html

Thibal, S. (1996). *Introduction: The concept of sustainable development applied to tourism.* Paper presented at the Colloquy organised by the Council of Europe (Directorate of Environment and Local Authorities) and the Slovenian Ministry of the Environment and Physical Planning. Sustainable tourism development: concilliation of economic, cultural, social, scientific and environmental interests., Maribor, Slovenia.

Thurlow, B. H., Chambers, J., & Klemm, V. V. (1986). *Swan Canning estuarine system. Environment, use & the future* (No. 9). Perth, WA: Waterways Commission.

Tosun, C. (1998). Roots of unsustainable tourism development at the local level: the case of Urgup in Turkey. *Tourism Management, 19*(6), 595-610.

Tourism Council of Australia, & CRC Tourism. (1998). *Being green keeps you out of the red*. Woolloomoolloo, New South Wales: Tourism Council of Australia.

Tourism Council of Australia, & CRC Tourism. (1999). *Being green is your business*. Woolloomoolloo, New South Wales: Tourism Council of Australia.

Tourism Western Australia. (2005a). *Domestic market quick quotes-September 2005 (Public) Sourced from the National Visitor Survey (NVS)*. Perth, Western Australia: Governmnent of Western Australia.

Tourism Western Australia. (2005b). *International market quick quotes-September 2005 (Public) Sourced from the International visitor survey(IVS)*. Perth, Western Australia: Government of Western Australia.

Tourism Western Australia. (2005c). *Tourism Western Australia*. Retrieved 07/06, 2005, from http://www.westernaustralia.com/en/InfoCentre/About+Us/Tourism+Western+Australia.htm

Trousdale, W. T. (1999). Governance in context. Boracay Island, Philippines. *Annals of Tourism Research, 26*(4), 840-867.

Twining-Ward, L. (1999). Towards sustainable tourism development:observations from a distance. *Tourism Management, 20*, 187-188.

Twynam, D. G., & Johnston, M. E. (2002). The use of sustainable tourism practices. *Annals of Tourism Research, 29*(4), 1165-1168.

United Nations Division for Sustainable Development. (1992). *Agenda 21. Chapter 27. Paragraph 27.2*. Retrieved 13/02, 2005, from http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter27.htm

United Nations Environmental Program. (2002, July 9, 2002). *UNEP principles*. Retrieved 06/03/, 2003, from www.uneptie.org/pc/tourism/policy/principles.htm

United Nations Environmental Program. (2003, July 9, 2002). *Tourism and Local Agenda 21 Approach*

The role of local authorities in sustainable tourism. Retrieved 06/03/2003, 2003, from www.uneptie.org/tourism

Veal, A. J. (1997). *Research methods for leisure and tourism. A practical guide* (2nd ed.). Great Britain: Pitman Publishing.

Vesenjak, P. (1996, 12-14 September). *The development of sustainable tourism in Slovenia.* Paper presented at the Colloquy organised by the Council of Europe (Directorate of Environment and Local Authorities) and the Slovenian Ministry of the Environment and Physical Planning. Sustainable tourism development: Conciliation of economic, cultural, social, scientific and environmental interests: proceedings, Maribor, Slovenia.

Waldrop, M. M. (1992). *Complexity. The emerging science at the edge of order and chaos*. London, England: Penguin Books.

Walker, P. A., Greiner, R., McDonald, D., & Lyne, V. (1999). The Tourism Futures Simulator: a systems thinking approach. *Environmental Modelling & Software, 14*, 59-67.

Wall, G. (1997a). Is ecotourism sustainable? *Environmental Management, 21*(4), 483-491.

Wall, G. (1997b). Sustainable tourism-unsustainable development. In S. Wahab & J. J. Pigram (Eds.), *Tourism, development and growth* (pp. 33-49). London: Routledge.

Walsh, J. A., Jamrozy, U., & Burr, S. W. (2001). Sense of place as a component of sustainable tourism marketing. In S. McCool & R. N. Moisey (Eds.), *Tourism, recreation and sustainability. Linking culture and the environment*. Wallingford: CABI Publishing.

Ward, J., Hughey, K., & Urlich, S. (2002). A framework for managing the biophysical effects of tourism on the natural environment in New Zealand. *Journal of Sustainable Tourism, 10*(3), 239-259.

Waters and Rivers Commission. (n.d.). *Western Australian Government framework to assist in achieving sustainable natural resource management in Western Australia [Brochure]*. Perth: Author.

Weaver, D. (2000). Sustainable tourism: Is it sustainable? In B. Faulkner, G. Moscardo & E. Laws (Eds.), *Tourism in the twenty-first century* (pp. 300-311). New York: Continuum.

Weaver, D., & Lawton, L. (1999). *Sustainable tourism: a critical analysis*. Gold Coast: CRC for Sustainable Tourism.

Weaver, D., & Opperman, M. (2000). *Tourism management*. Brisbane, Australia: John Wiley & Sons.

Western Australian Planning Commission. (2002). *Swan and Canning Precinct Planning Project. Precinct Plan Handbook*. Perth, Western Australia.

Western Australian Tourism Commission. (2003). *Journey further. A cultural tourism strategy for Western Australia*. Perth, Western Australia.

Western Australian Tourism Commission. (2004a). *Domestic market quick quotes-December 2004 (Public)*. Perth, Western Australia.

Western Australian Tourism Commission. (2004b). *International market quick quotes. Year ending December 2004*. Perth, Western Australia.

Whittaker, S., Major, A., & Geraghty, P. (2004). Victoria's emerging framework of regional governance for sustainability: The case of catchment management authorities and regional catchment strategies. *Local environment, 9*(6), 575-593.

Wight, P. (1993). Sustainable ecotourism: balancing economic, environmental and social goals within an ethical framework. *The Journal of Tourism Studies, 4*(2), 54-65.

Wight, P. (2002). Supporting the principles of sustainable development in tourism and ecotourism: Government's potential role. *Current Issues in Tourism, 5*(3&4), 222-254.

Willers, B. (1994). Sustainable development: A new world deception. *Conservation Biology, 8*(4), 1146-1148.

Williams, D. R. (2001). Sustainability and public access to nature: Contesting the right to roam. *Journal of Sustainable Tourism, 9*(4), 361-371.

Wolfenden, J. (2003). *Report on the FutureWater Australia pilot visioning workshop*. Armidale: Centre for Ecological Economics & Water Policy Research.

World Commission on Environment and Development (1987). Our common future. Oxford: Oxford University Press.

World Tourism Organization. (1996). *Agenda 21 for the travel and tourism industry. Towards environmentally sustainable development.* Madrid: World Tourism Organisation.

World Tourism Organization. (2004). *Sustainable development of tourism. Conceptual definition*. Retrieved 29/04, 2005, from http://unaa.org.au/praxis.php/category/view/8

Yin, R. K. (1994). *Case study research. Design and methods* (Vol. 5). Thousand Oaks, California: Sage Publications Inc.

Ziemelis, K. (2001). Nature insight. Complex systems. *Nature, 410*(3), 241-250.

Appendix 1
Interview Guideline

1.1   *Tourism Operators/Recreational Users*

1.2   *Government Agencies*

1.3   *Non-Government Agencies*

1.4   *Community*

Appendix 1

1.1   Tourism Operators/Recreational Users

1   How long have you been operating on the Swan River?

2   Can you explain your operations/recreational activity?

3   Why is the Swan River important to you?

4   What is your overall vision for the development of the Swan River?

5   What are the implications of the condition of the river for your business/recreational activity?

6   How would like to see tourism develop on the Swan River in the future?

7   What is your understanding of sustainable tourism development?

8   What strategies do you use to ensure your business/recreational activity operates in a sustainable manner?

9   What key strategies do you think management agencies should implement in order to achieve sustainable tourism development?

10   What level of communication do you have with tourism/recreational groups who also utilise the Swan River?

11   Which Swan River management agencies do you have any contact? How often do you make contact? What form of contact do you make with management agencies?

12   What are the management issues that you see surrounding the use of the river?

13   Who do you see as being responsible for planning and decision making in regards to the Swan River?

14   How do you see the community's role in planning for tourism development of the Swan River?

15   Which stakeholder groups do you have contact?

16   What level of communication do you have with other stakeholders?

17   How do you communicate with other stakeholder groups?

18   Who do you think should be involved in the policy and planning decision making process of the Swan River?

1.2   Government Agencies

1   Why is the Swan River important to you?

2   What is your role in managing the Swan River?

3   What are the key issues surrounding management of the Swan River?

4   What are some of the management issues that you see regarding the use of the river?

5   What is your overall vision for the Swan River?

6   How would like to see tourism develop on the Swan River in the future?

7   What is your understanding of sustainable tourism development?

8   Where do you see the role of self-regulation of tourism operators utilising the Swan River?

9   What key strategies do you implement to ensure sustainable tourism development of the Swan River?

10   What level of contact do you have with Tourism Western Australia?

11   What level of communication do you have with other stakeholders? Community groups?

12   How do you see the community's role in planning for tourism development of the Swan River?

13   Which stakeholder groups do you have contact?

14   What level of communication do you have with other stakeholders?

15   How do you communicate with other stakeholder groups?

16   Who do you think should be involved in the policy and planning decision making process of the Swan River?

1.3   Non- Government Agencies

1   Why is the Swan River important to you?

2   How do you see your role in the management of the Swan River?

3   What is your overall vision for the Swan River?

4   What are the key issues surrounding management of the Swan River?

5   What are some of the management issues that you see regarding the use of the river for tourism?

6   What is your understanding of sustainable tourism development?

7   How would like to see tourism develop on the Swan River in the future?

8   Where do you see the role of self-regulation of tourism operators utilising the Swan River?

9   How do you see the community's role in planning for tourism development of the Swan River?

10   Which groups connected to the Swan River does your organisation communicate with?

11   What role does your agency have in the decision making process regarding tourism development of the Swan River?

12   Which stakeholder groups do you have contact?

13   What level of contact do you have with other groups connected to the Swan River?

14   How do you communicate with other stakeholder groups?

15   Who do you think should be involved in the policy and planning decision making process of the Swan River?

1.4   Community

1   How often do you come and use the Swan River?

2   Why is the Swan River important to you?

3   What is your opinion of tourism development of the Swan River?

4   What is your understanding of sustainable tourism development?

5   What is your overall vision for the Swan River?

6   What do you see as the key issues regarding the management of tourism on the Swan River?

7   How would like to see tourism develop on the Swan River in the future?

8   Which stakeholder groups connected to the Swan River do you have contact?

9   What level of contact do you have with other groups connected to the Swan River?

10   How do you communicate with other stakeholder groups?

11   How do you see the community's role in planning for tourism development of the Swan River?

12   Who do you think should be involved in the policy and planning decision making process of the Swan River?

Appendix 2
Respondents Letter of Introduction

2.1   *Letter of Introduction*

2.2   *Consent Form*

2.1 Letter of Introduction

Understanding Sustainable Development from a Complex Systems Perspective. A Case Study of the Swan River- Perth, Western Australia

Dear _____

My name is Janine Mc Donald and you are invited to participate in a research project which aims to increase understanding of sustainable tourism development of the Swan River. The research project is being undertaken as part of the requirements of a PhD at Edith Cowan University and will culminate in a written thesis to be submitted to the university. The project will provide a framework to be used by management agencies to develop strategies that incorporate stakeholder's values for the Swan River. Specific project outcomes of this research will be to assist in the development of sustainable tourism development policy, planning and management for the Swan River.

My research will involve a personal interview with you which will take approximately 30-40 minutes. The interview aims to determine the values of the Swan River that are held by stakeholders which will influence sustainable tourism development. As a stakeholder, your contribution to this research project will provide practical information that will contribute to a greater understanding of the role of stakeholder values in policy, planning and management strategies for the Swan River.

This research will abide by the strict ethical requirements stipulated by Edith Cowan University. Your participation and resultant information will be treated with utmost confidentiality. Your identity will be kept anonymous through the use of codes instead of names. Subsequent reports or papers arising from this research project will ensure that this anonymity remains. Data collected will be kept for a period of 5 years in a lockable filing cabinet.

Your participation and co-operation in this research will be greatly appreciated. If you have any questions or require any further information about the research project, please contact either my supervisor or myself at the following address.

Yours Sincerely

Janine Mc Donald   (Researcher)

Supervisor

Professor Ross Dowling
School of Marketing, Tourism & Leisure
Faculty of Business and Public Management
Edith Cowan University
100 Joondalup Drive Joondalup WA 6027
Email: r.dowling@ecu.edu.au
Phone: 63045891

If you have any complaints or concerns about this research please contact: Ms Kim Gifkins, Research Ethics Officer, Edith Cowan University , JOONDALUP WA 6027
Phone (08) 6304 2170
Email: research.ethics@ecu.edu.au

Consent Form

Understanding Sustainable Development from a Complex Systems Perspective. A Case Study of the Swan River- Perth, Western Australia

<u>**Principal Investigator:**</u>

Janine Mc Donald ███████████████████████████

- The purpose of the research has been explained to me and I have read and understood the information sheet presented to me. I have had the opportunity to ask questions about the research project.

- I understand that I am free to withdraw my participation in the research at any time.

- I do/do not permit the investigator to tape record my interview as part of this project (*Note: All tapes will be erased after study is completed)

- I understand that any information or personal details gathered in the course of this research about me are confidential and that neither my name nor any other identifying information will be used or published without my written permission. I understand that the organisation I represent may be identified.

Edith Cowan University Ethics Human Research Committee has approved this study.

I understand that if I have any complaints or concerns about this research I can contact:

Research Ethics Officer
Human Research Ethics Officer
Edith Cowan University
100 Joondalup Drive
JOONDALUP WA 6027
Phone (08) 6304 2170
Email: research.ethics@ecu.edu.au

Name: _____

Date: _____

Signature: _____

Appendix 3
Respondent Codes

3.1 *Codes for Tourism Operators*

3.2 *Codes for Government Agencies*

3.3 *Codes for Non-Government Organisations*

3.4 *Codes for Community Members/Organisations*

Appendix 3

3.1   Codes for Tourism Operators = TO

BO = Charter Boat Operator	**REST =** Restaurant/Café /Bar Operator	**ACC =** Accommodation Providers
ST = Scenic Tour Operators (includes helicopter, bus, tram tours)	**RET =** Retail Operator	

3.2   Codes for Government Agencies = GO

CSC = City of Swan Council	**DPI =** Department of Planning and Infrastructure	**CSP=** City of South Perth Council
SCC = Swan Catchment Council	**COP =** City of Perth Council	**TPF =** Transperth Ferries
CALM = Department of Conservation and Land Management	**TWA =** Tourism Western Australia	**DIA =** Department of Indigenous Affairs
SRT = Swan River Trust		

3.3   Codes for Non-government Agencies = NG

CBA = Charter Boat Operators Association	**CCWA =** Conservation Council Western Australia	**WWF =** World Wide Fund for Nature
TCWA = Tourism Council of Western Australia	**FACET =** Forum Advocating Cultural and Ecotourism	**NTWA =** National Trust of Western Australia
WAITOC = Western Australian Indigenous Tour Operators Committee		

3.4   Codes for Community Respondents= CO

KAY = Kayaker	**CG** = Catchment Group	**CYC** = Cyclist
RECF = RecFishWest	**PB** = Power Boat Association	**YC** = Yacht Club
SA = Ski Association		

Appendix 4
Swan River Tourist Survey

4.1   *Swan River Tourist Survey*

Swan River Tourist Survey

Date…………..   Location…………………..

Hello! My name is ……………., I am a Edith Cowan University student and we are conducting surveys with visitors to Perth who are 18 years and over and are visiting the Swan River. We would appreciate your participation in this survey, which will assist us to find out what visitors think of the river. The survey is completely anonymous and will take approximately ten minutes of your time. Would you be willing to participate?
If yes, confirm they are visitors to Perth and are 18+

1.   Firstly are you from……..? **(READ OUT & TICK)**
Country WA   □1   Interstate   □2   International   □3

2.   Is this your first trip to Perth?
☐ 1 Yes
☐ 0 No

3.   Is this your first time to the Swan River?
☐ 1 Yes **(Go to 5)**
☐ 0 No   **(Go to 4)**

4.   If No, how many times have you visited before:
1-2 □1   3-10 □2   More than 10 times □3

5.   Thinking about your visit to the Swan River which of these sources were important to   you finding out about the river
(READ OUT & TICK- *May be multiple response*)

☐ 1 Word of mouth, friends and relatives
☐ 1 Brochures
☐ 1 Visitor Centre
☐ 1 Accommodation information
☐ 1 Tour operator
☐ 1 Other _____

6.   Thinking about your visit to the Swan River, was the reason for coming here….
(READ OUT & TICK - *May be multiple response*)

☐ 1 Part of a tour group
☐ 1 To take a wine cruise
☐ 1 To take the Ferry to Perth Zoo
☐ 1 To take a Ferry to Rottnest Island
☐ 1 To see the river
☐ 1 Other _____

If more than one box ticked ASK: What was your main reason for coming to the river?   1- 6

(If visitor has taken boat trip)

7a.   What influenced your choice of a boat tour operator?
- ☐ 1 Accreditation of Operator
- ☐ 2 Price of tour
- ☐ 3 Package Deal
- ☐ 4 Advertising
- ☐ 5 Word of mouth from friends and relatives
- ☐ 6 Other _____

(If visitor has not taken a boat trip)

7b.   While you are visiting Perth do you plan to take a boat tour of the river?

Yes ☐1   No ☐ 0 *(If no go to 8)*

If yes What will influence your choice of a tour operator?

- ☐ 1 Accreditation of Operator
- ☐ 2 Price of tour
- ☐ 3 Package Deal
- ☐ 4 Advertising
- ☐ 5 Word of mouth from friends and relatives
- ☐ 6 Other _____

8.   What activities have you undertaken or plan to undertake <u>along the river</u>?
(READ OUT & TICK)

Bell Tower	☐1	River Cruise	☐1
Restaurants/Café/Bar	☐1	Water Activity	☐1
Ferry to Zoo	☐1	Foreshore Activity	☐1
Helicopter Ride	☐1	Other	☐1 …………………

9. I am going to read out some statements about the river. *Give card to participant*. Using a scale from 1-5 where 1=Strongly Agree and 5= Strongly Disagree please choose the most suitable response to the statements.
(READ OUT & CIRCLE RESPONSE)

a. The Swan River is an important attraction <u>to my visit</u>

                                        1   2   3   4   5 DK 9 ———

b. The Swan River is an important tourist attraction
for Perth?

                                          1   2   3   4   5 DK 9 ———

c. Information about the meaning of the river
to aboriginal people is important to my visit

                                          1   2   3   4   5 DK 9 ———

d. The Swan River is an important place to socialise

                                          1   2   3   4   5 DK 9 ———

e. Information about the history of the river is important
to my visit

                                          1   2   3   4   5 DK 9 ———

f. Recreational activities on the river are important for tourists

                                          1   2   3   4   5 DK 9 ———

g. The restaurants and cafes on the river are important
to my visit

                                          1   2   3   4   5 DK 9 ———

h. The environmental condition of the river is important to my visit

                                          1   2   3   4   5 DK 9 ———

i. The river is important because of the opportunity
for businesses

                                          1   2   3   4   5 DK 9 ———

j. The natural beauty of the river is important for
tourism

                                          1   2   3   4   5 DK 9 ———

10. Are you interested in finding out any information about the river?

Yes ☐1 *(If yes go to 11)*　　　　No ☐0 *(If no, go to 12)*

_____

11. **If yes**, Would you be interested in information on…….?
(READ OUT & TICK)

Aboriginal Heritage	☐1	Historical	☐1
Types of activities available	☐1	Wildlife	☐1
Environmental	☐1	Other☐1……………

If more than one box is ticked. Which information are you <u>most</u> interested in?

_____

1-6

12. I am going to read out some more statements about the river.
(*Give card to participant)* Now using a scale from 1-5 where 1=Strongly Agree and 5= Strongly Disagree please choose the most suitable response to the statements.
(READ OUT & CIRCLE RESPONSE)

a. The environmental condition of the Swan River
is important to tourism　　　　**1　2　3　4　5 DK 9**

b. Greater tourism development is needed along
the river　　　　**1　2　3　4　5 DK 9**

c. Tourism operators should use recycle bins
　　　　1　2　3　4　5 DK 9

d. Tourism operators should employ locally
　　　　1　2　3　4　5 DK 9

e. Tourism operators should contribute a fee to
assist management of the river　**1　2　3　4　5 DK 9**

f. Tourism operators have a responsibility to
look after the river　　　　**1　2　3　4　5 DK 9**

13. Do you have any comments about your visit to the Swan River?

_____

_____

_____

Demographics
To finish off the survey and to ensure we get a representative group of people, I'm going to ask a few questions.

14 Gender: Female ☐1 Male ☐2

15. Which of these age groups are you in?   **(READ OUT GROUPS)**

☐ 1 18-29
☐ 2 30-39
☐ 3 40-49
☐ 4   50- 59
☐ 5   60 and over
☐

16. What is your normal place of residence?

_____ 1-5

17. How long are you staying in Perth?

1 day ☐1   2-5 days ☐ 2   6-10 days ☐3

More than 10 days ☐4

18. And lastly, what is your occupation?

_____1-9

* Thank you for your time. Enjoy the rest of your visit to Perth.

Appendix 5
Swan River Research Brief

5.1   *Swan River Research Brief*

Appendix 5

5.1 Swan River Research Brief

The Swan River is a significant landscape for Perth, which has a population of 1.4 million people. As an urban river, the Swan River and its foreshore provide an important natural resource for tourism operators and serves as an attraction for tourists. The values of the river were highlighted in February 2004 when the State Government officially declared the river as a state heritage icon, as part of the 175th Anniversary of Western Australia celebrations. The rivers values include scientific, social, cultural, ecological, aesthetic, historical and economic values.

Tourism is an industry that has increasingly recognised the natural environment as a crucial attraction of most destinations and one that can be utilised as a significant resource product. The Swan River is used as a marketing feature in tourism brochures, post cards and on the internet and is regarded as an important natural resource for tourism operators. Today there is intense use of the river for commercial and recreational purposes and the resulting competition between user groups, combined with the fragile ecology, has contributed to the increasing pressures on the river. Numerous tourism operators conduct scenic tours and river based activities along the foreshore and therefore contribute to the pressures placed on the river. Ad hoc development has occurred along the river and to date there is no clearly defined vision for tourism development for the river.

In order to understand the issues that surround sustainable tourism development of the Swan River, identification of stakeholder groups is necessary. Questions regarding the values stakeholder groups hold and their perceptions for sustainable tourism development of the river need to be understood in order to build a holistic picture of how to manage the resource. One such stakeholder group are the tourists who visit the river.

During the 12 months from March 2003-2004, Western Australia attracted almost 6 million domestic and international visitors. Although there are no official figures that determine how many visitors utilise the Swan River as an attraction, it is necessary to

determine the values that domestic and international visitors have for the river and their perceptions of sustainable tourism development.

The Aims of the Research

The aim of this proposed research project is to identify tourist values of the Swan River and tourists understanding of sustainable tourism development.

A visitor survey is needed on:

- What values do visitors associate with the river? i.e aesthetic, social, ecological, economic, cultural?
- What activities do visitors engage in when they use the river?
- Why do people go to the river?
- What experiences are people seeking when they are on the river?
- What type of development would visitors like to see occur along the river?
- What does the term STD mean to visitors?
- What influence visitors choice of operators? Accreditation? Price? Package?
- What types of operator practices are important to visitors? Recycling? Waste disposal? Local employment? Contribution to Management of the river?
- What information should be available about the river?
- What are visitor perceptions of the condition of the river?
- Why is the condition of the river important to visitors?

Methods

An on site face to face survey will be conducted at key tourist nodes in Perth Waters. Barrack Square and South Perth Jetty are the two key nodes that will be utilised.

Appendix 6
Legislation Governing Swan River

6.1 *State government legislation*

6.2 *State government strategies, plans and policies that complement legislation*

6.3 *State government strategies, plans and policies that complement legislation*

6.4 *Commonwealth Government Legislation that guides Governance of the Swan River*

6.5 *Key state government departments and agencies with legislative governance responsibilities.*

Appendix 6

6. 1   Overview of Key State Legislation Governing the Swan River, Perth, Western Australia. Source: (Swan Catchment Council, 2004; Swan River Trust, 2004)

Legislation		Legislation	
Rights in Water and Irrigation Act (1914).	The Act relates to rights in water resources, makes provision for the regulation, management, use and protection of water resources, and provides for irrigation schemes, and other purposes.	*Metropolitan Water Supply, Sewerage, and Drainage Act* (1909).	The Act constitutes the Metropolitan Water, Sewerage, and Drainage Area, establishes the method of control, defines water reserves, charges and related matters.
Country Areas Water Supply Act (1947).	The Act makes provision for the construction, maintenance and administration of reticulated supplies of water to country areas, to safeguard water supplies, to repeal the Goldfields Water Supply Act 1902-1942, and other purposes.	*Environmental Protection Act* (1986).	The Act provides for an Environmental Protection Authority, for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for other related matters.
Aboriginal Heritage Act (1972).	The Act makes provision for the preservation on behalf of the community of places and objects customarily used by or traditional to the original inhabitants of Australia or their descendants.	*Conservation and Land Management Act* (1984).	The Act makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, and establishes authorities to be responsible.
Wildlife Conservation Act (1950).	The Act provides for the conservation and protection of wildlife. This Act will be updated by the draft Biodiversity Conservation Act.	*Soil and Land Conservation Act* (1945	The Act relates to the conservation of soil and land resources, and to the mitigation of the effects of erosion, salinity and flooding.
Local Government Act (1995)	The Act provides for a system of local government in Western Australia and amends the Local Government Act 1960.	*Town Planning and Development Act* (1928)	The Act relates to the planning and development of land for urban, suburban, and rural purposes.
Fish Resources Management Act (1994).	The objective of this Act is to conserve, develop and share the fish resources of the State for the benefit of present and future generations.	*Water Corporation Act* (1995)	The Act guides environmental planning; water supply and drainage and sewerage activities
*Swan River Trust Act (*1988)	The Act guides the Swan-Canning Cleanup Program Action Plan and assists planning river management	*Western Australian Planning Commission Act* (1994)	The Act guides catchment land use strategies.

* Note: This list is not inclusive of all legislation influencing the Swan River

6.2 State government strategies, plans and policies that complement legislation: Source: (Swan Catchment Council, 2004; Swan River Trust, 2004)

- Environmental Protection (Swan and Canning Rivers Policy)
- *Environmental Protection (Swan and Coastal Plain Lakes) Policy*
- *State Planning Policy*
- *State Rural Water Plan*
- *State Salinity Strategy* (2000)
- *State Sustainability Strategy* (2003)
- *State Water Quality Management Strategy for Western Australia* (2001)
- *State Water Strategy* (2003)
- *State Weed Strategy* (2001)
- *Wetlands Conservation Policy for Western Australia* (1997)
- Draft *State Algal Management Strategy*
- Draft *State Biodiversity Conservation Strategy*
- Draft *State Coastal Strategy*
- Draft *State Floodplain Management Strategy*
- Draft *State Marine Planning Strategy*
- *Draft Swan and Canning Rivers Management Bill*
- Draft *Western Australian Greenhouse Strategy*
- Draft *Waterways WA Strategy*

6.3 Commonwealth Government Legislation that guides Governance of the Swan River: Source: (Swan Catchment Council, 2004; Swan River Trust, 2004)

- *Natural Heritage Trust of Australia Act (1997)*
- *Environment Protection and Biodiversity Conservation Act* (1999).
- *Natural Resources Management (Financial Assistance) Act* (1992)
- *Natural Resources Management (Financial Assistance) Act* (1999)

6.4 Key State Government Departments and Agencies with Legislative Governance Responsibilities: Source: (Swan Catchment Council, 2004; Swan River Trust, 2004)

Department of Environment	Environmental Protection Authority
Swan River Trust	Department for Planning and Infrastructure
Western Australian Planning Commission	Department of Conservation and Land Management
Conservation Commission of Western Australia	Marine Parks and Reserves Authority Department of Agriculture
Department of Fisheries	Department of Industry and Resources
Water Corporation	Department of Health
Department of Indigenous Affairs	Main Roads
Department of Premier and Cabinet	Local Governments
Department of Local Government and Regional Development	

Swan Catchment Council. (2004). *The Swan Region strategy for natural resource management*. Perth, Western Australia: Swan Catchment Council.

Swan River Trust. (2004). *Riverplan. An environmental management framework for the Swan and Canning Rivers. Comprehensive management plan and implementation strategy for the Environmental Protection (Swan and Canning Rivers) Policy 1998*. Perth, Western Australia.

Appendix 7
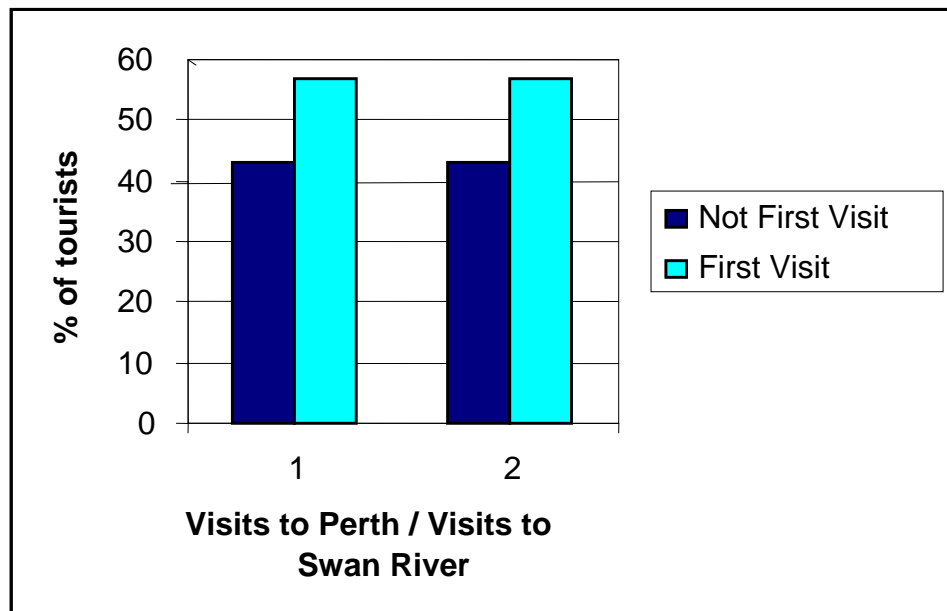# Newspaper Headings

7.1   *Algal bloom newspaper headings - 2004*

Appendix 7

7.1   Algal bloom Newspaper headings - 2004

Appendix 8
Tourists Visits

8.1   *Tourist Visits to Perth and Swan River*

Appendix 8

8.1   Tourists Visits to Perth and Swan River

N = 125	Visit to Perth		Visit to Swan River	
	Count	%	Count	%
Not First Visit	54	43.2	54	43.2
First Visit	71	56.8	71	56.8
	125	100	125	100

Appendix 9
Open-ended Comments from Tourist Survey

9.1   *Tourist surveys: Open ended comments*

Appendix 9

9.1   Tourist surveys: Open ended comments.

ID 2   " It was lovely, bit browner than I thought it would be." (Melbourne)

ID 3   "Great for family visit" (South Korea)

ID 4   "Nice place to relax" (Adelaide)

ID 5   "$58 bus trip around Perth a bit pricey. Transport wonderful. Cafes and restaurants weren't impressed with" (Gold Coast, Queensland)

ID 11   "lovely" (Sydney, NSW)

ID 14   'Lovely time" (Adelaide, SA)

ID 16   "Greater awareness of all environmental impacts" (Country WA)

ID23   "One of the magnificent rivers I've come across, seen around the world, a huge interest in historical/heritage was what captured me and I enjoyed the activities and wine and also the people/Aussies are very friendly and know how to have a good time" (Japan)

ID 26   "Beautiful, asset to Perth" (South Australia)

ID 27   "Info board needed" "beautiful" (Japan)

ID 28   " beautiful & clean" (Queensland)

ID 29   "clean" (Queensland)

ID 30   "beautiful" (Queensland)

ID 31   "dirty and bad colour" (Sydney, NSW)

ID 32   " very attractive & pleasing" (UK)

ID 33   "beautiful at night" (Singapore)

ID 34   " the river is dirty" (Hong Kong)

ID 35   "looking forward to taking a cruise" (Sydney, NSW)

ID 36   " Fresh beautiful scenery, lots of blues" (Malaysia)

ID37   " I would like to come back because the restaurants are good" (Norway)

ID 38   " People should take more care about the condition of the river and maintain good conditions" (Country WA)

ID41   "Learnt lots on the cruise" (UK)

ID 43   'Important to keep it clean, not much to see in Perth : good for the visitors. More activities / recreational facilities for kids needed. More signage – eg on pollution" (Italy)

ID 47   "More ferries" (Germany)

ID 50   " Beautiful, would like to come again. Best & cleanest city to date" No. 1 (Victoria)

ID 56   "Cruise was very enjoyable & informative" (UK)

ID 59   " Nice place. One of the best things in Perth" (Hanover, Germany)

ID 62   " River could be cleaner" (Country WA)

ID 72   " I like the food and wine" (London)

ID 75 " needs more activities" (Country WA)

ID 78 " Quite clean compared to other capital cities" (Queensland)

ID 79   " Need more development along the river" (Country WA)

ID 91   " Local people didn't know much the wildlife (name on birds etc) & didn't like pine trees planted alongside Swan River." (Melbourne, Victoria)

ID 101 " the area around the river such as picnicking grounds, grassed areas and playgrounds seem to be looked after exceptionally well, however the river does not see to be in as good condition." (Geraldton)

ID 102 " Beautiful location, river is in okay condition, but could be looked after a little better. Great area surrounding the river, grass, kids playgrounds etc" (South Africa)

ID 103 " Locals and tourism operators were very friendly. River and surrounding area seems to be looked after quite well. Enjoyable relaxing day out." (Country NSW)

ID 105 " Needs to be cleaned up and looked after better, otherwise a nice day out." (Country WA)

ID 107 "One of the most beautiful riverside settings of any city in the world" (UK-Bristol England)

ID 108 "Enjoyable because of activities it offers & beautiful to look at. Impressed by the size of the river." (Country WA)

ID109 "Very nice, love Australian scenery" (Canada)

ID 110 " Cool spot. Good to have a big river beside city- don't have it in Melbourne. Not enough chicks." (Melbourne)

ID 111 " Nice, but should be more things for younger people to do" (Melbourne)

ID 112 " Was good but have been before, so wasn't as interested in the tourism attractions." (Queensland)

ID113 " Good to see an icon of Perth. Enjoyed the weather." (England)

ID 114 " Beautiful day out." (Country WA)

ID 115 "Beautiful, good restaurant." (China)

ID 116 "Very nice, would be better if there was more things for young people to do like disco's or pubs." (Pordenone, Italy)

ID 118 "Very beautiful, not like anything from where I come from. Nice place to visit." Pordenone, Italy)

ID118 "I come here often when visiting family in Perth because it is a good place for picnics especially in summer. The water is a bit polluted though" (Country WA)

ID 119 "Nice place to visit, Good way to see the city while travelling to the zoo." (Melbourne)

ID 120 "Could use some more attractions, like a pub or club also some information about the river like a info centre." (England, Liverpool)

ID 122 "Very beautiful" (Canada)

ID 124 "Found story from tour operator annoying" (Holland)

ID 124 "Very, very pleasant"

Appendix 10
Agency Acronyms

10.1 *Acronyms for Agencies – (Chapter 9-Table 9.2)*

10.1 Acronyms for Agencies- Table 9

AHA = Australian Hotels Association	**AHA** = Australian Hotels Association	**CASA** = Civil Aviation Safety Authority
CBA = Charter Boat Association	**CBA** = Charter Boat Association	**CG** = Catchment Group
Comm. Grp = Community & Recreational Groups	**COP** = City of Perth	**COSP**= City of South Perth
Councils = Other local councils	**DIA** = Department of Indigenous Affairs	**DoAg** = Department of Agriculture
DoAv = Department of Aviation	**DOE** = Department of Environment	**DOF** = Department of Fisheries
DPI= Department of Planning and Infrastructure	**EPA**=Environmental Protection Authority	**Ind. Comm** = Indigenous Community
MRWA= Main Roads Western Australia	**PCB**=Perth Convention Bureau	**PTA** = Public Transport Authority
SCC=Swan Catchment Centre	**SCCO** = Swan Catchment Council	**SRT** = Swan River Trust
TCWA = Tourism Council of Western Australia	**Tour Op** = Tour Operators	**TWA** = Tourism Western Australia
WC = Water Corporation	**W Power** = Western Power	