

Carrying Capacity for Sustainable Tourism Development:  
Tofino, British Columbia, Canada

by

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B.Sc., University of Calgary, 2002

A Thesis Submitted in Partial Fulfillment of the  
Requirements for the Degree of

MASTER OF SCIENCE

in the Department of Geography

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**ABSTRACT**

Tourism has the potential of leaving permanent footprints on the physical, cultural and economic environments of tourism destinations. Understanding and managing these footprints is paramount to understanding the industry, and to the successful management of the associated host-guest relationships. Research questions and objectives examine the concepts of tourism carrying capacity and tourism space to determine whether tourism development in Tofino, British Columbia has exceeded its limits of acceptable use. Data were collected through surveys directed to three stakeholder groups; local residents, tourism businesses and tourists. Data were analyzed using quantitative, qualitative and spatial means. The research found that tourism carrying capacity has not been exceeded for the business and tourist participants, but is divided within the resident stakeholder group. Perceived tourism space was similar for all participant groups, but some identified areas did not match the defined boundaries of tourism use set forth by the District of Tofino.

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*This thesis is dedicated to  
my aunt and godmother – Stacy,  
who introduced me to my passion in life – traveling*

## CHAPTER ONE

### INTRODUCTION



Figure 1.1: Photo – Copyright © 2006 Adrian Dorst (from [www.tofinotimes.com](http://www.tofinotimes.com))

#### 1.0 Introduction

Some say a picture is worth a thousand words, but how would you describe the above picture with only one? This picture could be described as ‘inspiring’ or ‘beautiful’, but how would you describe it if you lived there? Perhaps your one word might simply be ‘home’. Differences in perceptions exist in multiple situations and environments, but at a tourism destination these differences come to the forefront surrounding issues of the growth or alteration of the destination city, town or village.

Tourism begins at the tourists’ places of origin and includes the linking route in-between, the final destination and the return trip back to the tourists’ origins. All levels of the tourism

industry have unique roles to play, from travel agents organizing trips for their clients, to transportation companies servicing travelers to and from their chosen destinations, to the staff that makes their stays as welcoming as possible, which all combine to provide an experience for the tourist.

Traveling experiences commenced before the pharaohs floated down the Nile, to present day people flocking to beaches every winter, to people seeking that last untouched piece of wilderness and to tourists beginning to travel into space. The industry has evolved from including only upper class citizens to anyone who can afford to take a break, as modes of transportation and increased quality of life have improved the accessibility and ease of traveling.

Just as the types of people traveling have changed, the destinations have changed as well. As this industry has grown throughout the years into the world's largest industry generating over 623 billion US dollars and hosting over 763 million international arrivals in 2004 (WTO, 2005), many developing countries and remote destinations have invested and promoted tourism in hopes to alleviate the economic problems that are currently facing many of today's societies. As such, tourism can be a saving grace for destination regions, but can also be dire to destinations if they cannot compete with the demands, politics and pressures associated with the tourism industry. If tourism is not properly planned and managed, the industry has the potential of leaving permanent footprints on the physical, cultural and economic environments of tourism destinations. Identifying and addressing issues that may alter pre-existing environments before tourism is incorporated is ideal, but in many situations the opposite exists, where destinations become popular and resident

communities react to the change in their environments, either positively or negatively. The resulting effects of tourism may not only dictate the present situation of a tourist destination, but can direct the years, decades and centuries to follow.

Understanding and managing these issues are paramount to understanding the industry and to the successful management of the associated host-guest relationship. Therefore a 'bigger picture' is needed, where combinations of perspectives need to be examined to piece together how tourism is viewed at tourism destinations and to prepare for how these perceptions may change with time.

Tofino, British Columbia is a tourism destination that has changed with time. It could have been described as a 'secret' only ten years ago. Presently however, as many as 22,000 visitors travel to this small west coast town on summer days (ICOC, 2005), nearly 15 times more people than the local population. The community of Tofino has felt the impacts that tourism has placed upon its environmental, economic and social landscapes, which include both positive and negative effects. The 'secret' of Tofino is out and the people of the community are trying to understand, brace and react to the changes that tourism is bringing to their small town setting. Measuring and assessing how the visitors and residents of Tofino are responding to the current situation is essential for managing and planning the future direction of Tofino.

## 1.1 Research Objectives and Goals

In order to address how people view the current tourism development in Tofino, British Columbia the main objectives of the research presented in this thesis are to:

- 1) Define and determine the tourism space of Tofino through discussions with key stakeholders, including residents of the community, business owners and tourists.
- 2) Investigate the concept of tourism carrying capacity through the eyes of the community and the tourists, and address whether acceptable limits of use have been surpassed using both quantitative and qualitative approaches.

The research seeks to fulfill the above research objectives by addressing the founding research questions, which are:

- 1) What defines tourism space in general and explicitly for the community of Tofino? Who are the stakeholders in tourism destinations and how do stakeholders in Tofino define/perceive their tourism space?
- 2) What defines carrying capacity for a tourism destination? Does a definition of carrying capacity vary amongst the diverse stakeholders, including the tourists themselves?
- 3) Is it possible to assess Tofino's carrying capacity for tourism? If yes, has Tofino's carrying capacity been exceeded? If it has, what has been exceeded? If not, what is expected to be exceeded?

The above research objectives and goals were developed from discussions with members of the research community, the Chamber of Commerce and residents of Tofino at the Clayoquot Symposium in November 2003, where it was indicated that studying the concepts of tourism carrying capacity and tourism space would be of benefit to the community of Tofino. This research provides a foundation, based on the carrying capacity and limits to growth frameworks, which identify issues that communities are currently facing and provides insight into where future issues may occur. The research additionally provides a connection between three stakeholder groups, in terms of each group's perceptions (tourism carrying capacity), where the issues are occurring (tourism space), and compares the stakeholder groups to highlight similarities and differences in perceptions and expectations of tourism. Using a combined perspective approach, priorities may be developed which can be explored in future research, which focus on areas that require development and the support of Tofino's community and governing bodies.

In efforts to perform the stated objectives and to answer the related research questions the paper begins by providing the background information to set the context of the research, then describes the methods used to address the research objectives and questions, and concludes by presenting the results of the research. Specifically, Chapter Two proceeds by examining the underlying concepts and methodologies used in previous tourism studies in a review of the literature, including the discussion of tourism, tourism development, tourism carrying capacity, residents' perceptions towards tourism and tourism space. Chapter Three further develops the concept of tourism carrying capacity used throughout the study, focusing on the evolution of the concept from limits to growth to levels of acceptable use. Chapter Four follows a similar approach to Chapter Three where the concept of tourism

space is described from a geographic perspective of space and how this is influenced by the tourism industry. Chapter Five summarizes the local history of the town of Tofino, beginning from settlement in the early 1900s to the present thriving tourism industry. The methods used to address the research questions and objectives are described in Chapter Six, which include quantitative, qualitative and spatial means to capture the perspectives of the identified stakeholder groups of Tofino. Chapter Seven is devoted to addressing the research objectives and questions surrounding the tourism carrying capacity of Tofino. Chapter Eight relates the research results to the goal of defining and describing the tourism space of Tofino as defined by the stakeholder groups. The research closes with a review of the research in Chapter Nine, which includes setting forth recommendations for future research and ends with personal lessons learned through the research experience.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.0 Introduction**

This chapter begins by introducing the concepts used in the research study and concludes by summarizing the choice of framework used to examine the perceptions of tourism development in Tofino, British Columbia. Further detail on the two prominent themes in the thesis, tourism carrying capacity and tourism space, are elaborated upon in the following two chapters, Chapters Three and Four respectively.

#### **2.1 Tourism Development**

Tourism development has been defined in many ways and viewed from many perspectives. It is a hybrid term representing two concepts – tourism and development (Pearce, 1989). Tourism and development will be separately defined, followed by a discussion of the combined term of tourism development. This separation allows the interrelationships between the individual terms to be illustrated and provides the context for models of tourism development, discussed later in this chapter.

##### **2.1.1 Definition of Tourism**

Many studies have attempted to define tourism by incorporating all or specific aspects of the area of research, but to this date no universally acceptable definition has been agreed upon. The form of travel, the total trip distance, the purpose for traveling, the length of stay and

the type of traveler have all been used to define tourism. Mathieson and Wall's (1982) definition of tourism is used in this research as it adopts the criteria stated above and includes the amenities associated with the tourism destination, with tourism being defined as:

“the temporary movement of people to destinations outside their normal place of work and residence, the activities undertaken during their stay in these destinations, and the facilities created to cater for their needs” (Mathieson and Wall, 1982: 1).

Academic research that has defined tourism has been performed in many disciplines including Sociology (i.e. Cohen, 1974), Anthropology (i.e. Graburn, 1983) and Geography (i.e. Leiper, 1979). Leiper (1979) defined tourism in a systems framework that consisted of three spatial elements; tourist generating regions (origin), tourist destination regions (host locality) and transit regions (route). This research study examines tourism from this geographical perspective and focuses on the geographical considerations proposed by Mitchell and Murphy (1991), which concentrate on regional, spatial and evolutionary considerations of tourism development.

### **2.1.2 Definition of Development**

Similar to the definition of tourism, there is no universal definition of development, a result from the term being referred to both as a process and a state (Pearce, 1989). Early research of development focused on the process of development, described by Goulet (1968:388) “as a particular kind of social change”. Rostow (1960) described the process of development through five successive stages of economic growth: traditional, transitional, take-off, maturity and high mass consumption, and suggested that the staged approach provided a theory of economic development and a theory of modern history. Friedmann further

described the process of development as an evolutionary process of change (cited in Pearce, 1989).

Goulet (1968), one of the founding writers of development, also described the concept as a state or condition, and depicted development as the destination of a journey and to the journey itself. Goulet (1968:392) identified three elements used for measuring the 'good life'; sustenance of life, esteem and freedom. The literature on the state of development however have predominately used economic indicators to measure development, such as Gross National Product (GNP) per capita (Smith, 1977).

Mabogunje (1980) summarized the uses of development into economic growth, modernization, distributive justice, socio-economic transformation and spatial reorganization (cited in Pearce, 1989). In the research study, the term development is regarded as an evolutionary process occurring over space and time, allowing the researcher to identify the successive stages of development at a tourism destination.

### **2.1.3 The Relationship between Tourism and Development**

The connection of tourism and development was first performed by Krapf (1961), when describing the economic development of tourism in developing countries. Bryden (1973) recognized that tourism development took different forms and its impacts were conditioned by the context in which the development occurred (cited in Pearce, 1989).

The literature concentrates on the individual impacts of tourism on the social, economic or environmental landscapes, and often does not consider the processes behind the impacts,

such as the type of tourism or the way in which tourism developed (Pearce, 1989). Literature over the past ten years has focused on the impacts on developing countries (Brunet *et al.*, 2001; Ishwaran, 1994; Lieberknecht *et al.*, 1999; Sambrook *et al.*, 1994; Sjöholt, 2000; Soefield, 1993) and have included aspects of the planning, management and marketing of tourism developments (Dimara and Skuras, 1998; Gunn, 1994; Herath, 2002; King *et al.*, 2000; Luck, 2003; MacDonald and Aumonier, 1998; Poon, 1993; Pritchard and Morgan, 2001; Ritchie and Ritchie, 2002; Shackley, 1994; Smith, 2003; Vail and Heldt, 2000; Yigitcanlar, 2001).

Pearce (1989:1) defines tourism development as “the provision or enhancement of facilities and services to meet the needs of tourists”. This definition is applied in the research by examining the social awareness of the growth of tourism development in Tofino in a spatial context.

## 2.2 Tourism Space

The geographers' perspective of tourism differs from other disciplines with an inherent emphasis on space (Ritchie and Goeldner, 1994). In a tourism system, space can be divided into three components: the origin, the destination and the path connecting the two (Pearce, 1989). The majority of tourism research is performed at the destination, as the destination predominantly experiences both the positive and negative impacts of tourism development. Tofino, British Columbia is the selected tourism destination of this research, where different types of identified tourism space are examined.

### **2.2.1 Definition of Tourism Space**

Mansfeld (1990) summarized the definitions of tourism space found in previous literature into three approaches: actual space, functional space and perceived space. Mansfeld (1990) additionally provided the foundations used for explaining tourism flows between the originating destination of tourists and the final selected tourism destinations. The three approaches or definitions of tourism space are individually addressed in the following sections and are elaborated upon in Chapter Four.

### **2.2.2 Actual Tourism Space**

Actual tourism space, as explained by Mansfeld (1990), appeared primarily in earlier research and referred to the area that accommodated tourist activities (as applied by Defert, 1966). The actual tourism space approach delineates clear geographical boundaries and is most successful when research is applied within the defined boundaries (Mansfeld, 1990). Lundberg and Lundberg (1985) attempted to generalize actual spaces to broader areas but had difficulty with overlapping functional tourism spaces that blurred the periphery of the actual tourism space.

### **2.2.3 Functional Tourism Space**

Functional tourism space is associated with the use of the space, whether related to tourism activities or in terms of the characteristics of the space (Mansfeld, 1990). Functional space has been described by economic characteristics (Macdonald, 1984). Gunn (1994) further added a transport medium that linked the supply and demand areas of tourism development. Leiper's (1979) and Husband's (1983) 'generating and attracting areas' concept of functional tourism space is described as the resulting tourist interactions which are shaped by physical,

cultural, social, economic, political and technological environments prevailing in both areas (Mansfeld, 1990). Functional tourism space has been separated into formal and informal dichotomies that represent two existing sectors in the tourism industry (Oppermann, 1993), which are dependent on the individuals perceptions of tourism space.

#### **2.2.4 Perceived Tourism Space**

Perceived tourism space is based on individuals' behaviours, where each individual (tourist or local resident) has his/her own perceived image of that space, with the level and quality of their experience being mainly determined by socioeconomic and cultural influences (Miossec, 1976). Mansfeld (1990) separated perceived tourism space into two levels. The first level is divided into two types of cognitive space sectors, regions and specific places visited in the past and regions or tourist attractions not yet visited; the second level refers to the destinations where the individual does not know exist. Keller (in progress) approaches the concept of perceived tourism space by employing maps to portray present perceptions of tourists of the places and regions they visited at tourist destinations. Del Casino Jr. and Hanna (2000) argue that tourism maps and other representations play an important role in the production of tourism spaces and further emphasize that tourism maps, spaces and identities are inter-related processes rather than final products.

#### **2.2.5 Discussion**

The definition of tourism space that was used in the research was adopted from Husbands (1981), who described tourism space as a spatial organization arising under the influence of tourism activity but limits itself to the tourist space at the destination site only. The concept of tourism space delineates actual, functional and perceived boundaries of tourism effects

and development, with the other main research concept of tourism carrying capacity being explored within these defined boundaries.

## **2.3 Tourism Carrying Capacity**

The carrying capacity concept has evolved in multiple disciplines and has been applied to multiple types of tourism development. The concept has been adopted by tourism research as it identifies thresholds or limits that should not be surpassed without having negative resulting effects. The section begins by detailing the origins of the carrying capacity theory, followed by the integration of the term in tourism applications. Chapter Three details the underlying foundations of the carrying capacity framework, as tourism carrying capacity is the selected framework for measuring multiple perceptions of tourism development in Tofino.

### **2.3.1 Definition of Carrying Capacity**

The study of tourism incorporates methods and theories from other disciplines, with the concept of carrying capacity originating from ecology and population studies. Carrying capacity in ecology and population studies relates to a systems potential for sustaining species in a living system or ecosystem, with this living system being capable of sustaining itself indefinitely and without help from another system (Coccosis and Parpairis, 1992).

### **2.3.2 Definition of Tourism Carrying Capacity**

The concept of tourism carrying capacity represents the associated relationships between tourism destinations and their visitors, and is therefore influenced by the characteristics of

each (Boniface and Cooper, 1994). Mathieson and Wall (1982:21) define tourism carrying capacity as “the maximum number of people who can use a destination without an unacceptable alteration in the physical environment and without an unacceptable decline in the quality of the experience gained by visitors”. The concept of tourism carrying capacity can further be divided into specific areas, which include physical, environmental, social and psychological carrying capacities.

### **2.3.3 Physical Carrying Capacity**

Physical carrying capacity refers to the amount of suitable land available for accommodation, tourist facilities and services, such as roads and water supply (Boniface and Cooper, 1994), which refers to the point where not one more person can be accommodated (Martin and Uysal, 1990). This type of capacity is useful for the planning and management of tourism destinations, with many studies determining numerical capacity measurements to be applied or recommended.

### **2.3.4 Environmental Carrying Capacity**

Environmental capacity is the most commonly studied capacity in tourism research, but proves more difficult to measure in comparison with physical capacity. Environmental carrying capacity refers to the physical deterioration of the environment as a result of tourism, which may be a result of multiple users and other considerations. Brown et al. (1997), Brown and Ulgiati (2001), Cole and Sinclair (2002) and Miossec (1997) have all performed carrying capacity research specifically on the environmental considerations at different types of tourist destinations.

### **2.3.5 Psychological Carrying Capacity**

Psychological carrying capacity refers to the perceptions and experiences of visitors to a tourism destination. This capacity is exceeded when tourists are no longer comfortable at the destination area, which may be dependent on the number and the behaviour of other users, and additionally to the visitor's tolerances of crowding, physical wear and tear, or pollution at the destination site (Boniface and Cooper, 1994). Research of psychological capacity has focused on the use of crowding norms (Cole and Stewart, 2002; Doorne, 2000; Vaske and Donnelly, 2002), computer edited photographs (Lawson and Manning, 2001), Likert scales of tourist perceptions (Morgan and Lok, 2000; Sutton *et al.*, 1993) and models (Saveriades, 2000) to determine how individuals perceive tourism development in destination regions.

### **2.3.6 Social Carrying Capacity**

Social carrying capacity is reached when "the local resident population of an area no longer want tourists because they are destroying the environment, damaging the local culture, or crowding them out of local activities" (Martin and Uysal, 1990: 329). Past research has focused primarily on tourists' perceptions, but research on social capacities or residents' perceptions has expanded with the research of Davis *et al.* (1988), Fredline and Faulkner (2000), Graburn (1983) and Madrigal (1995).

### **2.3.7 Discussion**

The concept of carrying capacity has become accepted as a paradigm for addressing and limiting the amount of tourism development and use at a tourism destinations (McCool and Lime, 2001), where preliminary research focused on developing numerical carrying capacities that recommended specific numbers of tourists that should be allowed in designated areas

(Brown *et al.*, 1997; Brunet *et al.*, 2001; Herath, 2002; Manning *et al.*, 2002; Saveriades, 2000).

Many believe that suggesting numerical carrying capacities limits the use of the carrying capacity framework as an effective management paradigm (McCool and Lime, 2001). The disadvantages of carrying capacity have been cited in the literature (Collins, 1999; Lindberg and McCool, 1998; McCool and Lime, 2001), with many suggesting the use of other management schemes for assessing tourism development, including limits of acceptable change (LAC), visitor impact management (VIM), visitor experience and resource protection, protected area visitor impact management (PAVIM), visitor activity management planning (VAMP) and the tourism optimization management model (TOMM).

Carrying capacity was selected as the measurement framework to determine if Tofino has sustainable tourism development as it provides a foundation for assessing if capacities or limits have been exceeded. The research did not approach the concept of carrying capacity by determining recommended numbers of people in Tofino, but focused on determining whether current numbers of people visiting Tofino have had an 'unacceptable alteration' on the quality of stakeholders experiences. Specifically, the research focused on the identification of resident, business and tourist perceptions surrounding the growth of tourism infrastructure in order to determine if thresholds or limits to growth have currently been exceeded. In the research study, physical, psychological and social carrying capacities were addressed; environmental carrying capacity was not examined due to time constraints and lack of expertise in the area. The reasons for choosing the tourism carrying capacity framework over other possibilities are detailed in Chapter Three.

## 2.4 Residents' Attitudes of Tourism Development

Within the last ten years, a growing number of studies have been performed concerning the social impacts of tourism on the resident communities. The majority of research examining residents' attitudes towards tourism development may be summarized in terms of an intrinsic/extrinsic dichotomy, described by Faulkner and Tideswell (1997).

The extrinsic portion of the dichotomy relates to "variables that affect reactions at the macro level, where variables have a common impact on the community as a whole" (Fredline and Faulkner, 2000: 765). Extrinsic variables can include the stage of development, seasonality in patterns of activity and cultural differences between the host and guests (Fredline and Faulkner, 2000). The intrinsic half "recognizes that the host community is heterogeneous and perceptions of impacts may vary according to variations in the characteristics and circumstances of individuals" (Fredline and Faulkner, 2000: 765). In recent research, intrinsic variables have been examined to include the geographical proximity to activity concentrations and the involvement in tourism (Fredline and Faulkner, 2000).

Studies of residents' attitudes towards tourism development have identified social representations within a community, by examining the commonality or the consensus of residents' perceptions (Pearce et al., 1996). Davis et al., (1988), Fredline and Faulkner (2000) and Madrigal (1995) have used communities' reactions towards tourism in cluster analyses to identify groupings of residents with common perceptions of tourism impacts. MacDonald and Aumonier (1998) have additionally identified issues such as housing demands, infrastructure and inflated housing prices as a result of limited land supply and renting, which may influence residents' attitudes towards tourism.

### **2.4.1 Discussion**

Although the concept of residents' attitudes towards tourism development is similar to determining levels of social carrying capacity, this approach explores the underlying factors that influence how residents' perceive tourism in their home town. A methodology adopted from Fredline (2000) was adopted in the research study, where a series of tourism impact questions were used to measure how residents and tourism businesses perceive tourism in Tofino, where participants indicated if tourism impacts have increased, decreased or not changed, and additionally how the impacts affect their personal quality of life and the community of Tofino as a whole.

## **2.5 Tourism Development Models**

Many models have been developed for the multiple systems and subsystems of tourism, ranging from theoretical models, forecasting models and diagrammatic models of planning and management processes (Getz, 1986). Models of tourism development have evolved by incorporating economic and infrastructure elements but additionally through including the social change on communities and tourists with increasing levels of tourism development.

### **2.5.1 Proposed Models of Tourism Development**

A number of models have been used to explain the phases of tourism development. The phased models are similar to each other, where the focus is on the tourist destination rather than the origin of the tourist or the route of travel, which include Butler's (1980), Christaller's (1964), Gormsen's (1981), Keller's (1987), Miossec's (1976), Plog's (1973) and Thurot's (1980) models. Plog (1973) and Thurot (1980) focused on modeling the changes of

social and psychological perspectives of tourists and residents, developing commonly used tourist typologies. Other frequently used models include Gormsen's (1981) that identified regional participation in the development process increases not decreases over time and Miossec's (1976) that described the evolution of tourist destinations through time and space and is the most explicit model for portraying tourist development (Pearce, 1989).

Butler's tourist area model is most frequently referred to in the research study. This widely used and accepted model portrays how tourist destinations go through recognizable cycles of evolution, which follow the S-shape curve of the product life cycle (Martin and Uysal, 1990). The evolution of tourism development is a result of numerous factors, including the change of preferences and needs of the visitors, the degradation of tourism facilities, and the change of natural and cultural attractions (Butler, 1980). The stages of tourism development as proposed by Butler (1980) are: exploration, involvement, development, consolidation, stagnation and the decline/rejuvenation stage. Butler's (1980) tourism development model is referenced to throughout the research paper, as it incorporates both infrastructure and community changes.

### **2.5.2 Discussion**

The tourism destination of Tofino, British Columbia was examined to identify the stage of tourism development as summarized by Butler (1980). Others tourism development models were incorporated in the research to aid in the overall interpretation of the stage of development, in regards to both physical and social factors. For future research regarding the tourism destination of Tofino, British Columbia, it would be beneficial to identify and

compare the stage of evolution that the study site is at in order to manage and plan appropriately for existing and future scenarios.

## 2.6 Summary

The chapter explored the concepts and methods found in the literature that were used throughout the research study. The review of literature provided the theoretical and methodological frameworks for the research study, where the main concepts of tourism carrying capacity and tourism space were emphasized. This research made use of multiple methodologies, based on the existing tourism literature, adding a new case study to many of the concepts discussed in the literature review. Additionally, with the selected case study of Tofino, British Columbia, a number of methods could be used to assess multiple concepts, from both social and physical perspectives, to provide a combined perspective approach that identified issues that were affecting three stakeholder groups. Specifically, the research employs the techniques used in previous studies to determine physical, social and psychological capacities or limits to growth, and adds to the tourism space literature by providing another example of how perceptions of tourism can be portrayed and how they can be collected using maps and Geographic Information System (GIS) methodologies. All the aforementioned concepts in the literature review, including tourism development, tourism carrying capacity, tourism space, residents' attitudes towards tourism and tourism development models are all interrelated and referred to throughout the research study. The following two chapters provide additional detail into the growth of the two prominent themes used in the research study; Chapter Three describes how the concept of carrying capacity has evolved from Malthus' population theory to the multiple tourism assessment frameworks that are used to measure individual capacities and Chapter Four details the

spatial concept of tourism space which focuses on the definitions contributed by the discipline of geography.

## CHAPTER THREE

### TOURISM IMPACT CONCEPTS AND STUDIES

#### 3.0 Introduction

With any development there are resulting effects, both positive and negative, which involve both physical and social perspectives. Tourism is an industry where developmental impacts affect tourism destinations, socially on the local residents and the visiting tourists, and on the physical environment. To assess and measure these impacts is imperative not only for the management of present conditions, but also for the sustainable growth of tourism at a destination.

One founding concept researchers have applied to assess developmental impacts is limits to growth, where a threshold exists regarding the amount of increased use that can be accommodated on the physical and social environments. Research areas including the physical and social sciences have adapted the limits to growth concept into their own field assessments. This research project applied the concept of tourism carrying capacity, a concept similar to limits to growth which has evolved in the tourism literature.

This chapter begins by examining the underlying concepts of limits to growth and its early applications, and explores how the concept has been defined and applied to other areas of research. A thorough description of the carrying capacity concept is presented beginning with Malthus' population theory, to the applications in various management schemes within the recreation and tourism research. The chapter concludes with a detailed description of the studied tourism carrying capacity concepts and how they have been measured in the existing

literature. From the examination of tourism carrying capacity, an explanation of the types chosen for this research and the associated measurements will be discussed in relation to this research.

### 3.1 Limits to Growth

When conducting impact analyses one benefited use is to predict future outcomes given a set of predetermined or present conditions. In regards to the state of the world, a group of scientists, educators, economists, humanists, industrialists, and national and international civil servants congregated in Rome in 1970 -1971 to discuss problems that affected all of mankind (Meadows *et al.*, 1972). From these meetings The Club of Rome was formed, where Phase One of the Project on the Predicament of Mankind was initiated.

The Club of Rome examined five causes that were believed to be the underlying factors that determined the limits to growth on the planet, which included:

- 1) Population;
  - 2) Agricultural Production;
  - 3) Natural Resources;
  - 4) Industrial Production; and
  - 5) Pollution
- (Meadows *et al.*, 1972).

The five factors were developed into a world model that examined the major trends of global concern, which included accelerating industrialization, rapid population growth, widespread malnutrition, depletion of nonrenewable resources and a deteriorating environment (Meadows *et al.*, 1972). The world model was used to investigate the cause of the trends, the interrelationships and the implications of the five factors up to 100 years in the future (Meadows *et al.*, 1972).

The conclusions from The Club of Rome's world model are as follows:

- 1) "If the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity";
- 2) "It is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on earth are satisfied and each person has an equal opportunity to realize his individual human potential";
- 3) "If the world's people decide to strive for this second outcome rather than the first, the sooner they begin working to attain it, the greater will be their chances of success" (Meadows *et al.*, 1972:24).

Many believed that the models' conclusions were alarmist in nature, but others made use of the limits to growth concept first introduced by The Club of Rome. The concept has been used in many fields, including the physical sciences of soil chemistry, biology, ecology and hydrology, and the social sciences of demography, economics, anthropology and geography.

The very nature of a limit implies a maximum threshold which should not be surpassed. But due to varying perceptions, technology and research we are able to alter or surpass the limits to an extent without facing the negative postulations as described by Malthus, discussed in the following section. One of the many adaptations from the original concept of limits to growth is carrying capacity, which has evolved to denote the dual characteristics of protection and use in regards to sustainability (Hall and Page, 2002).

### **3.2 Carrying Capacity**

Similar to the limits to growth concept, carrying capacity has early roots in population research and has entered into many realms of research. Early research focused on the delineation of physical (environmental) thresholds, whereas present research recognizes the

importance of studying both human and physical thresholds. Applied as a framework in many research fields including population, ecology, biology, landscape, recreation and tourism research, carrying capacity remains a highly used and contested concept within the literature.

Before the publication of Meadows *et al.* (1972) *Limits to Growth* was Malthus' population theory, which provided the foundations of the carrying capacity concept (Seidl and Tisdell, 1999). Malthus' *An Essay on the Principle of Population* (Malthus, 1986, 1<sup>st</sup> edition of 1798) provided a theory about human population growth that was founded on three assumptions:

- 1) Food was considered to be necessary for the existence of man and to be the sole limiting factor on human population growth;
  - 2) Human populations increase geometrically (exponentially);
  - 3) Food production only increases linearly and would thus lead to food shortages given the geometric growth of population
- (Adapted from Seidl and Tisdell, 1999: 396-397).

The assumptions were well received as the theory represented the past situation of England, but over time were criticized as they were not proven by empirical evidence (Seidl and Tisdell, 1999). Although the term carrying capacity was not introduced by Malthus, this concept would be traced back to Malthus' work on population growth that was bounded by natural resources (Seidl and Tisdell, 1999).

Pierre F. Verhulst (1838) first put Malthus' population theory into a mathematical equation, known as the logistic growth equation, which is calculated by:

$$dN/dt = rN * (K - N/K)$$

Where:

$N$  = population

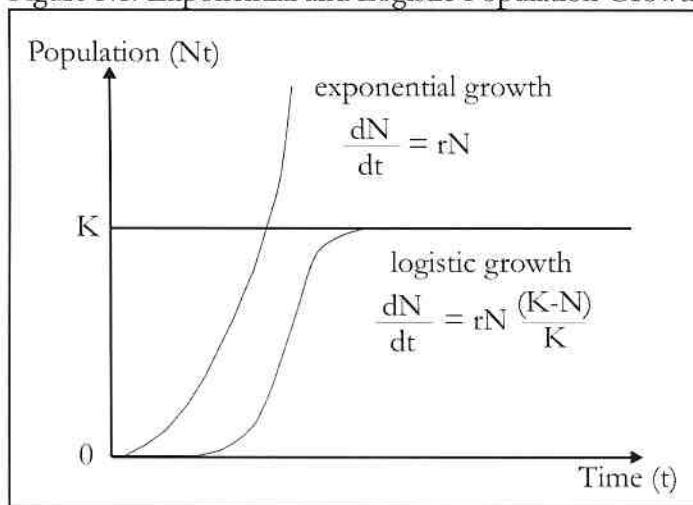
$r$  = growth rate

$K$  = carrying capacity

(Adapted from Seidl and Tisdell, 1999).

Malthus' assumption of exponential growth was rejected as it did not include an upper limit, whereas Verhulst's equation took into consideration the limits to population growth,  $K$  or carrying capacity (Seidl and Tisdell, 1999), presented in Figure 3.1.

Figure 3.1: Exponential and Logistic Population Growth Curves



(Adapted from Seidl and Tisdell, 1999)

Verhulst's equation of the logistic growth of populations was applied in biology and ecology, with carrying capacity being defined as "the theoretical limit up to which a population can grow and still be supported permanently by the environment" (Coccosis and Parpairis, 1992:26). It was found through multiple laboratory experiments that the logistic growth model was particularly restrictive, as it did not incorporate time lags or the interactions between species (Seidl and Tisdell, 1999).

Even with the issues associated with logistic growth models, carrying capacity was applied in the late 1960's and early 1970's to examine the environmental impacts of human activities. During this time frame, two main areas of the application evolved, first in relation to the management of habitats or ecosystems (rangeland/wildlife), including the management of

recreation and tourism, and secondly in relation to human ecology, which examined the ecological impacts and limits of the growing human population (Seidl and Tisdell, 1999).

In response to the dramatic growth of wilderness use in the United States National Parks and National Forest backcountry areas, many studies were conducted using carrying capacity frameworks to determine “the number of users that can be accommodated by a given area without loss in the quality of the natural environment and/or the visitor experience” (Shelby and Heberlein, 1986:1). Although concerns about crowding and resource deterioration in recreational settings can be traced to the late 1920’s, major theoretical and empirical advances of the carrying capacity concept did not appear until 1964 (Shelby and Heberlein, 1986). The majority of research focused on determining absolute numbers of use that should not be surpassed in regards to the deteriorating environment, and it wasn’t until the late 1970’s that research began to evaluate recreational impacts from a social perspective (Shelby and Heberlein, 1986).

Within the recreation carrying capacity literature many definitions have been used, which include maximum, minimum and optimum conditions, but can be summarized as “the level of use beyond which impacts exceed levels specified by evaluative standards” (Shelby and Heberlein, 1986:18). From the definition it becomes apparent that applying carrying capacity requires both descriptive components, which include management parameters and the associated impacts, and evaluative components, which include value judgments regarding the type of experience to be offered and the specific defined standards of evaluation (Shelby and Heberlein, 1986). Research in this field additionally introduced different types of carrying capacity, which included ecological, economic, social, physical and facility, which have been

adapted within the tourism research literature to examine the relationships between the tourism destination, the physical environment, the local residents and the tourists that choose to visit tourist destinations.

### **3.3 Tourism Carrying Capacity**

The majority of tourism research is performed at the tourism destination, the supply part of the tourism system (Leiper, 1979), where positive and negative effects of tourism are experienced by host communities, tourism infrastructure and tourists. Carrying capacity when applied to tourism destinations can be considered as the threshold of tourist activity beyond which facilities are saturated (physical capacity), when the environment becomes degraded (environmental capacity), when visitor enjoyment is diminished (psychological capacity) (Pearce, 1989), and when the local residents perceive an unacceptable level of social disadvantage from tourism development (social capacity) (Cooke, 1982).

Earlier research focused on the environmental and physical capacities of tourism destinations, with later research incorporating the perceptions of host communities, social capacity, and tourists' perceptions, psychological capacity. Each measure of tourism carrying capacity is unique, but when combined provide a holistic view of the effects of tourism development in evaluative and descriptive terms.

#### **3.3.1 Physical Carrying Capacity**

Physical capacity has been defined as the total amount of suitable land available for tourist activities, which include accommodation, tourist facilities, and infrastructure such as road, water and sewage, which is a 'space' impact measurement (Shelby and Heberlein, 1986). This

type of capacity is exceeded when the delineated tourism space with associated tourism activities is saturated (Pearce, 1989) denoted by the point at which not one more person can be accommodated by the tourism destination, which acts as a constraint on visitor use by limiting access to sites (Martin and Uysal, 1990).

Physical capacity in reference to tourism relates to a quantitative measurement of the total number of people or the usage a site can support with present tourism provisions, primarily in relation to zoning and bylaw formulations by the local government (Hall and Page, 2002), which is linked to density and ratio measurements. Examples of density measurements may include the number of people per acre or the number of camping parties per beach (Shelby and Heberlein, 1986), whereas ratio measurements may compare the resident population to the number of tourist arrivals. Additional physical measurements focus on the existing tourism infrastructure, which may include the determination of the total number of beds per type of tourism accommodation, the maximum use levels for restaurants per night, the maximum use and frequency of tourist activities, and the maximum load that sewage, road and water infrastructure could maintain; which are all influenced by spatial and temporal dimensions.

Within the tourism space that delineates physical capacity, other measures of carrying capacity can be assessed. The physical capacity provides a defined boundary of tourism activity and within these boundaries the risks to the natural environment become more prominent with the associated increase of tourists to a tourism destination.

### 3.3.2 Environmental Carrying Capacity

Within the tourism space defined by local governments and resident populations, the degradation of the natural environment due to tourism can be measured (Pearce, 1989). This measure of environmental capacity is primarily concerned with the maximum level of use in terms of tourist numbers and activities that can be accommodated before an unacceptable or irreversible decline in ecological value occurs (Pigram and Jenkins, 1999).

When negative effects of tourism development exceed threshold levels through the disturbance of the environment, irreversible changes may occur that can alter the basic processes and characteristics of the environment. The length of stay, the time and level of use, the potential to return to or recommend the destination to others, the way tourism use is distributed over time and space, and the desires of all involved stakeholders should be considered in any comprehensive definition in ecological terms (Coccosis and Parpairis, 1992). Environmental impacts may additionally result from new tourism facilities, infrastructure and superstructure, and through the waste and pollution associated with the increase of users on the natural environment.

Measurements of environmental capacity have been performed on various types of tourist destinations, including coastal resorts, dunes and beaches, lakes and ecotourism locations, which have used various indicators for absolute measurements including water quality, wear and tear of historical buildings, and contamination of beaches by untreated sewage and soil erosion (Manning *et al.*, 2002). It is recognized that there are an infinite number of factors that can be applied to measure environmental capacity and therefore it is common practice to select specific variables that are pertinent to the tourism destination under investigation.

The tourism industry can contribute to environmental degradation and as a result be self-destructive, but if tourism development is planned and structured properly it can promote the enhancement of the environment (Pigram, 1980), and preserving the quality of the natural environment may be a major pull factor to the tourism destination. Through planning and management initiatives the determination of optimum levels of tourism development can direct the degree and direction of environmental change (Williams, 1994). The identification of variables relating to the physical environment that will be affected by tourism can help determine the thresholds or limits to growth that may be withstood without significant degradation to the environment, which is ultimately influenced by the number and characteristics of visitors to a tourism destination.

### **3.3.3 Psychological Carrying Capacity**

To evaluate and describe the perceptions of visitors to a tourism destination, psychological or perceptual capacity is used. This type of capacity refers to the maximum amount of tourism use, in terms of numbers and activities, when the visitors experience a decline in the quality of their tourism experiences (Pigram and Jenkins, 1999). Psychological capacity is exceeded when tourists are no longer comfortable in the tourism destination, which may be a result of the numbers and behaviours of other users, and the tolerances of physical deterioration or pollution of the tourism destination (Boniface and Cooper, 1994). To measure this capacity a relationship between the amount of use and user satisfaction (Nielsen, 1977; Stankey, 1982) must be incorporated, which is influenced by tourist demands and motivations.

The fundamental question that underlies saturation is why people choose to visit particular destinations; these issues of motivation and demand directly affect the way tourism develops (Coccosis and Parpairis, 1992). Influences of tourist demand and motivation may include: rises in welfare, availability of more leisure time, the decline in the quality of life, increased accessibility, improved telecommunication services and information systems, the increase in the supply of tourism services, social progress, disappearance of old superstitions and prejudices, the response of pull factors, development of more sophisticated advertising campaigns, the desire for change, and a number of interrelated factors (Coccosis and Parpairis, 1992). The demands and motivations will vary for each individual and therefore relates to the individuals' characteristics, which can be summarized into socio-economic characteristics, level of use, length of stay, types of activity and the level of tourist satisfaction (Mathieson and Wall, 1982).

Measurements of perceived capacity focus on crowding measures to describe and identify norms, standards of quality and indicators. Crowding relates to the ability of individuals and groups to tolerate others, their activities and the level of acceptability, or the number of people a site can absorb before the latest arrivals perceive the area to be full and seek satisfaction elsewhere (Hall and Page, 2002). Norms are evaluative standards regarding acceptable behaviours or conditions in a given context (Shelby *et al.*, 1996), where standards of quality and indicators of acceptable norms examine possible underlying factors influencing tourist perceptions. Within the literature, questionnaires or interviews have been used to measure perceived capacity, with many using Likert scales to determine satisfactory and unsatisfactory elements of tourists' experiences to assess the degree of irritation resulting from congestion and overcrowding, and other methods include quantitative studies which

utilize computer simulation models or edited photographs to determine the acceptability of increasing numbers of visitors.

The perceived or psychological capacity of a tourism destination can be combined with other capacity measures, with the amount of physical capacity being designed to limit levels of crowding identified by standards of quality and indicators as defined by tourists (Pearce, 1989). Carrying capacity of a tourist destination in relation to human experience and perceptions is not only determined by the tourist, but also by the host-guest relationship of the residing community.

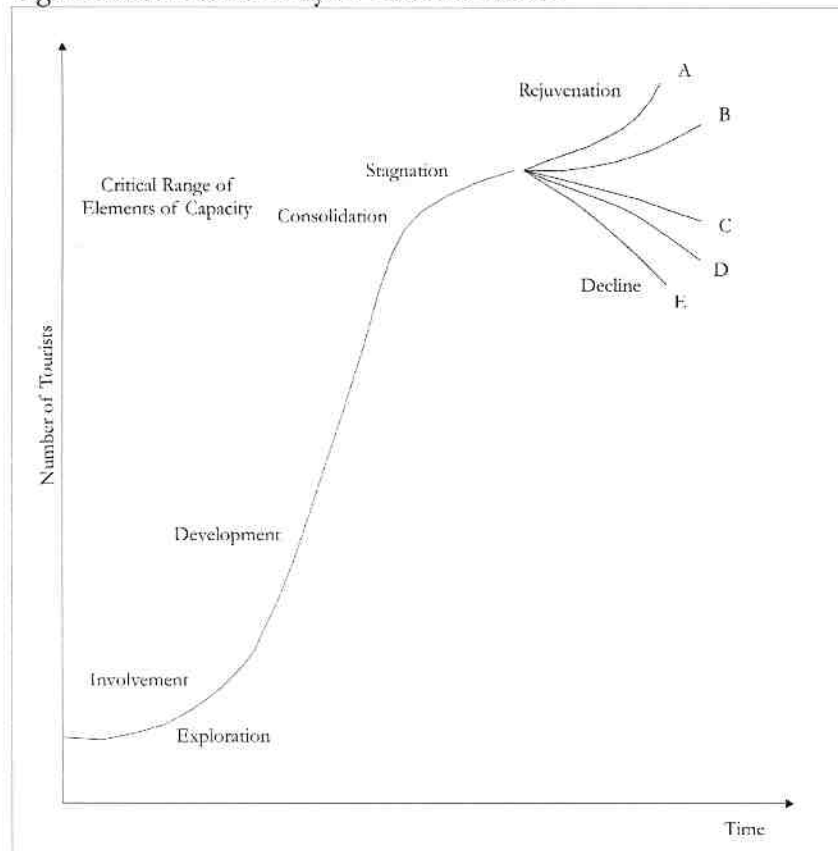
#### **3.3.4 Social Carrying Capacity**

Although tourism literature initially focused on tourist perspectives, much of today's research recognizes the importance of the resident population in regards to tolerances and attitudes towards tourism development. The social capacity can be defined as the level at which the host population of an area becomes intolerant of the presence of tourists and is reached when the local residents of an area no longer want tourists because they are destroying the environment, damaging the local culture or crowding them out of local activities (Martin and Uysal, 1990). The social capacity measurement is based on the lifecycle of tourism development, where each development stage results in the attitude change of host populations.

Butler's (1980) model of the lifecycle of tourism development (Figure 3.2) is readily used to illustrate the growth of a tourism destination, and can be used to describe the changes in

tolerances and attitudes of host communities in relation to the increase of tourism development.

Figure 3.2: Butler's Lifecycle Tourism Model



(Adapted from Butler, 1980)

In Butler's (1980) first stages of exploration and involvement, host populations are involved in the planning process for successful tourism development and generally have favorable opinions of tourists. The growth of tourism, or the development stage, promotes further acceptability of tourists as development and training are initiated by locals. In the mature stages of development, within Butler's (1980) 'Critical Range of Elements of Capacity', the beginning of apathy towards tourists begins, resulting in varying scenarios. In the decline stage, residents begin having antagonistic feelings towards tourists as other industries may be

more desirable than tourism (Martin and Uysal, 1990). At the other end of the spectrum, in the rejuvenation stage, the existing tourism industry may be revamped to promote other pull factors or tourist typologies to a tourist destination. Doxey (1975) also suggests that reciprocating impacts of hosts and visitors may be converted into varying degrees of host irritations, moving through the stages of euphoria, apathy, irritation and antagonism. The degree of host irritation tends to change with time and follows a similar pattern to those of tourism destinations (Butler, 1980).

The results of tourism studies on social capacity suggest that resident communities are influenced by the perceived impacts of tourism in three main categories, economic, environmental and social (Gursoy *et al.*, 2002), which may include changes such as overcrowding or local dissatisfaction, increased cultural awareness, increased foreign control of tourism operations and loss of authenticity of tourism products. When local communities are involved in tourism planning, development and decision-making, it can result in a more sustainable approach to tourism development as it is less likely to be exploited from within the host population (Mathieson and Wall, 1982). It is not only important to identify the commonality or consensus of residents' perceptions, described by Faulkner and Tideswell's (1997) intrinsic/extrinsic dichotomy, but to examine the differences and the relationships between tourists and the local population to highlight the social impacts that can be used for the planning and management of sustainable tourism developments (Butler, 1974).

### **3.3.5 Discussion**

Tourism carrying capacity incorporates elements from the environmental, physical and social landscapes of a tourism destination, to identify thresholds that should not be surpassed in

relation to tourism development. Each type of tourism carrying capacity will vary for different tourism destinations, which will depend upon the physical characteristics of the tourism destination, the tourism types and levels of use by the tourists and the goals each type of capacity is expected to satisfy (Mathieson and Wall, 1982). Therefore it is easily argued that no simple tourism carrying capacity equation or value exists (Hall and Page, 2002), but that each type of capacity; physical, environmental, psychological or social, will have a threshold or a limit to growth that will indicate when tourism development induces effects that are primarily negative (Mathieson and Wall, 1982).

### **3.4 Summary**

The limits to growth concept, when applied to tourism destinations, refers to thresholds of saturation. When these thresholds are surpassed degradation in the physical, economic, environmental and social landscapes occur. A number of methods to measure limits to growth exist in the tourism research literature, one framework being carrying capacity. Carrying capacity represents the relationship between a tourism destination and its visitors (Boniface and Cooper, 1994), and the associated capacity levels are influenced by the characteristics of the tourists (psychological capacity), the characteristics of the destination area (physical and environmental capacity) and its population (social capacity) (Mathieson and Wall, 1982). Therefore, a number of capacity levels can be measured, based on the goals of the researcher, and of the planners and managers of tourism developments.

Many recognize the benefits of the applications of carrying capacity in tourism research and other disciplines, but some argue that determining thresholds of social and physical environments is idealistic and improbable, which is summarized by eight main problems:

- 1) Carrying Capacity means different things to different people; there is no universal definition and it “is centered around tolerance-levels” (Cooper *et al.*, 1998:2);
  - 2) There are a variety of standards to measure;
  - 3) Carrying Capacity is a dynamic and fluid concept, which is neither fixed or static, and can depend on the speed of change;
  - 4) The concept is virtually unquantifiable, therefore, there is a lack of quantifiable measurements and problems with qualitative measurements (Miller, 2001);
  - 5) There are difficulties predicting impacts, and an impact is only known if it is detectable, but detection thresholds can be highly variable (Buckley, 1999);
  - 6) Management can alter effects or processes and, therefore, impact assessment must be made before, during, and after any development;
  - 7) Solutions proposed by different experts do not often achieve general agreement; and
  - 8) Some authors criticize the concept. “The concept is deficient in theory, unrealistic in implementation and impossible to measure” (Pagageorgiou and Brotherton, 1999:271), and is not a concept that can be applied to a rigorous analysis or in practical management (Buckley, 1999)
- (Adapted from Simon *et al.*, 2004:277).

The issues in tourism carrying capacity studies parallel those in recreation research and the experience gained in the recreation field holds lessons from tourism management (Lindberg *et al.*, 1997). With similar and different goals for each type of capacity, it is difficult to calculate absolute values for tourism carrying capacities, a strong argument used by critics of this approach (Collins, 1999; Lindberg *et al.*, 1997; Lindberg and McCool, 1998; McCool and Lime, 2001) who suggest alternative measurement frameworks. Alternative frameworks include Limits of Acceptable Change (LAC), Visitor Impact Management (VIM), Visitor Experience and Resource Protection, Protected Area Visitor Impact Management (PAVIM), Visitor Activity Management Planning (VAMP) and Tourism Optimization Management Model (TOMM). For example, the LAC model is the union between recreational and ecological aims (McCool, 1994), which shifts in focus from “How much use is too much?” to “How much change is acceptable?” (Stankey *et al.*, 1985). Nonetheless, the concept of carrying capacity is still prominently used in present literature and will continue to evolve with new applications and locations, as “protecting and managing resources are means, not ends” (Wagar, 1974:275).

Although alternative measurement frameworks exist, the tourism carrying capacity framework explores a holistic measure of the limits of growth of a tourism destination, where a number of individual capacities are assessed, each with their own goals of sustainability and limits of acceptable change. In response to the identified problems of this framework, it can be easily argued that any framework will 'mean different things to different people' and as there are a 'variety of standards to measure' it provides a realistic view of the issues associated with tourism development instead of focusing on only one perspective. In regards to the 'rigour' of qualitative studies, this remains an argument seen in the study of geography as a whole, and as tourism development and management perspectives change with time it is beneficial to have 'fluid' frameworks, as the results found at the present time may change but it provides a bench mark which can be measured from in future studies. The concept has implications beyond the quantification of capacity levels, as it identifies physical and social systems that are tolerant and intolerant to tourism activities, therefore the knowledge of the consequences of surpassing these acceptance levels could promote the implementation of preventative management controls and maintenance policies (Mathieson and Wall, 1982). Therefore, tourism carrying capacity is the chosen framework in this research project for determining the limits of growth of Tofino, British Columbia.

Three types of tourism carrying capacity will be examined in this study; physical, psychological and social, which will be used to identify whether or not these thresholds have been exceeded based on the experiences and perceptions of host communities and tourists, and on the growth of tourism infrastructure and tourism space, discussed in the following chapter.

## CHAPTER FOUR

### TOURISM SPACE: A GEOGRAPHER'S APPROACH

#### 4.0 Introduction

Compared to other disciplines, geography has a central focus on space and its spatial relationships. Geographers study the earth from two perspectives, first from the “emphasis on the meaning of space, spatial relations and place” and secondly from the “relationship between man and his physical environment” (Sack, 1980:1). The two concepts can be summarized as the idea of landscape and the human impact on the land (Sack, 1980), which are applied in geographic studies of tourism from physical and social perspectives.

Space in tourism geography can be described by three components; the origin, the destination and the route taken between the origin and destination (Leiper, 1979), which together provide an experience for a tourist. The limited amount of tourism space research is performed regularly on the destination space, which can be divided into actual, functional and perceived tourism space (Mansfeld, 1990).

This chapter begins by defining space, studied predominately in the social scientific realm, which provides the foundations for the concept of tourism space in geographic studies. The chapter continues with describing the concept of tourism space by examining the geographic paradigms and models that have provided the basis for the concept, and additionally summarizes the types of tourism space found in tourism literature. The chapter concludes with describing the types of tourism space that were examined in the research and how they were measured.

## 4.1 Space

Notably since the 1960's has geography moved from asking 'where' to asking 'where, why, and how' (Goodey, 1974), a shift from a purely physical space to a combined space consisting of both physical and social attributes. The fusion of variables creates two classes of space, where concepts such as location, distance and shapes originate from a spatial side, and where 'things' are examined from a social perspective (Sack, 1980).

Space is among the most fundamental of notions as it provides a framework for all forms of thought and when combined with time provides an ordering system that combines every component of thought (Sack, 1980). The concepts of space and time have been described by Kant (1950) as 'universal, insuppressible, necessary, unique, and infinite', as space is everywhere at every moment in time; everything can be expressed in relation to these terms such as being 'here' or 'there' (cited in Sack, 1980). Therefore, the concept of space is described in the literature of many disciplines, as space is perceived differently by individuals and alters with changes with time.

From early descriptions and definitions of space within geography and other disciplines, the geography of tourism and recreation have adopted a specific definition, one that describes the origin, transportation or linking route, and the destination. The origin depicts where the tourists have traveled from, where studies focus on tourist motivation behaviours referred as the demand side of tourism. The route traveled between the origin and the tourism destination is dependent on a number of factors, which include distance traveled, time of year, type of tourist and economic expenses, where studies focus on tourists' decisions in terms of cause and effects. The destination space depicts the supply side of tourism, where

the majority of tourism research is performed, where positive and negative effects of tourism are prevalent in this geographic space on the host communities, tourism infrastructure and the visiting population. Tourism research is applied within this defined tourism system, where tourism space is approached from numerous perspectives.

## **4.2 Tourism Space**

Although tourism studies are performed at all levels of the tourism system, the literature describes the concept of tourism space from two main positions, one from a development perspective and the other from a tourist flow or spatial behaviour perspective. The tourist flow or spatial behaviour perspectives of tourism space are linked to the geographic models of tourism development, but emphasize the motivating behaviours of tourists based on factors that influence the decisions of travelling to one area over another. Tourism space, as applied in tourism development, details the growth and/or decline of tourism destinations and its associated effects on the tourist and local populations and the physical environment, resulting in multiple models of tourism development within the literature.

### **4.2.1 Tourism Development Perspective**

Central to the development of a tourism destination is the coupling of space and time or the associated spatio-temporal implications on the tourism site. Specific tourism development theories associated with space and time exist (Britton, 1982; Butler, 1980; Gormsen, 1981; Keller, 1987; Miossec, 1976; Murphy and Andressen, 1988), but are often combined with development theories from other disciplines. Oppermann (1993) has summarized the development theories into two paradigms, a diffusionist paradigm and a dependency or world system paradigm, and further proposes a new tourism development model.

### Diffusionist Paradigm

Two theories converge in the diffusionist paradigm; the development stage theory which is based on the notion of unilinear change and the diffusion theory which is associated with a spread, filtering or diffusion of growth/development from the most developed to a less developed area (Browett, 1979).

The development stage theory is based on the growth from a Euro-American stance, which implies that the less developed countries are in an earlier phase of their development, but will eventually repeat the Euro-American experience (Browett, 1979). These types of development models are represented by the stages that are associated with the growth of the development, one of the most familiar being Rostow's (1960) stages of economic growth. In the tourism literature, the tourism development models confine their analyses to the increases in tourism volume; which include Thurot's (1973) three phases, Miossec's (1976) five phases, and Butler's (1980) and Gormsen's (1981) six phases; and the change in tourist types, which include Christaller's (1964), Cohen's (1972), and Plog's (1973) tourist typologies associated with the progression of tourism development in 'first periphery' Northern European resorts (Oppermann, 1993).

The diffusion theory when applied to tourism studies occurs when core development areas spread to periphery regions, which will eventually lead to an adjustment of the regional disparities after the initial shift and therefore is necessary to establish growth poles to negate these effects (Oppermann, 1993). Growth poles can refer to cities or economic sectors with high connectivity with other industries, which are thought to have high multiplier effects; with Christaller (1964) and Friedmann (1966) being among the first who considered the

tourism industry as a growth pole (cited in Oppermann, 1993). Tourism was seen as a positive influence on the economy and as a catalyst in the development of peripheral regions. Additionally, tourism is an industry where consumption takes place at the location of production and will therefore have potential multiplier effects on the local economy (Oppermann, 1993). From the diffusion paradigm containing both development stages and diffusion theories, a number of limitations existed, allowing the introduction of another - the dependency or world system paradigm.

#### Dependency/World System Paradigm

The dependency paradigm maintains “as a result of dependency, capitalist development in the core continuously creates and perpetuates underdevelopment in the periphery” (Browett, 1982:145), examples of this paradigm applied in tourism studies include Britton (1982) and Husbands (1981). The main critiques of tourism as a catalyst for development was that most development plans and goals were not fulfilled and that multiplier effects were considerably lower than predicted due to high import rates (Oppermann, 1993), and the high initial costs are often too high for developing countries which leads to dependency on foreign capital (Britton, 1982).

The dependency paradigm is particularly useful when tourism development is initiated in developing nations, as it treats tourism like any other industry, “which is used by the developed countries to perpetuate the dependency of the developing countries”, which “instead of reducing the existing socioeconomic regional disparities within the developing countries, tourism reinforces them through its enclavic structure and its orientation along

traditional structures” (Oppermann, 1993:536). Husbands (1981:37) examined the roles of tourism in spatial restructuring based on the center/periphery relationship and concluded that the shortcomings can only be resolved through a “critical and revolutionary reconstruction”, which further prompts the introduction of another concept that attempts to address the shortcomings of both the diffusionist and dependency paradigms.

### Formal/Informal Paradigm

In the diffusionist and dependency paradigms there is an inherent emphasis on the formal sectors of tourism development and as a result the informal sector or ‘drifter’ tourism is often overlooked (Oppermann, 1993). As described by Cohen (1972) as the institutionalized and non-institutionalized, the ‘formal’ tourism group is often equated with the whole tourism system and will therefore have substantial spatial and economic effects. Therefore, this paradigm addresses the issue by analyzing and evaluating both the formal tourism sector and the informal or lower circuit.

The differentiation of the dichotomy in sectors has been analyzed by various variables, mainly in regards to accommodation where the formal sector is characterized by international hotel standards and the informal sector is associated with low-budget accommodation, but have additionally been analyzed according to the size and organization of the business (Michaud, 1991), and the acceptance of credit cards and the provision of regular wages (Kermath and Thomas, 1992). The characteristics of the two tourism sectors are summarized in Table 4.1, which help explain the spatial patterns that are exhibited within the dichotomy of tourism sectors.

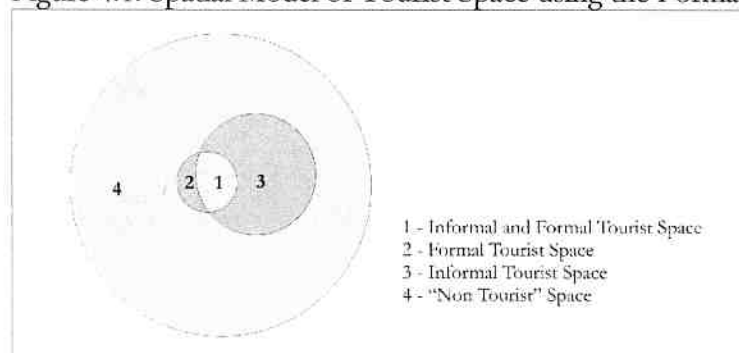
Table 4.1: Characteristics of the Formal and Informal Tourism Sectors

Characteristics	Formal Sector	Informal Sector
Capital	Abundant	Limited
Technology	Capital-Intensive	Labour-Intensive
Organization	Bureaucratic	Primitive
Ownership	Companies	Individual, Family
Prices	Generally Fixed	Negotiable
Inventories	Large Quantities and/or High Quality	Small Quantities and Poor Quality
Fixed Costs	Substantial	Negligible
Advertisement	Necessary	Almost None
Credit	Institutional	Non-institutional
Turnover	Large	Small
Profit Margin	Small per Unit and Investment Costs	Large per Unit and Investment Costs
Education	Skilled	Unskilled
Regular Wages	Prevalent	Less Prevalent
Government Aid	Extensive	None or Almost None
Dependence on Foreign Countries	Great, Externally Oriented	Small or None

(Adapted from Oppermann, 1993)

In regards to the spatial implications of the paradigm, the occurrence of the formal sector is limited to a restricted number of resort enclaves usually situated close to the capital city and international airports, whereas the informal sectors are much more expansive. The overlapping of the tourism sectors are in locations of tourist attractions and the areas that are in neither sector, referred to as non-tourist space (Oppermann, 1993), presented in Figure 4.1.

Figure 4.1: Spatial Model of Tourist Space using the Formal/Informal Paradigm



(Adapted from Oppermann, 1993)

From the descriptions of the three paradigms associated with the spatio-temporal changes of tourism, it is apparent that not one methodology is preferred, but will depend on the overall goals of the development. One common theme that lacks in the theories is their general view of international tourism, specifically in developing countries, where many focus on the formal sectors of tourism and neglect the informal (Oppermann, 1993). Although the theories are in terms of development, they not only acknowledge the physical spatial changes of the tourism destination, but also provide insight into the social changes of the tourist and the local populations, which is further discussed in terms of spatial behaviour.

#### **4.2.2 Tourist Flow/Spatial Behaviour Perspective**

As development is associated with the change of tourism destinations and their resulting boundaries, spatial behaviour is associated with the decisions and motivations behind the movement from an origin to a destination. Therefore, the difference is that the development perspective often focuses on one part of the tourism system, the tourism destination, whereas the spatial behaviour perspective focuses on the individuals themselves, which results in analyses at all levels of the tourism system.

Christaller (1964) was one of the first to describe an observable pattern of tourist movement or tourist flows from origins to destinations, which he summarized according to a centre-periphery model, where flows move from large urban centers to remote peripheral areas. The flow from large to remote areas is not always the direction of flow though, as large cities such as London, New York, and Paris both push and pull numbers of tourists (Mathieson and Wall, 1982). Therefore the need of studying the underlying or deciding factors of the traveling population is required for more efficient tourism planning and marketing.

The fundamental question that underlies the growth and change of tourism is why people choose to visit other places; these issues of motivation and demand directly affect all levels of the tourism system. Demand is the outcome of tourists' motivation, which is influenced by marketing, special destination features, money, health, and the desired length of the visit, among others. Motivation is the integrative network of biological and cultural forces that define the values and directions of travel choices, behaviours, and experiences for both the short and long term (Pearce, 1993). The demands and motivations will vary on each individual and therefore is related to the individuals' tourist characteristics.

Individual tourist characteristics determine the motivations and behaviours associated with tourism, which include socio-economic characteristics, level of use, length of stay, types of activity and the level of tourist satisfaction (Mathieson and Wall, 1982). Consumer behaviour is a popular topic of study in present research, but stems from seminal works from Cohen (1972), Doxey (1975), and Plog (1973), which all propose tourist typologies, summarized in Table 4.2.

Table 4.2: Tourist Typologies in Tourism Literature

<b>Cohen (1972)</b>	<b>Doxey (1975)</b>	<b>Plog (1973)</b>
Drifters	Euphoria	Allocentrics
Explorers	Apathy	Mid-centrics
Individual Mass Tourists	Irritation	Psychocentrics
Organized Mass Tourists	Antagonism	

The research of the demands and motivations of tourists, which ultimately depend on individual characteristics, has provided the groundwork for determining the spatial framework in tourism behavioural studies. Analyses of spatial behaviour have been

performed on all three levels of the tourism system (origin, destination and linking route), and have been performed before, during and after the tourism experience at a particular destination, as perceptions begin with expectations that change into experiences.

### 4.2.3 Combined Perspectives of Tourism Space

The spatial behaviour and development perspectives on the concept of tourism space utilize both physical and social means to describe space, and the interrelationships between these two landscapes to aid in the examination of the tourism system. From the limited research performed on tourism space, Mansfeld (1990) has summarized three types present in the tourism literature: actual space, functional space and perceived space. Within this combined framework, researchers can readily target specific types of space at the tourism destination, which can aid in the future planning of the site and the assessment of impacts associated with the tourism industry.

#### *Actual Space*

The first type of tourism space studied was the actual space approach, which was applied within the early ideographic studies of tourism and was used to describe the nature of concentrated tourist activity in a given locality (Mansfeld, 1990), such as Defert's (1966) 'espace milieu'. Actual tourism space can be described as an "area which accommodates tourist activities and has very clear geographic boundaries" and is the most successful when applied within the defined boundaries (Mansfeld, 1990:373).

When applied to present research, defined geographical boundaries may be examined using government community plans and documentation. Municipal governments are responsible

for creating zoning boundaries and associated bylaws within their designated land parcels, and therefore delineated boundaries for recreational or commercial use may be analyzed through these means. The designated areas may have altered with time and may still be under current negotiation in city councils; therefore the actual tourism space of a tourism destination is continually changing to keep pace with the demands of the local population and other associated tourism businesses. It is within the delineated boundaries that tourism may flourish, but it is often dependent on the function of the space.

### *Functional Space*

Functional tourism space was studied predominately in the mid-1970's, which was readily applied to tourism flow or spatial behaviour studies (Pearce, 1987). Within the actual space boundaries, functional tourism space is associated with the use of the space, whether related to tourism activities or in terms of the characteristics of the space (Mansfeld, 1990).

In regards to the characteristics of the space, functional tourism space has been described by economics (Macdonald, 1984), transportation (Gunn, 1994), Oppermann's (1993) informal and formal dichotomies (previously discussed), and Leiper's (1979) and Husband's (1983) generating and attracting areas concept. The generating and attracting areas concept explains that the functional space depends on the physical, cultural, social, economic, political and technological environments prevailing in both areas (Mansfeld, 1990).

Functional space as defined by the tourism activities that are being performed within actual tourism space can be attributed to the different types of tourism, whether it be 'fun in the sun' tourism or ecotourism. The activities that are performed within tourism destinations

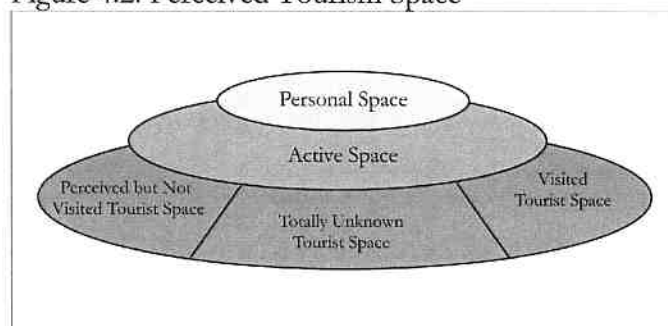
will attract particular types of tourists that will consequently define particular tourism destinations. Identifying different types of functional space in regards to activities can provide useful insight into potential marketing schemes and for allocating new tourism spaces within tourism destinations, which is ultimately dependent on the perceptions of tourism space of the individuals, in regards to the tourists and the local populations of a tourism destination.

### Perceived Space

In relation to tourism space, perceived space is based on a social standpoint that has gained recognition in present tourism literature. Perceived space is based on individual behaviours, where each individual (tourist or local) has their own perceived image of that space, with the level and quality being determined mainly by socioeconomic and cultural influences (Mansfeld, 1990).

Perceived tourism space may be divided into two levels (Figure 4.2), where the first level is divided into two kinds of cognitive space sectors; regions and specific places visited in the past and regions or tourist attractions not yet visited, and the second level refers to the tourism destinations of which the individual is not yet aware (Mansfeld, 1990).

Figure 4.2: Perceived Tourism Space



(Adapted from Mansfeld, 1990)

Individuals perceive space where they have visited in the past quite accurately, as the “tourists’ image of them is quite clear and close to reality as they have already experienced these places” and the perceptions of the destinations not yet visited “is based on an image created by being exposed to sources of information promoting these places, to experiences of friends and relatives, and to other means of tourist ‘image creating’” (Mansfeld, 1990:374). A gain in new information is the only method where a tourism destination can move from the second level to the first level. In order to move from the second cognitive space to the first (by traveling to the chosen destination), the individual is constrained by various factors including time, money, the level of positive image attached to the destination and its level of attractiveness relative to other assessed destination alternatives, among others (Mansfeld, 1990).

Incorporating time into perceived space will offer additional insights, as perceptions of space will change before, during and after an experience. A tourist for example, will have made a decision to choose a particular tourism destination, therefore expectations already exist and when the tourist arrives at the tourism destination immediate judgments will arise, which may alter throughout the length of the trip. When a tourist arrives back to their origin, they may have reflected on the positives and/or negatives of the trip, which as a result may alter their perceptions. From the other position, an individual from the local population perceives change as the level of development increases or decreases, which has effects on the economy, environment and on the social landscape. Therefore, collecting information at these three time scales provides valuable tools that may be used in present and future analyses.

#### 4.2.4 Discussion

Combining all three types of tourism space provides a holistic view of a tourism destination as it incorporates the physical and social landscapes; as the development perspective focuses on the actual and functional tourism spaces and the spatial behaviour perspective focuses on the perceived tourism space. When space is incorporated with the element of time it provides a scale of study that can be applied in forecasting the growth and/or decline of the tourism destination. From the combined tourism space paradigms of tourism development and tourist flows or spatial behaviour, which have been summarized by actual, functional, and perceived space (Mansfeld, 1990), a researcher can design a study that will partake in the investigation of all or individual types of tourism space.

#### 4.3 Summary

Although there are many underlying models and theories associated with spatial frameworks in geographic studies, the literature does not readily examine the concept of tourism space. Establishing its roots in development and spatial behaviour paradigms, specific applications to the study of space within any of the three levels of the tourism system is limited. Therefore, due to the lack of literature much groundwork has to be established in this area of study, especially in regards to the spatio-temporal changes of all three types of tourism space.

In this research, all three types of tourism space were analyzed and described at the destination site only. Actual space and functional space were examined using municipal and Chamber of Commerce documentation, including the Official Community Plan (OCP), relying on the most current documentation available. Perceived tourism space was analyzed

through a mapping exercise proposed by Keller (in progress), in efforts to summarize the perceptions of the participating tourist, local resident and business populations. A community mapping project performed in October 2004 was available as a reference for comparing changes in perceived tourism space.

One of the goals of the research project was to identify regions of tourism space, which will be described according to all three identified types. Highlighting the areas of tourism space will provide valuable insight into the pull factors of particular regions, which could contribute in the future planning of tourism in the town of Tofino, British Columbia.

## CHAPTER FIVE

### BOAT DAYS TO SUMMER DAYS: A HISTORY OF TOFINO

#### 5.0 Introduction

Tofino began as an isolated community, then a community at 'the end of the road'. Today it is a major tourism attraction, opening the West Canadian Coast to people around the world. This chapter depicts how Tofino has grown from its first designation as a village into a district municipality by detailing the instances that put Tofino on the map. The chapter describes the origins of Tofino from its first settlers, to the initiation of the Pacific Rim National Park Reserve, to the protests of Meares Island and ends with describing the present-day Tofino by examining the physical changes that have taken place and the changes in the social fabric that have defined the community of Tofino.

#### 5.1 Location

Tofino is located on the Esowista Peninsula on the far west coast of Vancouver Island (Figure 5.1) and is bordered by the Pacific Rim National Park Reserve on its south side and by the rugged Pacific Ocean and the sheltered Tofino Inlet on the other three sides. Growth is restricted to the 10.64 square kilometres that constitute the district of Tofino (Figure 5.2) where a population of 1,500 permanently reside (Statistics Canada, 2001). This can increase to 22,000 during days in the summer months of July and August (TCOC, 2005), nearly 15 times more than the local population.

Figure 5.1: Map of Tofino, British Columbia, Canada

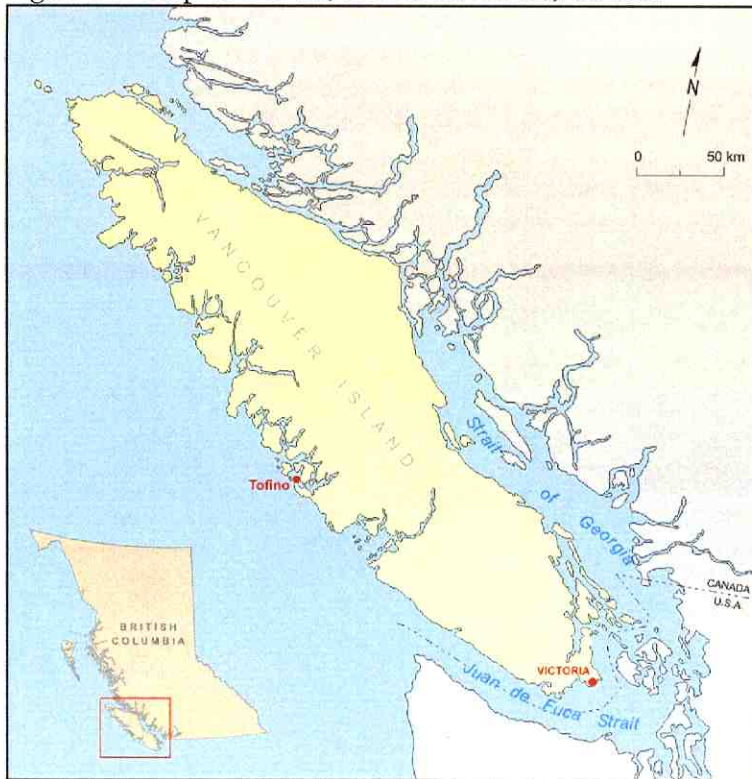
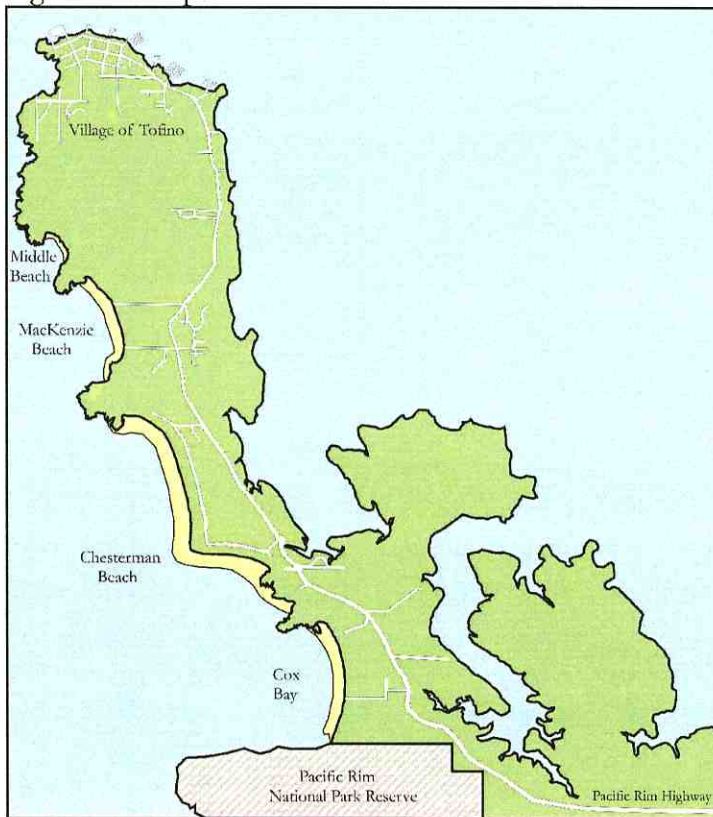


Figure 5.2: Map of the District of Tofino



## 5.2 In the Beginning

Before there was a 'Tofino', this was the land of the First Nations people of the Nuu-chuh-nulth culture. It wasn't until the late 19<sup>th</sup> century that non-indigenous people arrived by boat due to the promotion of gaining land through the pre-emption process and having the expectation of a connecting road to the outside world (Guppy, 2002). With no road connecting the west coast to the interior of Vancouver Island the main connection to the outside world was provided by the *Princess Maquinna*. 'Boat Days' as named by the locals, were also the main social events, as new passengers and goods would be brought into the region, and the *Princess Maquinna* provided transportation to other coastal communities (Guppy, 2002). The community relied on the extraction of resources from the natural surroundings of the region, which included mining, forestry and fishing, and also relied on Federal and Provincial monies for a lifeboat station, telephone and telegraph services, a post office and for road construction (Guppy, 2002). Socially, the community consisted of indigenous people and people from many countries notably England, Norway and Japan.

With the "increasing demand for tourist accommodation on the regular trips of the *Maquinna*" (Guppy, 2002:52) the *Norah* began sailing. The only accommodation for tourists at this time was the Clayoquot Lodge, located on Stubbs Island across from the present day Tofino (Guppy, 2002). Tourists spent their money on First Nations artwork and artifacts at the local store, with tourism remaining in the region until the Depression in 1929 (Guppy, 2002). It wasn't until 1932 that 'Tofino' became the official name of the village community, named after the Spanish hydrographer Vincente Tofino by the navigators Galiano and Valdez (TCOC, 2005). In terms of tourism, the Tofino Hotel was built in the 1930s but

Tofino once again changed when the Second World War was declared in 1939 (Guppy, 2002).

During the war, gravel roads were built to connect Ucluelet to the airport and Long Beach with a smaller road carrying on to Tofino (Guppy, 2002). The need to connect the coastal communities of both Ucluelet and Tofino to Port Alberni still remained a priority to residents, given weight by Tofino being named the Pacific Terminus of the Trans-Canada Highway in 1926 (Guppy, 2002). MacMillan Bloedal Ltd. offered to construct the most difficult section of road - around Kennedy Lake, in exchange for a tree farm license (Guppy, 2002). An agreement between MacMillan Bloedal Ltd. and the provincial government in 1954 granted the wishes of the residents. A road was built to connect Tofino and Ucluelet to Port Alberni and was open to the residents of the coastal communities' full time in 1964 (Guppy, 2002). This altered Tofino permanently.

In response to the new road access, the Maquinna Hotel was completed in 1959, and the previously built Clayoquot Lodge also provided accommodation to the adventurous visitors who made the trip out to Tofino (Guppy, 2002). The road also prompted a surge in real estate, allowing more people to permanently reside in Tofino. The alternative way of life in Tofino also began to attract 'hippies' who lived on the beaches of Tofino until the formal recognition of the park in the 1970s.

### **5.3 Tofino on the Map**

Tofino was broadcasted to Canadian and international audiences in two instances, physically with the creation of the Pacific Rim National Park Reserve in 1971 and socially with the

logging protests of Meares Island (1993). Together, these instances allowed tourism to thrive in the 1990s and to become the main industry in Tofino.

Jean Chrétien, then a minister of the federal government, promoted the establishment of the Pacific Rim National Park Reserve. The park was formally opened on May 4<sup>th</sup>, 1971 (Guppy, 2002). The complete paving of Highway 4 from Port Alberni to the west coast of Vancouver Island came with the opening of the park. The Pacific Rim National Park Reserve and the paved road to the interior of the island promoted the influx of further development in the area, directly related to the growing numbers of visitors traveling to the park and Tofino.

In the 1980s the community of Tofino celebrated its 50<sup>th</sup> anniversary as a village and extended the community boundaries from a village to a district municipality (Guppy, 2002), which bordered the Pacific Rim National Park Reserve on one side and water on all others. The viewpoints of the community were changing with the rise of environmentalism. The logging industry was seen as a destructive force to the natural beauty and ecology of Tofino and Clayoquot Sound.

Tofino was put on the ecotourism map with the protests against the logging of Meares Island in 1993 (Curnes, 2003). During the summer of 1993, 856 people were arrested and more than 10,000 people blocked the logging roads south of Tofino (Curnes, 2003). The people peacefully defended Clayoquot Sound from being logged and their efforts continue today with the non profit organization Friends of Clayoquot Sound which remains a pillar of strength for the preservation of the natural environment in Tofino.

The value of the surrounding landscape of Clayoquot Sound was further emphasized with the designation of the region as a UNESCO (United Nations Educational, Scientific, and Cultural Organization) Biosphere Reserve in January 2000, an honour bestowed to only twelve other locations in Canada (UNESCO, 2006). The governing body of the Biosphere Reserve is the Clayoquot Biosphere Trust, with its mission being to “assist the Clayoquot Sound UNESCO Biosphere Reserve Region Community to achieve its vision by providing funding and logistical support for research, education and training initiatives that promote conservation and sustainable development” (CBT, 2006).

The combination of its physical surrounding beauty and the community’s awareness of the environment make Tofino a unique place to visit, attracting national and international tourists alike.

#### **5.4 Tofino Today**

Today, Tofino attracts up to 22,000 additional people on a summer day (TCOC, 2005). Tourism in Tofino is very seasonal – with the majority of tourists visiting during the summer months. Over the recent years, tourism businesses have started to remain open throughout the year to accommodate the growing numbers of tourists during the wet winter months – driven by one local tourism business’s “storm watching” marketing initiative. With the growing number of tourists and the decreasing shoulder season, the tourism industry has grown to accommodate the influx of visitors, in terms of activities, accommodation, and other necessary tourism infrastructure.

In terms of activities, Tofino offers a relaxing atmosphere surrounded by beautiful landscape as well as many activities that cater to the outdoor enthusiast, including surfing, hiking, sea-kayaking, fishing, boating, whale-watching and other wildlife watching, as well as simply relaxing on a white sand beach. The town of Tofino also has a number of small artisan shops that sell a range of local artwork from the surrounding areas. In order to enjoy the many activities available, a growing number of tourist accommodations are situated in the district and town of Tofino.

In Tofino, a number of tourist accommodations exist and often are booked up throughout the high summer season. Tofino attracts many types of tourists and therefore many types of tourist accommodations have been adapted in this community; these include resorts, hotels, motels, vacation rentals, bed & breakfasts, hostels and camping. Accommodation is often a limiting factor for at least a couple of weeks during the peak summer season, where no accommodation can be found for new arrivals without reservations. The marketing of storm watching has attempted to fill up rooms during the winter months, which were often closed during the winter season. Although the numbers of tourists visiting during the winter months do not always fill up the accommodations, the numbers have increased. The increase in both seasons not only affects tourism businesses, but has impacted the local infrastructure.

For a local population base of 1,500 (Statistics Canada, 2001) the infrastructure to support the thousands of additional people as a result of tourism is shaping the present Tofino. The increased wear and tear on the roads and sidewalks, and the increased demands for necessities such as sewage and garbage facilities, and electricity and water have in recent

times become limiting factors for tourism growth. The major determining factor, as experienced this past September and previous summers, is the amount of available fresh water. Past summers have had severe water restrictions placed on the community, but in September 2006 - before the busy Labour Day weekend, the mayor ordered that all tourist businesses be shut down due to the low amounts of water (CBC News, 2006). As a result, a local business man offered to pay \$50,000 to truck in water from Ucluelet to remain open for the weekend, which was “a lot cheaper than closing the doors at his hotel, beach resort and campground on one of the busiest weekends of the year” (CBC News, 2006:1). In order for sustainable growth, tourism must grow in accordance with the available local infrastructure.

Throughout the growth of tourism in Tofino, the preservation of the surrounding environment has remained an integral part of the tourism industry and is a major pull factor to this small community. Another major pull factor is the small town feel of Tofino and the people who live in this community. Together, the residents and businesses of Tofino work together to provide this Tofino tourism experience for the visitors. During the summer months, businesses try to keep up to the demands of the visiting population and the small town feel of Tofino, where everyone says “hi” as you walk down the street, is diminished when crowds of people cross the streets, but is revived once summer ends and locals recoup. Such a seasonal flux has shaped the community of Tofino, but it continues to be ‘home’ to the residents and ‘a great place to visit’ for tourists.

## 5.5 Summary

Tofino began as a small isolated community that relied on the extractive resources of the surrounding landscape and today Tofino has become a major tourist attraction known around the world. Attracting tourists from international and national origins, Tofino as a tourism destination was promoted by the creation of the Pacific Rim National Park Reserve and the peaceful protests of the logging of Meares Island. Today, Tofino as a tourism destination is promoted through word of mouth, marketing schemes such as 'storm watching', and repeat visitors.

Tourism has become a part of Tofino and is the main industry which residents depend on. The seasonal influx of thousands of tourists during the summer months has affected the community of Tofino, but has tourism over run the community? The following chapters address the issues of whether tourism in Tofino has become 'too much' for the people living and visiting this small west coast community.

## CHAPTER SIX

### RESEARCH METHODS

#### 6.0 Introduction

As Tofino continues to grow as a community and as a tourism destination, stakeholders have highlighted the importance of preserving the nature and the values that draw the residing and visiting populations to Tofino, making it imperative that the tourism industry promotes the qualities for future sustained growth. Capturing the perceptions and opinions of multiple stakeholder groups provides a holistic view of present tourism conditions, but may offer insight into where future problems may occur.

From the review of methodologies used in previous tourism and recreation research, a number of commonly used sampling designs, survey designs and analyses were incorporated in the research. In the research project, surveys were used to identify and summarize the opinions of three identified stakeholder groups; residents, tourism businesses and tourists, to determine how tourism space is perceived and if tourism carrying capacity has been exceeded.

The chapter commences with defining the stakeholder groups of the research project and details how each group was uniquely sampled. How the research instrument was administered is presented in the subsequent section. The following section summarizes the common themes that were used in the survey instruments to address the different types of tourism carrying capacity and tourism space. The chapter concludes with detailing how the

surveys were analyzed using quantitative, qualitative and spatial means to address the research questions and objectives.

### **6.1 Stakeholder Selection**

A stakeholder can be defined as someone who has a vested interest in a specific subject; at a tourism destination everyone who is affected by tourism can be considered a stakeholder. The supply and demand nature of the tourism industry identifies two stakeholder groups, tourism businesses that provide services and amenities, and the tourists that purchase and consume what is made available. Another stakeholder group at tourism destinations is the residents of the community, as they affect how businesses operate through employment and management, and they can affect the experiences of the tourist through personal interactions. The three identified groups; residents, businesses and tourists, are the selected stakeholders for the tourism destination of Tofino, British Columbia. The stakeholder groups can provide valuable insight into the issues associated with individual capacities and all perspectives can be combined to investigate the overall effects of tourism on a destination site.

### **6.2 Sampling Frame**

Each stakeholder group is inherently different and therefore required unique sampling procedures. For the remainder of the chapter, each section is separated into the three stakeholder groups; residents, businesses and tourists, where appropriate.

### **6.2.1 Resident**

Logistics was the main determinate for the residential sampling frame; therefore the telephone directory was selected over other commonly used residential sampling frames, such as electoral roll and household based sampling. A list of potential participants was compiled from the 2004 Telus telephone directory. The telephone list was cleansed by deleting duplicate numbers, which often represented self-run businesses, to obtain a sampling frame of 767 residents.

### **6.2.2 Business**

A complete listing of tourism businesses was sought. A list was generated through various means, including the 2004 Telus telephone directory, the Tofino Times magazine, the Internet, brochures, The Westerly (local newspaper), members of Tofino's business associations and by a walk through the district of Tofino. A compiled list of 222 businesses was separated into categories defined by the Tofino Chamber of Commerce, including: accommodations (112), activities (44), artisan and galleries (16), gifts and clothing (14), not for profits (9), restaurants (22) and transportation (5). Every year new businesses open during summer months. After the sampling frame compilation the list therefore was supplemented with any new business.

### **6.2.3 Tourist**

Due to the unconfined nature of visitors to a tourism destination, a sampling frame of the tourist stakeholder group could not be produced. To remedy this, a number of key locations were identified within the village and district of Tofino to sample day trip tourists who

arrived and departed on the same day, and various accommodation types were approached to sample tourists who stayed overnight.

### 6.3 Sampling Method

Within the small resident and business populations of Tofino, a probability sampling frame was selected where participants were randomly selected. The sample design is said to “reduce bias in the sample and aid in the generalization of the results of the population” (Frankfort-Nachmias and Nachmias, 1992), as all potential participants have a known chance of being selected. Using the formula below, a sample size can be calculated which allows the researcher to be 95 % confident that the estimates will have a sampling error no more than  $\pm 10\%$ . In an ideal world, to be 95% confident, the following sample sizes should be aimed for using the equation below: 90 resident participants (N=1,500), 67 business participants (N=222) and 96 tourist participants (N=\*136,000).

$$n = \frac{p(1-p)}{(e/z)^2 + p(1-p)} \cdot N$$

Where:

p = variability in the population, 50/50 split (0.5)

e = margin of error (0.10)

z = for 95% confidence interval (1.96)

N = population size

(\*Tourist population estimated from 2004/2005 PRNPR arrival numbers for a 6-week time period in the summer)

(Frankfort-Nachmias and Nachmias, 1992)

In order to factor in non-response, a total of 150 potential participants for each stakeholder group were randomly selected from the compiled resident and business listings. As no listing of visitors to Tofino is available, a purposive sampling design was used for the tourist participant group, where selected locations within the district and village of Tofino were identified, where tourism accommodations were approached to administer surveys.

### 6.3.1 Resident

A systematic sampling method was used for the selection of the 150 residents. The first selection was chosen from a random number table, and every 5<sup>th</sup> participant was selected from the resident sampling frame, following the formula:

$$K = N/n$$

Where:

$N$  = total number in sampling frame (767)

$n$  = desired number of surveys (150)

(Frankfort-Nachmias and Nachmias, 1992)

### 6.3.2 Business

Due to the nature of having different sectors of businesses, a proportionate stratified sampling method was selected for the business participant group, where the sample size per business sector was proportional to the population size of the stratum (Frankfort-Nachmias and Nachmias, 1992). As a result, 75 accommodations, 30 activities, 11 artisans and galleries, 10 gifts and clothing, 6 non for profit, 15 restaurants and 3 transportation businesses were selected using a random number table within the strata. The accommodation and activities divisions were additionally stratified into specific types; accommodation included B&B's (28), cabins (3), camp grounds (2), hostels (2), hotels (13), private (9) and rentals (18), and activities include fishing (7), marine/recreation (20) and spa/massage (3).

### 6.3.3 Tourist

A nonprobability sampling design was selected for the tourist participant group; therefore a purposive sample was chosen to obtain a representative sample of the population (Frankfort-Nachmias and Nachmias, 1992). Although the method of purposive sampling is subjective, efforts to decrease bias were utilized, which included randomly selecting respondents in the village and district of Tofino, approaching different types of

accommodations to randomly administer surveys to their guests and randomly administering surveys from the Tofino Visitor Information Centre.

## 6.4 Survey Administration

Due to logistics and the relatively small geographic area of Tofino, a drop-off administration technique was selected over other methods. This method allowed the researcher to develop rapport with participants through personal contact, which allowed the participants to ask the researcher any questions they had and the participants had the ability to contact the researcher at any time. The drop-off method allowed the participants to fill out the surveys when they chose to, providing flexibility for the participant, and provided the opportunity for the researcher and participant to discuss the survey following the completion and to discuss topics that were raised by the participant. The survey administration is summarized in Table 6.1 and the following sections provide additional detail for each participant group.

Table 6.1: Survey Administration Summary

Participant Group	Surveys Distributed	Distribution Locations	Surveys Completed
Resident	145	Personal Drop-off Residence Drop-Off Phone	40
Business	142	Personal Drop-off Residence Drop-Off	60
Tourist	90	Personal Administration (Beach and Town) Tofino Visitor Centre Accommodations	29

### 6.4.1 Resident

Surveys were first administered to the residents of Tofino during the summer of 2004, where the researcher personally delivered surveys to the selected participants. A drop-off method was used to personally introduce the researcher and the research topic, and to provide

answers to questions about the project. A letter was included to provide further information on confidentiality, use of research results and contact information, found in Appendix A. When the surveys were delivered, the participant and researcher would arrange a pick-up date for the survey, which ranged from one day to two weeks. If the selected participant was not home on the arranged pick-up date, additional visits would take place due to the geographical extent of Tofino. If no one answered after the second time, the survey and letter were left at the residence with the local contact information. In order to determine if the surveys reached the intended participant, the researcher phoned to verify if the survey was received.

A total of 68 surveys were personally delivered, where eight selected participants refused. An additional two selected residences were vacation rentals and another three participants were previously sampled in the business participant group. Following the initial field season, ten additional surveys were collected by contacting participants by telephone (where no one was present during the field season), where the survey was mailed out with a stamped return envelope. A total of 40 resident surveys were obtained. Therefore, assuming that 145 surveys had reached the sample population, the response rate was 28%. Residents were extremely busy during the summer season with work, which resulted in many selected participants not being available during the daytime when the drop-offs most frequently occurred.

Additionally, the summer months are common times for vacations, which further diminished the chances of personally contacting residents. The main disadvantage to the drop-off method was not refusal, but of collecting the surveys at later times. Pick up times would be arranged with the participants and upon the specified return date some participants did not remember to fill them out, resulting in another arranged pick-up date, which is a

common problem associated with drop-off surveys (Frankfort-Nachmias and Nachmias, 1992).

#### **6.4.2 Business**

A similar method for administration was followed for the business participant group, where surveys were personally delivered and picked up. Before the field season began an email was sent to all members of the Tofino Chamber of Commerce briefing them about the research and provided contact information for further information, found in Appendix B. Once the researcher arrived in Tofino, a meeting with the other business association, the Tofino Business Association, was scheduled where an email from the president was sent out to relevant members. Surveys were either directly administered to the owner/manager of the selected business or were left with an employee to give to the owner/manager. The summer tourism season allowed for easier administration as all businesses were open, but as a result pick-up times were considerably longer and ranged from one day to one month due to the busy nature of the summer tourism season.

A total of 115 businesses were personally contacted, from this total 15 participants refused with two indicating that they were not able to fill out an English survey. From the sampling frame, four businesses had recently closed their business and four business owners were previously sampled, with a total of 142 surveys being delivered. A total of 60 business surveys were collected. A response rate of 42% was achieved. A common problem, as experienced with the resident participant group, was the arranged pick-up of the surveys, when participants indicated on the scheduled return that they 'haven't gotten around to it yet'.

### **6.4.3 Tourist**

In order to target both day-trip and overnight tourists, two methods of survey administration were used. To target day-trippers, tourists were approached randomly in the village and district of Tofino, focusing on points of interest that included wharfs and lookout spots within the town, and the beaches in the district. To target overnight visitors, different accommodation businesses were approached to randomly distribute surveys to their guests. Each accommodation type was represented, but only a small number of surveys were collected through this method. To represent all types of visitors, surveys were additionally distributed at the Tofino Visitor Centre; a minimal amount were collected through these means as visitors coming to the centre were predominantly arriving in Tofino and arranging pick-up times was cumbersome. Overall a total of 29 tourist surveys were collected. The tourists who were approached were interested in the research, but many felt that they were unable to fill out a survey because they believed they had limited knowledge about the area and the associated issues, as many were only in Tofino for a short period of time, which was the main disadvantage of the survey administration method.

### **6.5 Survey Design**

The full survey instruments for the resident, business and tourist participant groups are found in Appendices C, D and E, respectively. Although each survey was directed to an individual stakeholder group, all three surveys had common themes that could be compared and discussed (Table 6.2).

Table 6.2: Common Themes in the Survey Instruments

Theme	Participant Groups
1. Impacts of Tourism	Resident, Business, Tourist
2. Activities in Tofino	Resident, Tourist
3. Image Comparison	Resident, Business, Tourist
4. Tourism Seasonality and Development	Resident, Business, Tourist
5. Tourism Space	Resident, Business, Tourist
6. Demographics	Resident, Business, Tourist

Following Fredline (2000), the opening page (Section A) of the survey contained four open-ended questions. It was hoped these questions would be answered at the beginning so following questions would not bias the participants' answers. The first question asked the stakeholders to write down the first word that came to mind when they thought of tourism in Tofino; the second question asked why the participants reside, operate or chose to visit Tofino. The two remaining questions were directed towards identifying positive and negative impacts associated with tourism in Tofino; multiple responses were allowed in order to compare the qualitative responses with the subsequent quantitative responses in Section B of the resident and business surveys. The following portions of the survey consisted of close-ended questions, which required less effort from the participants and allowed for easier comparison between stakeholder groups.

Section B of the resident and business surveys consisted of a series of positive and negative impact statements associated with tourism, which were adapted from Fredline (2000). A similar section of negative impacts associated with tourism were used in the tourist survey, which were adapted from a survey performed by R.B. Rollins & Associates (1998). In Section B, the resident and business participants were first asked to indicate the direction of change of the impact as a result of tourism (positive/negative, increased/decreased or no change), and secondly how they perceived this impact to affect their personal lives and the

community of Tofino. The personal and community effects were measured on 7-point Likert scales, with the middle point indicating 'no effect', as used by Fredline (2000).

Following the impact statements, the resident and tourist survey instruments asked the participants to indicate what types of activities they normally perform and which activities they performed during their visit to Tofino, respectively. The list of activities used in the surveys was adapted from the Clayoquot Sound Recreation and Tourism Survey (Rollins & Associates, 1998) and the Community Values Survey (White/Barton Research Associates, 1991). For the resident stakeholder group, an additional question asked how tourism affected their normal activities during the summer months and for the tourist stakeholder group two additional questions asked how satisfied/dissatisfied were they with the variety of activities and their overall satisfaction of their visit to Tofino on 5-point Likert scales.

The image comparison section in all three surveys was used to identify preferences and the acceptability of different levels of use. The measurement method is normally performed on the visiting population to a tourism destination to assess psychological capacity through acceptable amounts of crowding, but was additionally included in the resident and business surveys for comparative purposes. In order to assess psychological capacity in the research project, a series of computer-edited photographs were developed as a visual approach to measure crowding norms, as performed by Manning *et al.* (2002). Two series of photographs were manipulated, a beach scene and a downtown scene, to visually represent increasing levels of use. First, participants were asked to indicate the acceptability of each photo on a 9-point Likert scale. Four tailored questions followed each photo series, asking participants to select individual photos for different preferences of use.

Common to all three surveys was the tourism development section, where stakeholders were asked to indicate how much they would support or oppose future tourism developments in Tofino, measured on 5-point Likert scales. The list was adapted from the Community Values Survey of Tofino (White/Barton Research Associates, 1991) in order for comparison.

Additionally in the resident and business instruments, a question about tourism seasonality was posed, where participants were asked to indicate on a 5-point Likert scale, ranging from very low to very high, how they perceived the relative number of tourists for each month of the year.

Mapping tourism space was the following section for all three instruments, which allowed the different stakeholder groups to identify where they perceived tourism within the village and district of Tofino. The participants were asked to draw boundaries on maps that represented 'high' concentrations of tourists and 'other' concentrations of tourists, following a methodology performed by Keller (in progress). The described approach was applied in the resident and business surveys, whereas the tourist participants were asked to identify where they visited and any memorable locations during their visit to Tofino. The mapping exercise was used to describe and compare various stakeholders' perceived tourism space.

The final section of the survey instruments collected demographic information for each stakeholder group, which in some instances were used as independent variables in data analysis. The last pages of the survey allowed the participants to write any additional comments they had about the survey, and if they desired, they could provide their contact information to be informed of the research findings.

A pilot test of 15 participants was performed to determine if the format of the surveys was clear and to determine the approximate times needed to complete each survey. Pilot surveys were administered in spring 2004 to grad students, professors, and to residents and business owners in Tofino. Although minor changes resulted, the pilot surveys distributed in Tofino were able to be used in the final data analysis.

## **6.6 Survey Data Analysis**

In order to address the objectives of the research project, to determine if tourism carrying capacity has been exceeded in terms of physical, psychological and social capacities, and where perceived tourism space exists in Tofino, a number of analyses were performed using data from the collected surveys.

Descriptive statistics were used to describe the participants of the surveys and to provide a general overview of responses collected from the surveys. The descriptive analyses addressed whether physical and psychological carrying capacity had been exceeded, by comparing relative numbers of accommodation to the estimated numbers of visitors for physical capacity, and through preferences of use and standards of quality for psychological capacity. A compiled listing from the business sampling frame was used to obtain information on the approximate number of people Tofino could accommodate on a given day, numbers were collected through administered surveys, researching websites and emailing businesses that didn't provide this information through either means.

Social carrying capacity was examined by performing a two-step cluster analysis to determine groupings of resident and business participants. From exploring multiple cluster solutions, a

three-group cluster solution was used to describe the perceptions of tourism, 'Lovers' of tourism, 'Haters' of tourism and the 'In-Betweeners'. A series of chi-square tests were performed to determine if cluster membership was based on selected independent variables, including years of residency/operation, age, gender, whether they owned or rented their residences and whether they were involved in the tourism industry. Logistic regression was additionally explored to determine if significant independent variables could predict cluster membership.

To further supplement the findings from the descriptive and multivariate statistics used to determine physical, psychological and social carrying capacity, a qualitative analysis was performed on the opening page of the collected surveys. The questions asked the participants to write down the positive and negative impacts or features of tourism in Tofino, which provided insight of the influences that may affect how participants perceive tourism in Tofino. The qualitative responses were compared with the quantitative responses in the following survey sections to determine if both methodologies found similar results.

To address perceived tourism space, the collected maps were scanned and entered into a Geographic Information System (GIS) platform to analyze. All maps were rasterized (converted from vector information into raster/pixel information) and were added together to produce resulting frequency maps that identified areas in Tofino where tourists visited and where residents and businesses perceived tourists to go. Municipal information was used to address actual and functional tourism space, by delineating the land use boundaries of tourism in Tofino and describing the activities that were performed within the defined areas.

### **6.6.1 Discussion**

The combination of the quantitative data of the descriptive and multivariate findings, the qualitative data collected through open-ended responses and the spatial analyses performed using GIS, addressed the objectives of the research project by determining whether tourism carrying capacity had been exceeded and identifying the tourism space of Tofino. A number of methods were employed to compare and contrast research findings to determine the overall perceptions of the residents, businesses and tourists of Tofino.

### **6.7 Summary**

The design of the research began with the extensive literature review that examined methodologies previously used to assess the concepts of tourism carrying capacity and tourism space. From this, the best means of collecting the information for the tourism destination of Tofino was explored. As tourism has impacts on the people, infrastructure, economics and the environment, a general overview of the present situation in Tofino was sought. First, it was found desirable to collect information from multiple stakeholder groups, which included residents, local tourism businesses and tourists, where it was hoped to compare the perceptions of tourism of each group, as tourism affects their lives in different ways. Due to the multiple stakeholder groups, multiple sampling frames, sampling methods, survey administration and survey designs were used to address specific issues particular to the participant group. Although each stakeholder group was unique, the survey design allowed common themes to be examined and compared, which provided a general overview of how stakeholders perceive tourism in Tofino, British Columbia.

As Tofino continues to grow as a tourism destination, determining how the stakeholders perceive the resulting changes is important for preserving the values that attracted residents, businesses and tourists alike. Identifying how tourism is presently perceived is a stepping stone for further analysis of the west coast community, which could be used in comparative analyses performed in years to come. In the following two chapters, how residents, businesses and tourists perceive tourism in Tofino is investigated, first in terms of tourism carrying capacity using descriptive and multivariate statistics and qualitative data, and secondly in terms of tourism space analyzed using GIS capabilities.

## CHAPTER SEVEN

### ATTITUDES TOWARDS TOURISM

#### 7.0 Introduction

The following two chapters present the research findings per the methodology used to address the research objectives and goals. Chapter Seven examines the attitudes towards tourism quantitatively through a series of descriptive and multivariate statistics that address psychological, physical and social carrying capacity, and qualitatively by identifying common themes which are compared with the quantitative data collected. Chapter Eight examines the tourism space of Tofino, where GIS analyses are performed to determine common and unique locations identified by the participant groups. Chapter Seven begins by describing the characteristics of the three surveyed groups and summarizes the attitudes towards tourism for each section of the survey. Table 7.1 presents a summary of the results chapters.

Table 7.1: Outline of Results Chapters

Section/ Chapter	Objective	Analysis	Participant Group
7.1	1. To provide a description of the survey participants	Descriptive Statistics	Resident, Business, Tourist
7.2	1. To provide general overview of responses. 2. To determine the Psychological CC of Tofino through perceptions of crowding. 3. To determine the Physical CC of Tofino in regards to accommodation. 4. To examine the numbers of visitors to Tofino over a time series.	Descriptive Statistics	Resident, Business, Tourist
7.3	1. To identify groups who have varying perceptions of tourism in Tofino, addressing Social CC. 2. To profile the characteristics of individual clusters based on a number of independent variables. 3. To determine the importance of variables in predicting cluster membership.	Cluster Analysis Chi-square Analysis Logistic Regression	Resident, Business
7.4	1. To further explore common themes. 2. To compare with quantitative findings.	Qualitative Analysis	Resident, Business, Tourist
8	1. To identify locations of Perceived Tourism Space.	GIS Analysis	Resident, Business, Tourist

## **7.1 Participant Characteristics**

The characteristics of each participant group provide useful insight in the subsequent analyses of attitudes towards tourism in Tofino. In the last section of the surveys the participants were asked to provide demographic information that was specific for each stakeholder group.

### **7.1.1 Resident**

The resident participant group (n=40) indicated that they have resided in Tofino from a range of 1 to 69 years, with a mean of 17 years of residency (SD =18.1) All participants were permanent residents. Of the resident participant group 53% owned of their residences, while the remainder rented. In regards to gender, the participants were split - 55% female and 45% male, where 7.5% residents were under 25 years old, 17.5% were 26 to 35 years old, 27.5% were 36 to 45 years old, 35% were 45 to 65 years old, and 12.5% were over 65 years of age. One of the independent variables used in the analysis; whether the participant was involved in the tourism industry in Tofino, was skewed towards 'yes' (57.5%). The resident participants were predominately employed within the tourism industry (32.5%), followed by professionals and retirees (15%), craftsperson (7.5%), fishing, logging, aquaculture industry (5%), and trades person and housewife/househusband (2.5%), with the remaining 5% falling into the 'other' category.

### **7.1.2 Business**

The business participant group (n = 60) was split amongst the types of tourism businesses; where 55% were accommodations, 17% restaurants, 13% activities, 5% artisans and galleries, gifts and clothing, 3% non for profit and 2% transportation. The accommodation tourism

businesses were further stratified into 18% hotels, 17% B&B's, 15% rentals, 12% private and 3% camp grounds, and the activities were stratified into 62.5% marine/recreation, 25% spa/massage and 12.5% fishing. The business participants have been in operation from a range of under one year to 40 years, with an average of ten years of business operation ( $SD = 8.7$ ). In regards to Tofino business associations, 82% of participants were members of the TCOC, 16% were members of the TBA, and 11% of participants were not members of either business association. With the different types of tourism businesses being sampled, employment ranged from 0 to 75 for full-time employees and 0 to 25 for part-time employees for a twelve month period, with higher employment during the summer tourism season. The majority (60%) of participants indicated that they switched careers to enter into the tourism industry in Tofino and that they plan for future growth. When asked what was the maximum number of people that your business can provide service to per day, the responses ranged from 4 to 1000, with a mean of 174 people ( $SD = 254.9$ ), which was dependent upon the type and size of business. In regards to marketing, 87.5% of participants advertised through the Chamber of Commerce/Tourism Centre and the Internet, followed by newspaper/magazines and 'other' methods at 50%. 'Other' methods included brochures on BC Ferries, publications by Tourism British Columbia, B&B directories, and associated maps and travel books. Some participants indicated that they did not market at all (5%) and only 4% advertised by television.

### **7.1.3 Tourist**

The bulk of tourist participants ( $n = 29$ ) were from British Columbia (34.5%), with 70% of the 34.5% coming from mainland British Columbia; participants were also from other Canadian provinces, particularly Alberta (31%). International tourists were from the United

States (2%) and Europe (3%), in particular England, Ireland, and Germany. When asked how long they were planning on staying in Tofino, the number of days ranged from 1 to 21, with an average of four days ( $SD = 3.9$ ). The majority of the tourist participant group stayed overnight (86%), and of these participants 67% stayed in their first choice of accommodation. Just over 40% of the participants were first time visitors to Tofino and all but one indicated that they would return (one 'maybe' response). For visitors who had previously visited Tofino, the number of times they had visited was between 1 and 20, with an average of six previous visits ( $SD = 6.03$ ). Twenty-four percent of the participants traveled by themselves or traveled in groups of four (27.6%), with an average of three people per party. Gender was split, 52% female and 48% male participants, and all age categories were represented, with the majority of participants falling between the age categories of 26 to 35 (21.4%) and 46 to 65 years old (43%). Only one participant was involved in the tourism industry in their home community. The majority of sampled tourists were professionals (55%).

## 7.2 Descriptive Statistics

This section summarizes the responses of the three participant groups and follows the sequence of survey themes introduced in the previous chapter. The research questions concerning psychological and physical carrying capacity are examined for each appropriate theme, which provides a basis for comparison with the qualitative analysis described in a later section. All resulting frequency tables are found in Appendix F.

### 7.2.1 Impacts of Tourism

For this theme, the tourist participant group rated how serious stated problems were during their visit to Tofino on a 5-point Likert scale ranging from 'not a problem' to a 'serious problem', including a 'not sure' option. The resident and business participant groups rated the direction and magnitude of change of potential impacts adapted from Fredline (2000) in a series of three-part questions. Part A questions consisted of two formats, one indicating whether the direction of change has increased/decreased or is better/worse (Figure 7.1), or whether the participant agrees/disagrees with the statement (Figure 7.2). All questions in Part A had the options of 'no change' and 'don't know' as possible selections. Although the formats were different, the results of the two types of questions were combined as the 'yes' selection is comparable to the direction of change associated with the impact statement and the 'no' selection is comparable to the 'no change' selection (Fredline, 2000).

Figure 7.1: Example of Questions with Selectable Direction

1a <b>Because of Tourism, the number of tourists has....</b>	1 <input checked="" type="checkbox"/>	Increased
	2 <input type="checkbox"/>	Decreased
	3 <input type="checkbox"/>	No change (go to 2a)
	4 <input type="checkbox"/>	Don't know (go to 2a)

Figure 7.2: Example of Questions with Non-Selectable Direction

1a <b>Because of Tourism, the number of tourists has increased</b>	1 <input checked="" type="checkbox"/>	Yes
	2 <input type="checkbox"/>	No (go to 2a)
	3 <input type="checkbox"/>	Don't know (go to 2a)

Part B and Part C of the questions measured the magnitudes of the participants' perceptions of how the impact statement has affected their personal quality of life (Part B), and how it has affected the community as a whole (Part C), as previously performed by Fredline (2000). Both parts were measured on a 7-point Likert scale ranging from -3 (very bad) to +3 (very

good), with the middle of the scale (0) indicating 'no effect'. Part B responses were the basis for a cluster analysis described later in this chapter.

Figure 7.3: Example of Part B and C Questions

	Very Bad		No Effect				Very Good
b. What effect does this have on you personally?	-3	-2	(-1)	0	1	2	3
	Very Bad		No Effect				Very Good
c. How does this affect Tofino as a whole?	-3	-2	(-1)	0	1	2	3

### 7.2.2 Resident Impact Statements

In Tables 7.2 and 7.3, the frequencies for Part A of the resident and business participant groups are presented, and the means of Part B (personal effects) and Part C (community effects) are included. The means are calculated from the participants' responses of the effects (personal and community) of each tourism statement, which could range from -3 to +3. Although calculating the means of ordinal data violates a statistical assumption, the average provides insight into what tourism impacts are affecting personal quality of life and the community of Tofino. Following Fredline's (2000) interpretations, a mean greater or equal to  $\pm 1$  indicates a 'minor' effect and mean greater or equal to  $\pm 2$  indicates a 'moderate to serious' effect for each tourism statement. For coding purposes, participants who answered the 'no change' option in Part A were coded as 'no effect' in Parts B and C, while those who responded 'don't know' in Part A were coded as missing in Parts B and C, following Fredline (2000).

In Table 7.2 the majority of community means were higher than personal means, indicating participants perceived greater impacts on the community than on personal quality of life.

Additionally, the resident participants indicated that half of the impact statements had a minor effect on the community and themselves, which is portrayed by community and personal means greater than  $\pm 1$ ; a total of 15 statements for the personal means and 22 statements for the community means were greater than  $\pm 1$ .

Personal means greater than  $\pm 1$  for the resident sample were found in six positive impacts and 9 negative impacts associated with tourism in Tofino. The positive statements included employment, the economic spin-offs from tourism and the ability to meet new people, all having significant benefits to the participants' personal quality of life. The negative statements included the degradation to the environment, traffic congestion, crime, excessive noise and the disruption/division of the community that can be summarized as having minor to moderate harmful effects on the individuals of Tofino.

A total of ten positive and twelve negative impact statements fell within the  $\pm 1$  range for the community means. Positive statements overlapped with statements identified from the personal means with further emphasis on economic gains and the enhancement of entertainment and hospitality in Tofino. Negative statements overlapped with ones described in personal means, but also included property values, rental costs and the availability of parking. Traffic congestion was the only variable that fell within the  $\pm 2$  range for the resident participant group, specifying that traffic congestion has moderate to serious effects on the community of Tofino.

Table 7.2: Resident Frequencies and Personal and Community Means

Variable	Increased/ Yes/Better	Decreased /Worse	No change/ No	Don't know	*Personal Mean	*Community Mean
1. Because of Tourism, employment opportunities in Tofino have ...	39	1	0	0	1.58	1.49
2. Because of Tourism, trade for local businesses in Tofino has ...	34	1	0	4	1.17	1.62
3. Because of Tourism, housing property values and rental costs in Tofino have ...	40	0	0	0	-0.57	-1.10
4. Because of Tourism, prices of goods and services in local shops have ...	29	1	8	2	-0.82	-0.61
5. Because of Tourism, local business opportunities have ...	38	0	1	1	0.90	1.76
6. Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	25	0	2	13	1.07	1.58
7. Because of Tourism, damage to the terrestrial environment around Tofino has ...	24	3	9	4	-0.92	-1.23
8. Because of Tourism, damage to the marine environment around Tofino has ...	25	1	8	6	-1.12	-1.41
9. Because of Tourism, litter around the town has ...	27	1	11	0	-1.23	-1.33
10. Because of Tourism, litter around the beach areas has ...	26	0	9	4	-1.63	-1.83
11. Because of Tourism, the appearance of the town is ...	19	9	6	2	0.38	0.67
12. Because of Tourism, life in Tofino is ...	23	5	6	4	0.71	1.19
13. Because of Tourism growth, relationships between tourists and locals are ...	10	15	6	7	-0.03	-0.10
14. Because of Tourism, the pride of local residents of their town has ...	18	8	5	6	0.55	0.63
15. Because of Tourism, traffic congestion has ...	39	0	0	0	-1.95	-2.18
16. Because of Tourism, the facilities available to local residents in Tofino have ...	13	8	15	3	0.03	0.20
17. Because of Tourism, the ease for local residents to use local facilities has ...	1	23	14	2	-0.55	-0.49
18. Because of Tourism, the maintenance of public facilities is ...	18	9	9	4	0.22	0.43
19. Because of Tourism, the range of goods and services available is ...	28	0	11	1	1.03	1.24
20. Because of Tourism, the number of available parking spaces has ...	6	31	3	0	-0.90	-1.44
21. Because of Tourism, crime levels in Tofino have ...	25	0	8	7	-1.30	-1.69
22. Because of Tourism, entertainment opportunities in Tofino have ...	22	0	17	1	0.69	1.11
23. Because of Tourism, rowdy behaviour and/or excessive noise in Tofino has ...	30	0	7	3	-1.35	-1.47
24. Because of Tourism, the quality of life of local residents has ...	12	17	6	3	-0.23	0.06
25. Because of Tourism, the opportunity to meet new people has ...	34		5	1	1.56	1.45
26. Because of Tourism growth, the local community is divided over issues.	35		0	5	-1.15	-1.82
27. Because of Tourism, the local residents' lives are disrupted.	29		6	4	-1.11	-1.32
28. Because of Tourism, the tranquility of Tofino has been disrupted.	35		4	1	-1.47	-1.46
29. Because of Tourism, the local economy has increased.	38		1	1	1.37	1.97
30. Because of Tourism, local residents' hospitality is enhanced.	16		13	11	0.64	1.00
31. Because of Tourism, too many people visit Tofino.	19		18	3	-0.81	-0.72

(\*Means do not include all participants)

Table 7.3: Business Frequencies and Personal and Community Means

Variable	Increased/ Yes/Better	Decreased /Worse	No change/ No	Don't know	*Personal Mean	*Community Mean
1. Because of Tourism, employment opportunities in Tofino have ...	58	0	0	1	1.60	1.70
2. Because of Tourism, trade for local businesses in Tofino has ...	54	0	4	1	1.67	2.15
3. Because of Tourism, commercial property values and rental costs in Tofino have ...	59	0	0	0	0.19	-0.78
4. Because of Tourism, prices of goods and services in local shops have ...	39	0	12	7	-1.04	-0.47
5. Because of Tourism, local business opportunities have ...	52	2	2	3	1.57	2.09
6. Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	43	0	4	12	1.66	1.67
7. Because of Tourism, damage to the terrestrial environment around Tofino has ...	38	4	7	10	-0.82	-1.11
8. Because of Tourism, damage to the marine environment around Tofino has ...	31	3	14	11	-0.69	-0.91
9. Because of Tourism, litter around the town has ...	37	0	15	7	-1.00	-1.32
10. Because of Tourism, litter around the beach areas has ...	42	1	10	6	-1.27	-1.47
11. Because of Tourism, the appearance of the town is ...	33	8	14	3	0.64	1.02
12. Because of Tourism, life in Tofino is ...	41	5	9	4	1.25	1.56
13. Because of Tourism growth, relationships between tourists and local businesses are ...	30	4	14	10	0.96	1.00
14. Because of Tourism, the pride of local businesses of their town has ...	42	1	4	11	1.61	1.98
15. Because of Tourism, traffic congestion has ...	57	0	3	0	-1.69	-1.98
16. Because of Tourism, the facilities available to local businesses in Tofino have ...	26	9	19	5	0.48	0.58
17. Because of Tourism, the ease for local residents to use local businesses has ...	11	38	7	1	-0.61	-0.44
18. Because of Tourism, the maintenance of public facilities is ...	21	16	14	6	0.43	0.52
19. Because of Tourism, the range of goods and services available is ...	38	3	11	4	1.17	1.36
20. Because of Tourism, the number of available parking spaces has ...	6	43	6	2	-1.16	-1.51
21. Because of Tourism, crime levels in Tofino have ...	31	0	11	15	-1.05	-1.48
22. Because of Tourism, entertainment opportunities in Tofino have ...	38	1	17	1	0.93	1.28
23. Because of Tourism, rowdy behaviour and/or excessive noise in Tofino has ...	41	0	10	6	-1.04	-1.35
24. Because of Tourism, the quality of life of local residents has ...	29	17	7	3	0.57	0.53
25. Because of Tourism, the opportunity to attract customers has ...	57		1	1	2.07	2.33
26. Because of Tourism growth, there are too many competing businesses.	19		34	6	-0.23	-0.14
27. Because of Tourism, it is difficult to find housing for staff during the summer months.	58		0	1	-1.10	-2.30
28. Because of Tourism, the tranquility of Tofino has been disrupted.	48		8	3	-0.91	-1.30
29. Because of Tourism, the local economy has increased.	57		0	2	2.04	2.36
30. Because of Tourism, local businesses hospitality is enhanced.	34		14	11	1.35	1.57
31. Because of Tourism, too many people visit Tofino.	18		37	3	-0.11	-0.42

(\*Means do not include all participants)

### 7.2.3 Business Impact Statements

The majority of the business participant group indicated that the community of Tofino was affected more than individual businesses. A total of 18 personal and 22 community means were greater than  $\pm 1$ ; for the personal means ten were positive and eight were negative statements, and for the community means thirteen were positive and nine were negative. All statements were similar to those highlighted by the resident participant group, which are described in the next section. Five statements fell between the  $\pm 2$  range which indicates moderate to serious effects on tourism in Tofino. For individual businesses and the community as a whole, the opportunity to attract new customers and the increase of the local economy were identified as major benefits, and the lack of staff housing was identified as a major disadvantage to the community as a whole.

### 7.2.4 Comparison and Discussion

The resident and business participant groups were similar, as both placed more weight on the positive and negative community effects than on the effects on personal quality of life. The difference between participant groups was the majority of means were more positive for the business participant group; where the business participants had higher means for positive impact statements and lower means for negative impact statements. It could be argued that tourism is the viable economic industry in Tofino; it is intuitive that businesses would not operate if the benefits did not outweigh the negative effects. The large differences of means between participants groups are presented in Table 7.4.

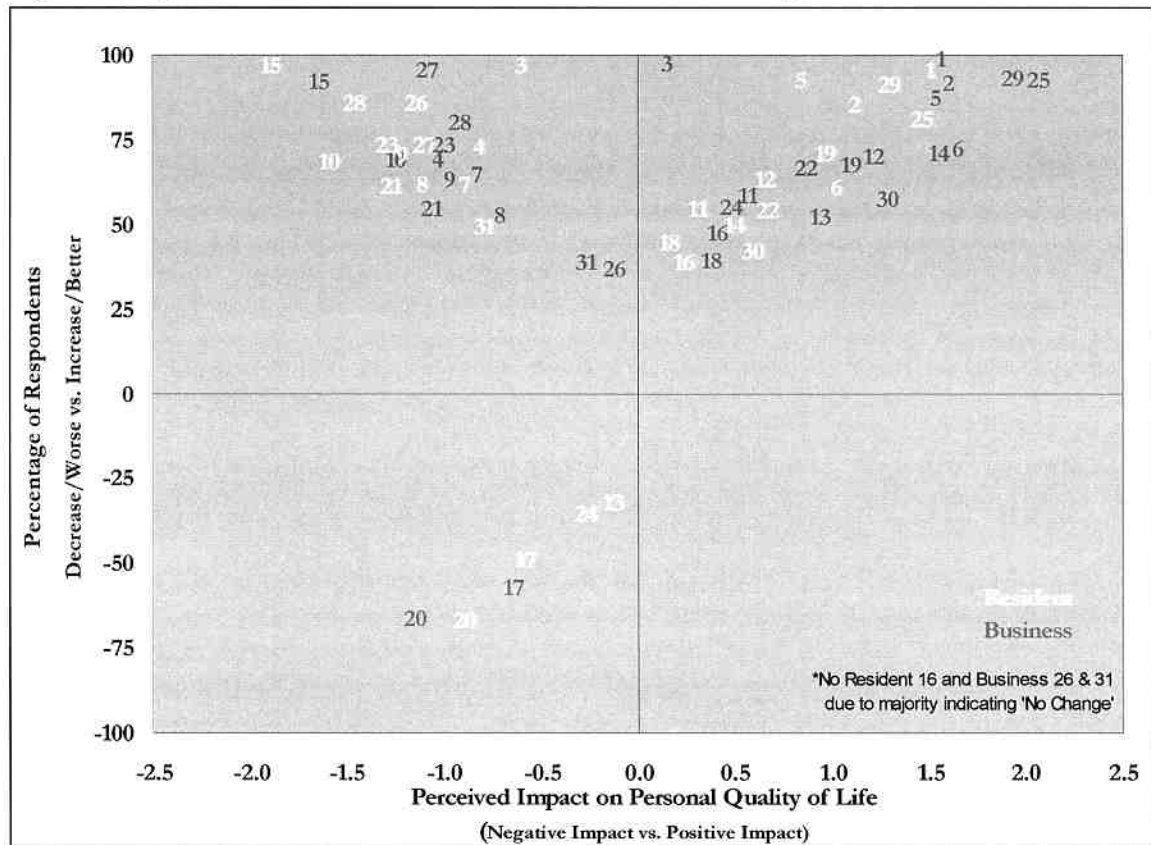
Table 7.4: Differences in Means between Resident and Business Participants

Variable	Personal			Community		
	Res.	Bus.	Diff.	Res.	Bus.	Diff.
14. Because of Tourism, the pride of local residents/businesses of their town has ...	0.55	1.61	<b>1.06</b>	0.63	1.98	<b>1.35</b>
13. Because of Tourism growth, relationships between tourists and locals are ...	-0.03	0.96	<b>0.99</b>	-0.10	1.00	<b>1.10</b>
24. Because of Tourism, the quality of life of local residents has ...	-0.23	0.57	<b>0.80</b>	0.06	0.53	<b>0.47</b>
3. Because of Tourism, housing/commercial property values and rental costs in Tofino have ...	-0.57	0.19	<b>0.76</b>	-1.1	-0.78	<b>0.32</b>
30. Because of Tourism, local residents'/businesses hospitality is enhanced.	0.64	1.35	<b>0.71</b>	1.00	1.57	<b>0.57</b>
31. Because of Tourism, too many people visit Tofino.	-0.81	-0.11	<b>0.70</b>	-0.72	-0.42	<b>0.30</b>
5. Because of Tourism, local business opportunities have ...	0.90	1.57	<b>0.67</b>	1.76	2.09	<b>0.33</b>
29. Because of Tourism, the local economy has increased.	1.37	2.04	<b>0.67</b>	1.97	2.36	<b>0.39</b>
6. Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	1.07	1.66	<b>0.59</b>	1.58	1.67	<b>0.09</b>
28. Because of Tourism, the tranquility of Tofino has been disrupted.	-1.47	-0.91	<b>0.56</b>	-1.46	-1.30	<b>0.16</b>
12. Because of Tourism, life in Tofino is ...	0.71	1.25	<b>0.54</b>	1.19	1.56	<b>0.37</b>
2. Because of Tourism, trade for local businesses in Tofino has ...	1.17	1.67	<b>0.50</b>	1.62	2.15	<b>0.53</b>
8. Because of Tourism, damage to the marine environment around Tofino has ...	-1.12	-0.69	<b>0.43</b>	-1.41	-0.91	<b>0.50</b>

The largest difference between the participant groups was for variable 14; where both groups perceived pride of their town as a beneficial impact, with the business participant group more than doubling the residents' means. The increased pride for the business participant group may relate to the ability to share their community with visitors to Tofino and receiving positive feedback from the tourists during their visit. In the following two statements in Table 7.4, the resident participant group perceived that relationships between visitors and locals, and the quality of life have negatively affected both personal quality of life and the community, whereas the businesses' perceived these as beneficial, which may be related to the businesses dealing directly with the visiting population and that they perceive tourism as improving their quality of life. The remaining statements were the same for both participant groups in regards to positive and negative means, with higher emphasis on beneficial impacts and less emphasis on negative impacts for the business participant group.

In Figure 7.4, the proportion of participants perceiving a change in Part A of the impact statements is plotted against the magnitude of how much personal quality of life has been affected.

Figure 7.4: Quadrants of Personal Means vs. Direction of Change



(Adapted from Fredline, 2000)

The majority of impact statements fall within the upper quadrants, indicating that participants perceived an increase in both positive and negative tourism impacts. The upper right quadrant has the most personal means, specifying that participants perceive tourism to have increasing positive effects on personal quality of life, mainly a result of the business participant group. The resident participant group perceived an equal number of increasing negative and positive impacts on their personal quality of life, whereas the business

participant group perceived 17 positive impacts and 10 negative impacts on their personal quality of life. No impact statements fell within the lower right quadrant, where no statements have decreased with positive effects on personal quality of life.

For three impact statements, the differences in participant groups' perceptions were apparent as the personal means were in different quadrants. In the lower left quadrant, where participants perceive a decrease in the impact which has negative personal effects, both participant groups agreed that statements 17 (ease of locals to use facilities) and 20 (number of available parking spots) had negative effects on personal quality of life. The resident participant group perceived that relationships between tourists and locals (13) and the quality of life for local residents' (24) have also resulted in negative personal effects. The increased property values and renting costs (3) statement fell in two quadrants, where businesses perceived increasing property values as beneficial when residents perceived this as damaging.

Table 7.5 presents the majority of participants who indicated that there was 'No change' in the impacts on the community and personal quality of life. Each statement is related to one participant group, represented by bold lettering. For the business participant group, they perceived that there were not too many people visiting Tofino and not too many competing businesses. Residents did not perceive a change in the facilities made available as a result of tourism. In some tourist destinations businesses contribute to local infrastructure in order to 'give back' to the community, which also provides more services to the visiting population. There were no impact statements that had a majority of 'Don't know' responses by either

participant group. Further analysis of the relationships of the resident and business participant groups are explored in the cluster analysis section.

Table 7.5: Majority of 'No change' Impacts

Variable	No Change (%)		Personal Mean		Community Mean	
	Res.	Bus.	Res.	Bus.	Res.	Bus.
31. Because of Tourism, too many people visit Tofino.	45.0	<b>63.8</b>	-0.81	-0.11	-0.72	-0.42
26. Because of Tourism growth, there are too many competing businesses.	N/A	<b>57.6</b>	N/A	-0.23	N/A	-0.14
16. Because of Tourism, the facilities available to local residents in Tofino have ...	<b>38.5</b>	32.2	0.03	0.48	0.20	0.58

### 7.2.5 Tourist Perceived Problems

Table 7.6 summarizes how tourists perceived problems that are associated with tourism during their visit to Tofino; where it is concluded that the majority of problems were 'not a problem' (<2). The tourist participant group identified six problems that had a 'slight' impact on their experience in Tofino (<3): too much traffic congestion (B), lack of available low-budget tourist accommodation (D), lack of public facilities on the beaches (G), environmental damage (M), too much tourist development (P) and expensive pricing (Q). The major problem associated with tourism in Tofino was expensive pricing (Q), which was considered a 'moderate problem' by the tourist participants. No 'serious problems' were identified by the tourist participant group. Participants could also select a 'not sure' option, in efforts to allow participants with limited experience in Tofino to complete the surveys, where one problem, the lack of community facilities (E) was identified, which could relate to the similar perceptions of the resident participants.

Table 7.6: Tourist Perceptions of Problems Associated with Tourism

	Problem	Not a Problem 1	Slight Problem 2	Moderate Problem 3	Serious Problem 4	Not Sure 5	*Mean
A	Limited road access into Tofino	15	8	4	2	0	1.76
B	Too much traffic congestion	12	5	8	4	0	2.14
C	Lack of available tourist accommodation	13	7	3	4	2	1.93
D	Lack of available low-budget tourist accommodation	6	9	7	5	2	2.41
E	Lack of community facilities	9	4	5	0	10	1.78
F	Lack of public facilities downtown	11	9	2	0	7	1.59
G	Lack of public facilities on the beaches	8	13	2	1	4	1.83
H	Waiting for public facilities	16	4	1	0	8	1.29
I	Dirtiness of public facilities	12	3	3	1	10	1.63
J	Garbage/litter in downtown	19	5	3	1	1	1.50
K	Garbage/litter on the beaches	14	4	5	1	4	1.71
L	Garbage/litter in the water	17	6	2	1	3	1.50
M	Environmental damage	9	5	3	4	6	2.10
N	Impolite local residents	22	3	2	0	2	1.26
O	Crime/Vandalism	16	1	1	1	8	1.32
P	Too much tourism development	9	7	6	4	3	2.19
Q	Expensive pricing	2	9	13	3	2	2.63
R	Wet weather	11	10	8	0	0	1.90
S	Too many other people downtown	12	7	7	1	2	1.89
T	Too many other people on the beach	16	4	2	1	5	1.48
U	Too many other recreational boaters	14	5	2	1	7	1.55
V	Boat noise	18	4	2	1	4	1.44
W	Airplane noise	15	6	4	1	3	1.65
X	Rowdy behaviour	20	3	2	0	4	1.28

(\*Mean calculated without 'Not sure' responses)

The sentiments of the tourist participants identified by the series of problems associated with tourism were conclusive with the following open-ended question. Participants were asked to write down the three most serious problems they encountered during their visit to Tofino. The most serious problem specified by the participant group was expensive pricing, followed by too much development and tourists, and the lack of accommodation.

A series of crosstabulations were performed to explore relationships, but due to a small sample size low expected frequencies were experienced, which increases the Type One error. As a guideline, expected values less than five are discouraged; to remedy this one can combine similar data or delete data that is not pertinent to the analysis (Hair *et al.*, 1998). Both methods to increase expected frequencies were preformed to no avail. Setting this aside, only a small number of variables were significant ( $p \leq 0.05$ ) when compared with the

overall satisfaction of their trip (measured on a 5-point Likert scale): first time vs. repeat visitors and whether they were involved in the tourism industry.

### 7.2.6 Activities in Tofino

In this theme, the tourist and resident participant groups were asked what activities they performed during their visit and which activities they normally performed, respectively.

Identifying the activities which were performed by both participant groups may highlight where potential conflicts may occur. Table 7.7 presents the chosen list of activities and the corresponding percentages of tourists and residents that performed the activity.

Table 7.7: Activities Performed in Tofino – Tourists and Residents

Variable	Activity	Tourists (n = 29) (%)		Residents (n =40) (%)	
		Yes	No	Yes	No
A	Beach activity (walking/combing)	100	0	93	7
B	Bird watching	31	69	48	52
C	Camping	24	76	40	60
D	Canoeing	0	100	23	77
E	Day hiking	59	41	68	32
F	Guided tours	21	79	10	90
G	First Nations cultural activity	0	100	20	80
H	Fishing	7	93	60	40
I	Flight seeing	7	93	13	87
J	Motor boating	3	97	48	52
K	Mountain biking	7	93	23	77
L	Overnight hiking	0	100	20	80
M	Photography	69	31	40	60
N	Restaurant dining	69	31	73	27
O	Sailboating	0	100	10	90
P	Scuba diving/snorkelling	0	100	5	95
Q	Sea kayaking	14	86	28	72
R	Shopping	72	28	73	27
S	Surfing	21	79	30	70
T	Whale watching	24	76	25	75
U	Other wildlife watching	21	79	30	70
V	Visit Hot Springs	10	90	33	67
*	Gardening	N/A	N/A	5	95
*	Golfing	N/A	N/A	5	95
*	Logging	N/A	N/A	3	97
*	Volunteering	3	97	N/A	N/A
*	Relaxing	7	93	N/A	N/A

(\* Variables from open-ended 'Other' category)

The table highlights four activities that are performed by both participant groups and the low participation rates for the remainder of the activities. For tourist and resident participants, beach activity had the highest frequency (100/93%), followed by shopping (72/73%), photography (69/40%), restaurant dining (69/73%) and day hiking (59/68%). The remaining activities had particularly low or non-existent participation frequencies. The identified activities have the potential of drawing both tourists and residents to Tofino, but as the numbers of people increase this may result in conflicts between stakeholder groups, which is examined in regards to acceptable levels of use in the following section.

### **7.2.7 Image Comparison**

Although methods of examining acceptable levels of use or crowding are normally performed on the visiting population to assess psychological carrying capacity, a comparison among all participant groups was performed to offer additional insight into the various perceptions of tourism in Tofino. Following a methodology performed by Manning *et al.* (2002), two series of digitally manipulated photographs were created (Figures 7.5 and 7.6) and were used to assess the acceptability of increasing levels of use. For both the beach and downtown settings, a series of four questions were directed to individual participant groups to examine additional standards of quality.

Figure 7.5: Image Comparison – Beach Setting

Photo A



Photo B



Photo C

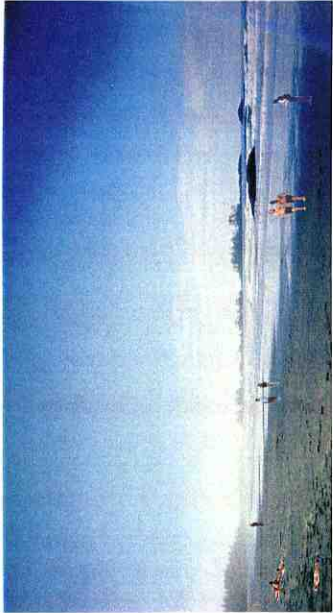


Photo D



Photo E



Photo F



Figure 7.6: Image Comparison – Downtown Setting

Photo A



Photo B



Photo C

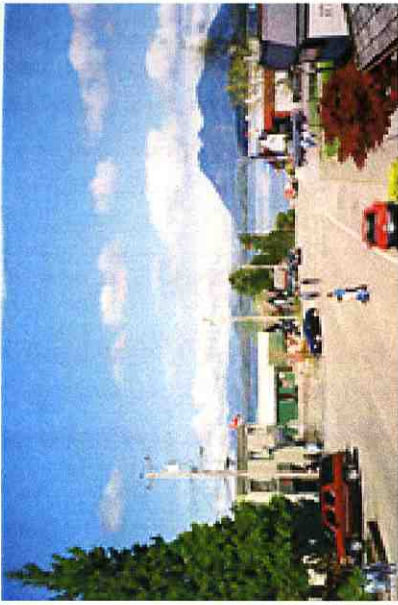


Photo D



Photo E



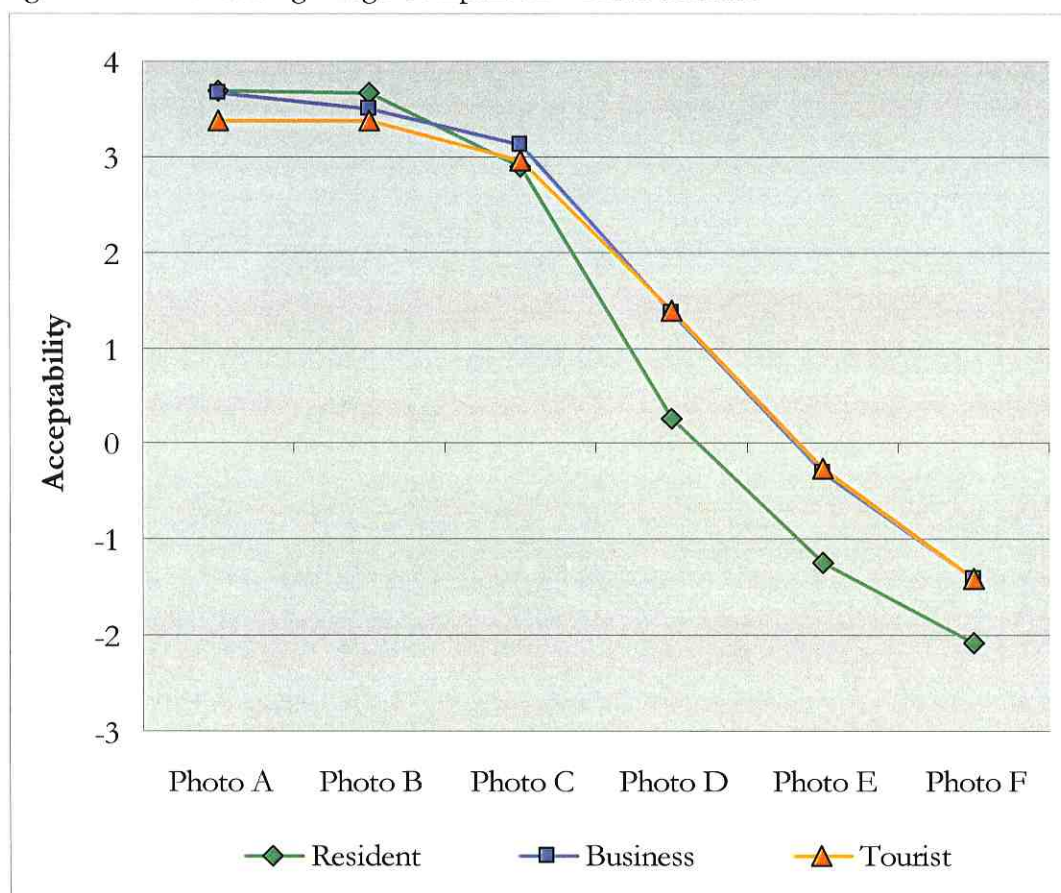
Photo F



Original photo provided by: [www.GoIofino.com](http://www.GoIofino.com)

The use of the term ‘crowding’ was not used in the survey instrument to not introduce bias; therefore ‘acceptability’ came to the forefront. To measure the acceptability of the photographs, a 9-point Likert scale was used that ranged from -4 (very unacceptable) to +4 (very acceptable), with a value of 0 indicating neither acceptable nor unacceptable. The mean responses for each participant group for the beach setting are plotted in Figure 7.7 and for the downtown setting in Figure 7.8.

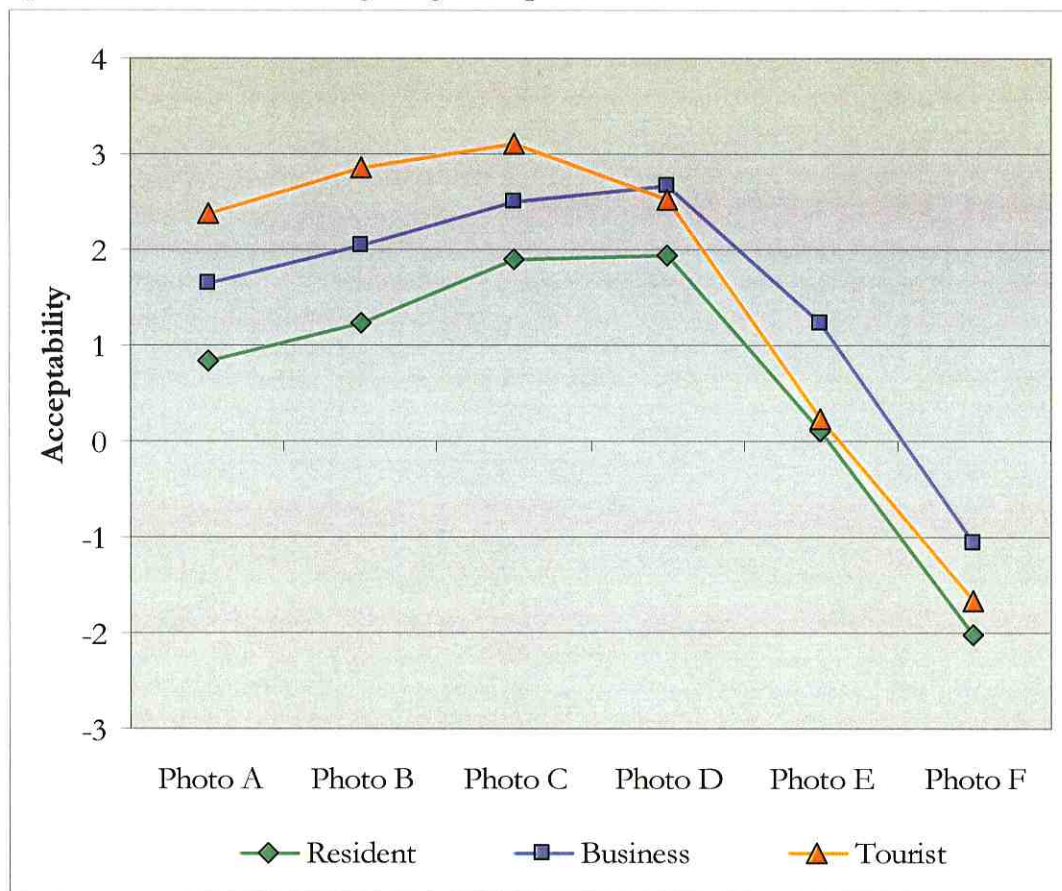
Figure 7.7: Beach Setting Image Comparison – Plotted Means



In Figure 7.7, all participant groups’ means followed an S-shaped curve where low levels of use had high acceptability ratings and higher levels of use had lower acceptability ratings. All participants began with similar perceptions of acceptable levels of use for Photos A, B and

C, but for Photo D the business and tourist participant groups followed an identical curve, whereas the resident participant group deviated below, indicating that residents perceived more unacceptability with increasing levels of use for the beach scene.

Figure 7.8: Downtown Setting Image Comparison – Plotted Means



In Figure 7.8, all curves followed a similar path but differences between participant groups were more apparent. The tourist participants perceived more acceptability for lower levels of use, which may be attributed to visitors desiring the 'small town feel', acceptability then dramatically decreases before the resident and business participant groups. The resident participants perceived more unacceptability with both low and high levels of use, and the business participants perceived more acceptability for all levels of use. The means for the

downtown scene followed a different curve than the beach scene, where low levels of use were not as acceptable as higher levels of use, experienced in Photos A, B and C. Photo D was once again the turning point, where a slight increase for the resident and business participants was experienced and the tourist participants means continued to decrease with each subsequent photo. All the participant groups' means drastically decreased representing unacceptability with the higher levels of use in Photos E and F, indicating that the participants perceived too many people and cars in the downtown scene.

As performed by Manning *et al.* (2002), to assess the quality of participants' experiences various standards of quality were derived and compared. To assess acceptable standards of quality a threshold can be measured where the curve crossed from the acceptable to the unacceptable range (acceptability = 0), as shown in the above figures (Figures 7.7 and 7.8). The threshold represents the acceptable number of people at one time (PAOT) derived by the participant groups means (Manning *et al.*, 2002). Levels of use were known for the beach setting, but as there were cars within the downtown setting determining standards of quality were not as conclusive as the beach setting. For standards of quality to be projected for the downtown setting, two people per car were used as an arbitrary estimate for comparison. Levels of use for each series of photographs are summarized in Table 7.8.

Table 7.8: Image Comparison – Levels of Use (PAOT)

	<b>Beach Setting</b>	<b>Downtown Setting</b>
<b>Photo A</b>	0	0
<b>Photo B</b>	4	18
<b>Photo C</b>	10	30
<b>Photo D</b>	30	40
<b>Photo E</b>	50	50
<b>Photo F</b>	75	75

For the beach setting, the resident participant group perceived a threshold value higher than Photo D, crossing at approximately 34 PAOT. The business and tourist participant groups perceived a threshold value slightly lower than Photo E, having a capacity of approximately 46 and 47 PAOT, respectively. For the downtown setting, the threshold of acceptability for the participant groups fall within the last two photos of the series, indicating that higher levels of use are more tolerable in the downtown setting than in a beach setting. The capacity measurements are similar for the resident and tourist participant groups, with a threshold at approximately 53 and 54 PAOT, respectively. The business participant group had the highest threshold value, also experienced for the beach setting, having an approximate acceptability measurement of 64 PAOT.

The acceptable standards of quality (PAOT) were compared to questions about additional evaluative measures, which included preference (Which of the photos shows the level of use you would ideally prefer to experience in Tofino?), expected (Which of the photos shows the level of use that you expected in Tofino?), experienced (Which of the photos looks most similar to what you experienced/what is typically experienced in Tofino?), choose to leave (Which of the photos shows the highest level of use that you would accept before you would choose to leave the beach), and promotion (Which of the photos reflects the highest level of use that should be promoted by the Tofino tourism associations and businesses?). Using the calculated means from the evaluative variables, individual capacities were derived measuring different standards of quality. Table 7.9 summarizes the PAOT for each standard of quality for each participant group and photo series.

Table 7.9: Image Comparison - Standards of Quality (PAOT)

Standards of Quality	Beach Setting			Downtown Setting		
	Resident (n = 40)	Business (n=60)	Tourist (n = 29)	Resident (n = 40)	Business (n=60)	Tourist (n = 29)
Acceptability	34	46	47	53	64	54
Preference	6	8	6	37	38	35
Expected	N/A	N/A	20	N/A	N/A	47
Experienced	43	46	20	68	68	51
Choose to Leave	38	39	43	54	55	58
Promotion	27	32	N/A	49	50	N/A

For the beach scene, each participant group followed a similar pattern where levels of preference were much lower than other standards of quality. The variables for the resident and business participants were within a similar range except for the acceptability measurement, where the resident participant group had slightly lower PAOT measurements than the business participant group. The tourist participants' measures were comparable to the other groups for acceptability, preference and choose to leave, but was largely different for experienced, which may be attributed to the many internal and external influences such as location, time of day and comparison to other tourism destinations.

Although numbers were not as conclusive for the downtown scene, similar patterns existed in terms of preference as PAOT measurements were much lower than other variables. In the downtown scene the resident and business participants had almost identical PAOT measures except for acceptability, which may be linked to both groups being in town often. Instead of the business and tourist participant groups having similar acceptability measures, for the downtown scene the resident and tourist groups had similar acceptability measurements. The tourist participant group had lower measures than the business and resident participant groups except for choose to leave and had similar expectations and experiences for both the beach and downtown scenes.

The derived PAOT values for both scenes suggest a potential range of crowding-related standards of quality, where “neither of the points defining this range, nor any points along this range, are necessarily any more ‘valid’ than any other” (Manning *et al.*, 2002:396). These values portray insight into individual evaluative measures, which may help determine the relationships between the level of use and the quality of experience (Manning *et al.*, 2002), which can be used in tourism management and planning. Although the participant groups’ measurements are different, has the level of use and the quality of the experience been diminished or exceeded? The resident participant group has the lowest acceptability measurements and the experienced measurements are higher than the choose to leave measurements indicating that levels of use of been exceeded, whereas the business participants have the highest acceptability measurements and follow the same pattern as the residents in regards to choosing to leave being lower than experienced but with acceptability not being exceeded for the beach scene. The tourist participant group had similar acceptability levels to the other groups but have higher choose to leave PAOT measurements than the experienced PAOT, indicating that tourist perceived that levels of use have not been exceeded in these terms, but additionally levels of acceptability were not exceeded.

### **7.2.8 Tourism Seasonality**

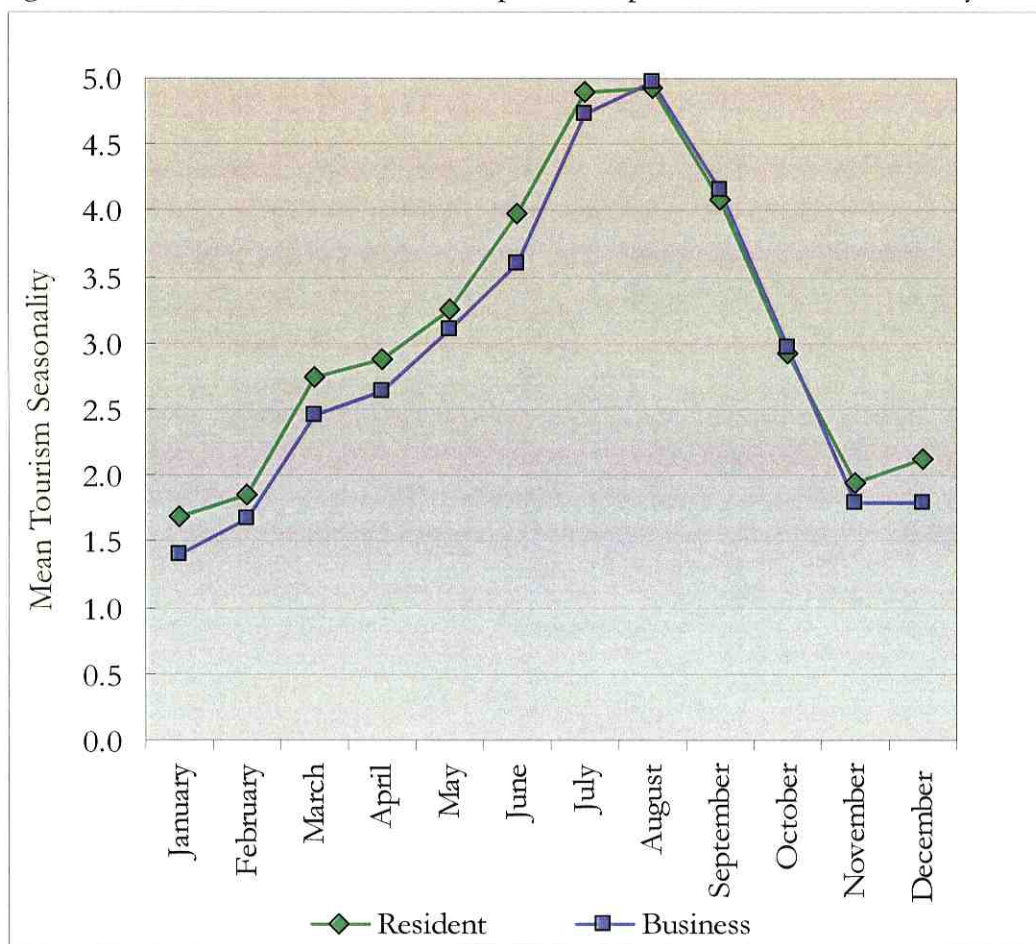
The first half of the last survey theme dealt with issues surrounding how the resident and business participant groups perceive the tourism seasonality of Tofino and what types of future tourism developments would be supported or opposed.

The question regarding seasonality was included to first compare how the two participant groups perceived the influx of tourism during each month of the year, and secondly to determine if participants perceived a shorter shoulder season which can be attributed to the successful storm watching marketing in the region. Participants were asked to rank from very low (1) to very high (5) how they perceived the number of tourists per month, results are presented in Table 7.10 and Figure 7.9.

Table 7.10: Tourism Seasonality – Resident and Business Participant Groups

	Very Low 1	Low 2	Medium 3	High 4	Very High 5	Mean
Month	Res. /Bus. (%)	Res. /Bus. (%)	Res. /Bus. (%)	Res. /Bus. (%)	Res. /Bus. (%)	Res. /Bus.
January	41/67	48/26	10/7	0/0	0/0	1.69/1.40
February	31/41	54/50	15/9	0/0	0/0	1.85/1.67
March	8/12	21/36	63/48	5/2	3/2	2.74/2.45
April	0/3	26/34	64/59	8/2	2/2	2.87/2.64
May	0/0	7/14	60/62	33/24	0/0	3.26/3.10
June	0/0	0/0	28/47	46/46	26/7	3.97/3.60
July	0/0	0/0	0/2	10/24	90/74	4.90/4.73
August	0/0	0/0	0/0	8/3	92/97	4.92/4.97
September	0/0	0/0	18/14	56/57	26/29	4.08/4.16
October	5/2	26/26	41/47	28/23	0/2	2.92/2.96
November	28/40	54/40	13/20	5/0	0/0	1.95/1.79
December	23/40	54/43	10/15	13/2	0/0	2.13/1.79

Figure 7.9: Resident and Business Participant Group Mean Tourism Seasonality



The above table and figure portray how the relative number of tourists alters with each month of the year, with the beginning of the year being the lowest and gradually increasing into the summer months where it peaks and then tapers off towards the end of the year. January is the lowest perceived month for the number of tourists for both participant groups, which may be attributed to being after the holiday break and due to the wet winters in Tofino. From the table, the tourism seasons begins slowly in the month of March when the whale migration returns to Clayoquot Sound, and the town hosts the annual Whale Festival. The number of tourists in Tofino begins reaches predominately 'high' values in the month of June, which coincides with the school summer break. The months of July and

August are the highest perceived months, where both participant groups indicate August as the busiest month, particularly emphasized by the business participants. Once school commences in September, the numbers of tourists are perceived to be lower, until there was a slight increase in December due to the holiday break.

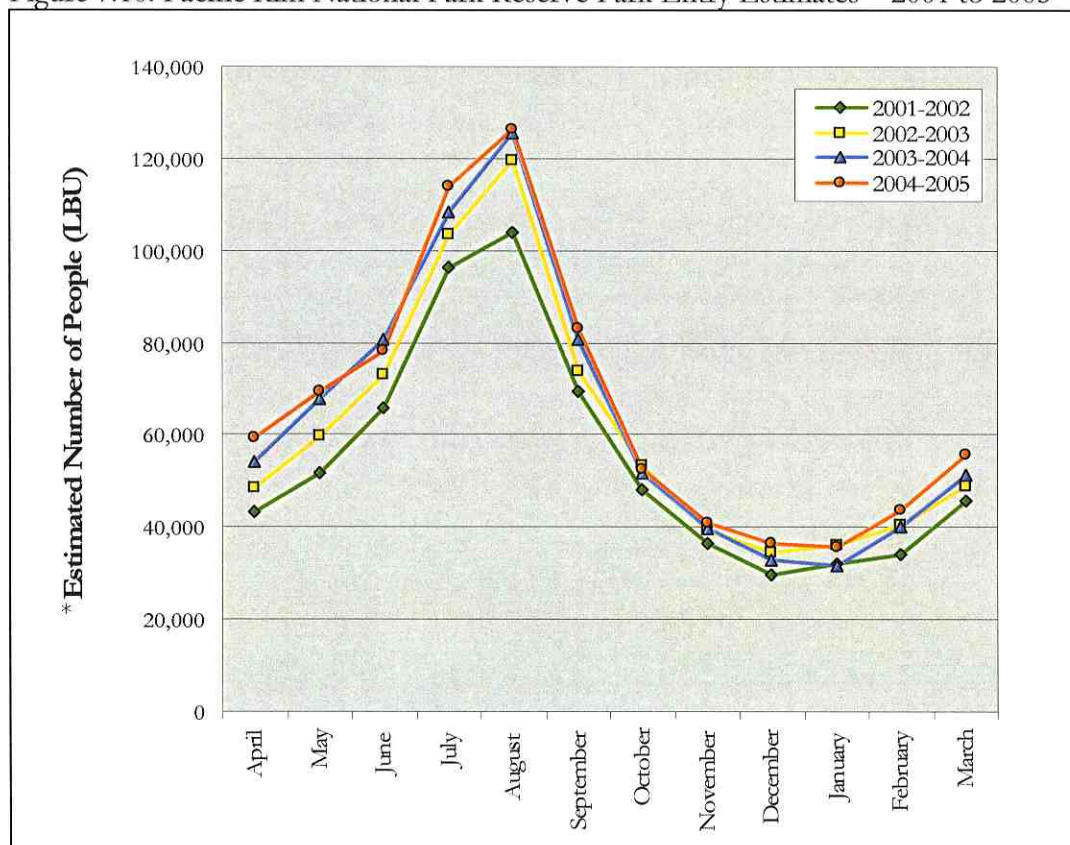
The pattern is consistent with the open-ended question that followed, where participants were asked to write down the starting/finishing dates of the two busiest periods in Tofino. All participants indicated the summer months of July and August as the busiest dates, but ranged from starting dates from March to May and finishing dates from September to October. Participants additionally highlighted that long weekends, particularly Labour Day weekend, and holiday breaks, including spring break and Christmas break were busier in regards to numbers of visitors to Tofino.

Storm watching is becoming an ever-increasing event during the winter months of the year, when Tofino receives the majority of its 5m of annual rainfall through the months of December to February (Travel bc.ca, 2006). In regards to the shortening of the shoulder season due to storm watching marketing schemes, it is difficult to decipher from the above table as there are no available time-series comparisons. In comparison to the high tourism season, it is intuitive that participants perceive the numbers of people to be much lower in the winter months, although it is prevalent that there has been an increase of the number of tourists during the winter months through casual interviews with businesses and residents during survey administration and due to the increased levels of entry into the Pacific Rim National Park Reserve (PRNPR, 2005).

Currently no method exists for determining the number of tourists visiting Tofino; the only method that can provide some insight is through monthly tire counts that are derived by the Pacific Rim National Park Reserve. Although the numbers are calculated for the estimated number of entries into the National Park Reserve, one can speculate the approximate numbers of people entering the district of Tofino.

Through an algorithm applied to the traffic counts from an in-road sensor, an estimated number of people who enter Pacific Rim National Park Reserve can be derived; the monthly estimates for 2001 – 2005 are plotted in Figure 7.10. The graph begins in April following the data provided by the Pacific Rim National Park Reserve.

Figure 7.10: Pacific Rim National Park Reserve Park Entry Estimates – 2001 to 2005



Source: Pacific Rim National Park Reserve, 2005

(\* LBU (Local Base Unit) is the station where the in-road sensor directs its count information to)

From the above graph, the increasing numbers for all months are prevalent with each subsequent year with numbers of estimated entries increasing from April until the sharp peaks at July and August, where it then begins to taper off into the winter months. August is the busiest month followed by July, which is concurrent with the perceptions of tourism seasonality of the resident and business participant groups. Additionally, there has been an increase of Park entry in the winter months from 2001 to 2005, which may be attributed to the storm watching phenomenon that was introduced in the late 1990s to attract visitors during the winter shoulder season.

Although the numbers represent estimated visitations to the Pacific Rim National Park Reserve, one can approximate the relative number of people entering the district of Tofino per day, which may range from hundreds to thousands. For example, 126,468 people were estimated to have visited the Pacific Rim National Park Reserve in August 2005, if 80% of those people additionally visited Tofino, which is approximately 15 minutes away by car, over 100,000 people would have visited Tofino. If these 100,000 visitors were split evenly amongst all the days in August, approximately 3,300 people would be visiting Tofino each day, which could potentially double on weekends and long weekends; this value alone is more than double the population of Tofino.

### **7.2.9 Tourism Development**

The second part of the last survey theme focused on the perceptions of potential tourism developments in Tofino. As the tourism industry continues to grow with each subsequent year, various types of tourism developments may be incorporated into the tourism infrastructure of Tofino. A question first posed in a Community Values Survey (1991) was

adapted in the survey instrument, where the participants indicated their degree of opposition or support on a 5-point Likert scale ranging from -2 to +2. The results are presented in Table 7.11. The responses from the Community Survey were measured on a different scale (1 to 5), but indicate similar perceptions of support throughout the years.

Table 7.11: Support of Future Tourism Developments

Type of Tourism Development	1991 Survey Mean (n = 370)	Resident Mean (n = 40)	Business Mean (n = 60)	Tourist Mean (n = 29)
More hotels/motels/B&B's	2.7	-0.72	-0.53	-0.52
More restaurants	2.8	0.26	0.39	0.34
More hiking trails	4.0	0.95	1.43	0.59
More bike paths	4.5	1.31	1.46	0.69
More general sightseeing tours	3.3	-0.39	0.23	0.00
New marina	2.8	-0.18	0.50	-0.21
More whale watching tours	1.8	-1.22	-1.16	-0.76
Beach commercial concession stands	1.8	-1.46	-1.47	-1.07
Jet ski rentals	N/A	N/A	-1.72	-1.46
More cultural activities	4.0	1.00	1.39	0.72
More sport fishing charters	2.0	-0.90	-0.63	-0.52
More pubs	1.9	-0.37	-0.07	-0.21
More tourist wilderness experience activities	3.7	0.15	0.68	0.69
More shuttle buses for tourists	3.6	0.59	1.02	0.59
More international chain businesses	N/A	-1.26	-1.63	-1.45
More tourism developments initiated by locals	4.3	0.43	0.98	0.90
Implementation of tourist tax to cover municipal costs	3.3	1.03	0.55	-0.03
More education programs/events for tourists	3.6	1.15	1.36	0.83
Tourism which promotes environmental awareness	4.3	1.62	1.69	1.76

Table 7.11 highlights that the majority of means are similar among participant groups in regards to direction of support or opposition and that business participants are more supportive/less opposed to future tourism developments than the resident and tourist participant groups. A number of potential tourism developments had low support values from all three participant groups, which included more hotels/motels/B&Bs, more whale watching tours, beach commercial stands, jet ski rentals, more sport fishing charters, more pubs and more international chain businesses, all of which would provide additional services to the visitors, residents and businesses of Tofino. This may result from the participants perceiving that there are already a number of businesses that provide these services to tourists and perhaps a desire of no large-scale developments.

The majority of tourism developments that were supported amongst all stakeholder groups were initiatives that would provide additional infrastructure to the town of Tofino, including hiking trails, bike paths and restaurants, but additionally focused on providing a particular type of tourism - ecotourism, which focuses on the preservation and education of the environment. One variable that sparked the largest differences between participant groups was the implementation of tourist tax to cover municipal costs, with the residents' supporting this development the most followed by the businesses, which may relate to covering the costs associated with water shortages/restrictions as experienced during the summer of 2004 and 2006, for example. The tourist participants were slightly opposed to the initiative, as this would ultimately increase the prices of goods and services for the visitors to Tofino.

#### **7.2.10 Accommodation Daily Capacities**

Within the boundaries of the district of Tofino a limitless number of people may come to visit, one key factor in determining whether or not all of these people may be accommodated is whether or not they can all stay overnight in Tofino. The amount of accommodation in Tofino is a limiting factor, not only in relation to the number of businesses that provide these services, but Tofino is a remote town that is approximately 30 minutes away from the small town of Ucluelet and is approximately two hours from the next largest urban centre – Port Alberni. As a result, reservations for accommodation in Tofino are often booked a year in advance in order to guarantee a place to stay during the busy summer months. Physical carrying capacity exists during the summer months; in August 2004 there was a two week period where no accommodation could be found for visiting tourists.

To determine how many people Tofino could accommodate overnight – one measurement of physical carrying capacity, a listing of accommodations was compiled. As previously mentioned in the Methods chapter, the sampling frame of the business participant group consisted of a listing of all businesses, including accommodations. The sampling frame was used to derive the approximate number of people that Tofino could accommodate per night. The daily capacities for each accommodation business were collected through surveys, researching websites and contacting the individual businesses by email if no information was provided.

From the generated list Tofino was found to accommodate approximately 4,000 people (following the question in the business survey - What is the maximum number of people that your business can provide service to, per day?), which is nearly 40% more than its permanent population. The number of hotels and motels in Tofino provide the most accommodation to visiting tourists, as these accommodations range in size and luxury. The two popular campgrounds in Tofino provide the second highest amount of accommodation. Other low-budget accommodations such as hostels provide a large service to visiting people and consequently are full the majority of the summer. The greatest numbers of businesses per type are the vacation rentals which provide about 11% of the accommodation available in Tofino. There is currently a debate about the use of vacation rentals, as residences are being rented out to tourists when the permanent residents cannot find places to live. The number of people coming to Tofino will consequently influence whether this type of physical carrying capacity will be exceeded each year and for how long.

### 7.2.11 Discussion

The administered surveys to the three participant groups provided valuable insight into how tourism in Tofino is presently perceived. First, describing the participant groups to provide the background for subsequent analyses and performing a number of descriptive statistics highlighted the difference in perspectives amongst stakeholders. Within the descriptive statistics section two individual capacities were examined, psychological and physical.

Psychological carrying capacity refers to whether the tourist population perceives degradation in the quality of their experience as a result of a number of combined factors. Following a methodology performed by Manning *et al.* (2002), a series of manipulated photos were created depicting increasing levels of use in a beach and downtown scene, followed by a series of questions exploring standards of quality. All stakeholder groups were examined for comparison, but the tourist participant group was focused on. Has psychological carrying capacity been exceeded for the tourist participant group? From the analysis of the image comparison and standards of quality measurements the tourist participant groups have not reached psychological carrying capacity. The tourist participants had similar acceptability levels to the other two participant groups, but had higher 'choose to leave' measurements than what they experienced during their stay in Tofino, additionally their levels of acceptability for both the downtown and beach scenes were not exceeded. These differences may be attributed to comparisons between Tofino and other tourism destinations, such as larger urban centres for the tourist participant group, and comparing the summer months to the winter months for the resident and tourism business participants.

Physical carrying capacity relates to the number of people that can be accommodated before degradation in the experience of the tourist or quality of life of the local population arises. Physical carrying capacity can be measured by a number of methods using multiple factors, one such factor is the availability of accommodation. Accommodation in Tofino is an identified limiting factor to the tourism industry in Tofino. Although a number of tourism accommodations exist ranging from hostels to five-star resorts there still remains a number of days where all the visiting tourists who wish to stay in Tofino overnight cannot. Through informal conversations with participants a number chose to stay in the neighbouring town of Ucluelet, due to the prices being less expensive and increased room availability. Has physical carrying capacity been exceeded in Tofino? In regards to accommodation, the physical carrying capacity of Tofino was exceeded for a number of days during the summer months; in 2004 there was no available accommodation for approximately two weeks. If the number of tourists coming to Tofino continues to increase, planning for the lack of available accommodations will be useful in the future management of the growth of tourism developments in Tofino.

Accommodation is only one measurement of physical carrying capacity; other physical limitations were highlighted in the surveys which included the lack of infrastructure needed to support the influx of population during the summer months, such as transportation infrastructure (parking) and water infrastructure. For example, during the summer of 2004 a number of severe water restrictions were placed on the resident and business communities, and in 2006 water levels were so low a local business man paid water to be trucked into Tofino for local businesses to remain open during the Labour Day long weekend. Previous to the summer of 2004 there was a referendum asking whether citizens wanted to pipe water

from Kennedy Lake and consequently to increase the local water supply; the proposal was rejected – as many saw the increasing of water supply to promote more tourism development. Further investigation into the better infrastructure vs. development concerns may warrant interesting results, which the municipal government may incorporate into future planning. The issues raised by the citizens of Tofino provide insight into how tourism is perceived and consequently relates to the social carrying capacity of Tofino.

### 7.3 Cluster Analysis

In efforts to determine if social carrying capacity has been exceeded, a two-step cluster analysis was performed to identify groupings based on participants' perceptions of tourism in Tofino, as performed by Fredline and Faulkner (2000). Other multivariate methods for classifying/reducing data exist, which include measures of discriminate and factor analysis. Discriminate analysis was not employed as previous knowledge regarding the number of groups or group membership was not known; factor analysis was explored, but due to the sample size (>50) and the sample-to-variable ratio the resulting factors were not interpretable (Hair *et al.*, 1998). Cluster analysis is an exploratory measure that classifies data, either cases (Q-mode) or variables (R-mode), in efforts to identify groups with high between group variability and low within group variability.

A Q-mode cluster analysis was performed on Section B of the resident and business survey instruments, which asked how tourism impacts affected their personal quality of life (Part B) on a 7-point Likert scale ranging from -3 to +3. In order for comparable groups, an equal number of negative and positive impact statements were included in the survey design, to not bias the results in an obvious manner (Fredline, 2000). A cluster analysis was performed

on the resident and business participant groups separately, as the descriptive statistics and a chi-square test identified significant differences between participant groups; if combined the business participant group would have positively skewed the resulting clusters.

A number of tourism studies have used cluster analysis to identify natural groupings within resident participant groups (Madrigal, 1995; Davis *et al.*, 1988; Fredline and Faulkner, 2000); however the research follows a two-step cluster method performed by Fredline (2000). It is now common to use both hierarchical and non-hierarchical clustering techniques to gain the advantages from each method; where a hierarchical analysis is used to establish the number of clusters, profile cluster centers and identify outliers, and the cluster centers are then used to seed a non-hierarchical cluster analysis (Hair *et al.*, 1998). Issues of linearity and homoscedasticity can be ignored in cluster analysis, but multicollinearity and outliers can produce problems (Hair *et al.*, 1998); multicollinearity was tested for and Mahalanobis distances were calculated. The tests were non-significant ( $p > 0.05$ ) a result of all the variables being measured on the same scale and therefore no cases were taken from either cluster analysis. Additionally, hierarchical clustering cannot be performed on data with missing values, therefore data which was coded as missing due to the 'Don't know' option in Part A were recoded to zeros, which weakens the means but was preferable to excluding participants' who used this option (Fredline, 2000).

For both participant groups, recoded data was entered into SPSS v.11 to perform series of cluster analyses using the squared Euclidean distance as the similarity measurement, which measures the straight-line distance between each pair of observations (Hair *et al.*, 1998). All hierarchical clustering methods were employed and two to five cluster solutions were

examined, which explored all arrangements of participants based on previous tourism studies. For the resident and business cluster analyses, the Ward method proved to be the most interpretable, which attempts to minimize the sum of squares of any two clusters resulting in relatively equal sized clusters (Hair *et al.*, 1998). The other methods employed (between-groups linkage, within-groups linkage, nearest neighbour, furthest neighbour, centroid clustering, and median clustering) resulted in one large cluster and smaller clusters regularly with only one participant in each. Therefore, the Ward method was selected following the approach of Fredline (2000).

In a two-step cluster analysis, the hierarchical (agglomerative) method is performed to determine the number of clusters and to develop the cluster centers that seed the non-hierarchical (divisive) cluster. The objective of selecting the number of clusters is to obtain a balance between the fewest numbers of clusters that have an appropriate level of similarity. (Hair *et al.*, 1998). As mentioned, two to five cluster solutions were chosen based on past tourism research (Table 7.12); each cluster solution was examined by comparing cluster means for individual and combined impact statements. For both participant groups, a 3-cluster solution was chosen. The two cluster solutions did not provide enough variation between cluster means, the five cluster solutions identified three main groups with small individual clusters as was seen with the four cluster solutions, but combined nicely into the 'Lovers', 'In-Betweeners' and 'Haters' groupings in the three cluster solutions.

Table 7.12: Cluster Names in Tourism Research

Davis <i>et. al</i> (1998)	Madrigal (1995)	Fredline and Faulkner (2000)	O'Brien (2007)
Haters	Haters	Haters	Haters
Lovers	Lovers	Lovers	Lovers
In-Betweeners	Realists	Realists	In-Betweeners
Cautious Romantics		Ambivalent supporter	
Love em' for a reason		Concerned for a reason	

The three clusters identified for each participant group follow the same findings as found in previous studies, where the 'Lovers' cluster typically had positive opinions about tourism and its associated impacts, the 'Haters' cluster had a majority of negative opinions for both positive and negative impacts and the 'In-Betweeners' fell between the 'Lovers' and 'Haters' clusters, having positive opinions about positive impacts and negative opinions about negative impacts. The cluster profiles for each participant group will be described in further detail in later sections.

Cluster centers were calculated for each question for the three clusters and were entered as input in the K-means non-hierarchical clustering technique, which included all the original data ('Don't know' responses) in the analysis. The resulting cluster solutions for the resident and business participant groups are described in the following sections, with more detail provided in Appendix G.

### 7.3.1 Resident and Business Cluster Solutions

From the original 40 resident participants, 32 were kept for use in the cluster analysis, a result of eight participants not replying to all of the impact statements. Cluster membership from the hierarchical to the non-hierarchical clustering techniques resulted in only one participant changing clusters from a 'Haters' to an 'In-Betweeners'. As a result of the two-

step clustering method, the resident participant group split into relatively equal classes, with ten participants (31.25%) classified as 'Lovers', ten participants (31.25%) classified as 'Haters', and twelve participants (37.5%) classified as 'In-Betweeners'.

From the original 60 business participants, a total of 47 participants answered all questions involved in the cluster analysis. The clustering of the 47 cases resulted in three similar groups as experienced in the resident cluster solutions, with cluster membership remaining the same through both clustering procedures. A total of 20 participants (42.6%) were grouped in the 'Lovers' category, 24 participants (51%) in the 'In-Betweeners' category, and within the 'Haters' cluster solution only three participants (6.4%) exhibited an overall negative perception of tourism. Table 7.13 presents the resulting cluster means per group as derived from the two-step cluster analyses.

Due to the nature of cluster analysis, as it is not a parametric statistical test, a single method for assessing the resulting cluster solutions does not exist (Hair *et. al*, 1998). The main goal when selecting a cluster solution is that it is easy to interpret, is parsimonious and which is supported by previous research (Fredline, 2000). The combined average for each cluster solution can be used as a rough indicator when assessing cluster membership.

Table 7.13: Resident and Business Cluster Means per Clustering Variable

Clustering Variable	Lovers (n = 10)	In- Betweeners (n = 10)	Haters (n = 12)	Lovers (n = 20)	In- Betweeners (n = 24)	Haters (n = 3)
	Res.	Res.	Res.	Bus.	Bus.	Bus.
1. employment opportunities	2.70	1.30	0.67	1.75	1.75	0.67
2. trade for local businesses	2.50	0.60	0.33	1.90	1.71	0.00
3. housing property values and rental costs	1.20	-0.60	-2.25	1.90	-0.92	-2.00
4. prices of goods and services	0.10	-0.90	-1.42	0.10	-1.54	-2.67
5. local business opportunities	1.50	0.30	0.58	2.00	1.50	-1.00
6. promotion of British Columbia	1.70	0.20	0.17	1.85	1.00	0.00
7. damage to terrestrial environment	0.30	-0.40	-2.00	-0.25	-0.67	-2.67
8. damage to marine environment	-0.30	-0.40	-2.00	-0.45	-0.29	-1.33
9. litter around town	-0.90	-0.50	-2.00	-0.55	-0.75	-2.33
10. litter around beaches	-1.60	-0.40	-2.50	-0.85	-1.17	-2.33
11. appearance of town	2.10	0.40	-1.00	1.85	0.17	-2.33
12. life in Tofino	2.40	0.30	-0.75	1.95	1.21	-1.00
13. relationships	1.60	-0.80	-0.67	1.50	0.42	-0.67
14. pride	2.10	0.40	-1.00	2.05	0.92	-0.33
15. traffic congestion	-2.10	-1.70	-2.42	-0.75	-1.88	-3.00
16. facilities available	0.70	-0.40	-0.33	1.20	-0.38	-0.67
17. ease to use local facilities	0.10	-0.70	-1.00	0.45	-0.83	-2.33
18. maintenance of public facilities	1.00	0.40	-0.25	1.05	0.42	-2.33
19. range of goods and services	1.80	0.60	0.75	1.80	0.83	0.33
20. parking spaces	-0.50	-1.10	-1.00	-0.50	-1.00	-2.00
21. crime	-0.90	-1.00	-1.67	-0.35	-0.83	-2.00
22. entertainment	1.20	0.20	0.42	0.80	1.04	1.00
23. rowdy behaviour	-0.70	-1.20	-2.00	-0.45	-0.88	-1.67
24. quality of life	1.10	-0.40	-1.92	1.80	0.25	-2.67
25. meet new people/attract new customers*	2.40	1.30	1.17	2.60	1.79	1.00
26. divided issues/competing businesses*	-0.80	-0.70	-1.33	-0.10	-0.21	-0.33
27. disrupted lives/summer housing*	-0.30	-0.70	-1.83	-0.65	1.63	0.00
28. disrupted tranquility	-0.30	-1.40	-2.42	-0.20	-0.83	-2.67
29. increased local economy	2.70	1.10	0.42	2.85	1.67	1.00
30. enhanced hospitality	1.60	0.00	0.08	1.85	0.58	0.67
31. too many people	0.10	-0.10	-2.00	0.05	0.04	-2.00
<b>Combined Variable Average</b>	<b>0.73</b>	<b>-0.20</b>	<b>-0.94</b>	<b>0.85</b>	<b>0.05</b>	<b>-1.15</b>

(Note\* - split into resident and business variables)

For the resident participant group, the 'Lovers' cluster has a combined mean of 0.73 with individual means ranging from -2.40 to 2.70, the 'In-Betweeners' have a combined mean of -0.20 ranging from -1.40 to 1.30, and the 'Haters' have a combined mean of -0.94, which ranges from -2.50 to 1.17. From the above Table, the combined means for the business cluster solutions are quite different, with the 'Lovers' having an overall average of 0.85 (ranging from -0.85 to 2.85), 'In-Betweeners' with 0.05 as a combined average (ranging from -1.88 to 1.79), and the 'Haters' with an average of -1.15 (ranging from -2.67 to 1.00). As cluster analysis inherently attempts to increase between-group variability and decrease

within-group variability, one can further assess the cluster solutions from the tables below (Table 7.14 and Table 7.15).

Table 7.14: Resident Cluster Solutions Group Variability

	Lovers	In-Betweeners	Haters
Lovers	<i>5.97</i>		
In-Betweeners	7.15	<i>4.94</i>	
Haters	10.89	5.92	<i>5.93</i>

Table 7.15: Business Cluster Solutions Group Variability

	Lovers	In-Betweeners	Haters
Lovers	<i>5.44</i>		
In-Betweeners	6.25	<i>5.99</i>	
Haters	13.99	9.14	<i>5.41</i>

The tables show the within-group variability (in italics) along the diagonal, with the between-group variability in the lower sections of the tables. The within-group variability measures the distances of each case to its appropriate cluster centroid, whereas the between-group variability measures the distances of individual cluster centroids to the two other cluster centroids. All measures of within-group variability are lower than their associated between-group variability, showing distinct differences between resident and business cluster solutions. The highest differences are found between the 'Lovers' and 'Haters' cluster solutions, which is important to identify if residents and businesses perceive that social carrying capacity has been exceeded. Although a slight difference is found between the resident 'In-Betweeners' and 'Haters' cluster solutions (4.94 and 5.92 respectively), their combined and individual means are distinct allowing for the validation of cluster solutions.

### 7.3.2 Chi-square Analysis

Once all clusters have been created, interpreted and assessed, cluster solutions can be examined to determine if relationships exist between cluster membership and variables not included in the cluster analysis. Both resident and business cluster solutions were examined using chi-square contingency table analyses to determine if significant relationships existed between cluster memberships and selected independent variables.

The first chi-square analysis tested if there was a relationship between cluster membership and participant group, this relationship was found to be significant ( $\chi^2 = 12.086$ ,  $p < 0.05$ ), therefore each participant group was tested separately with the selected demographic variables.

Chi-square contingency table analysis is a non-parametric test that does not assume the data is normally distributed. When performing the significance measure, the main concern is low expected frequencies that increase the Type One error, which is the chance of concluding there is a relationship when there is not (Garson, 2004). It is suggested that expected frequencies for each category should be at least one and that no more than 20% of the categories should have expected frequencies less than five (Garson, 2004). In order to remedy this, one can combine categories of data or recode data into fewer cells. If the observed frequencies deviate significantly from the expected frequencies an overall significant chi-square will be reported signifying those variables relate to cluster membership (Hair *et. al*, 1998). Measures of the standardized residual are also important, where a residual of  $\pm 1.96$  is interpreted as having a significant contribution to the overall relationship (Fredline, 2000).

For both the resident and business participant groups crosstabulations were performed, examining the associated Pearson's chi-square and standardized residual measurements. All crosstabs indicated that more than 20% of the expected frequencies were less than 5, indicating greater chances of Type One error. To solve this, variables were recoded and combined, and were tested again. Once again, all crosstabulations increased the Type One error, a result related to the small sample size of the participant groups. Chi-square tests assume a large sample of at least 50, when the sample size is small this will result in high Type II error, where relationships may not be found in the analysis, but they may actually exist (Garson, 2004). Therefore the reporting of significant chi-square measurements will not be performed further and logistic regression, which tests the predictability of significant variables on cluster membership, will not be pursued as no variables were identified in the chi-square analyses.

### **7.3.3 Summary of Cluster Profiles**

Although cluster membership could not be associated with selected variables, a summary of the resident and business clusters are presented in Tables 7.16 and 7.17, respectively.

Table 7.16: Summary of Resident Cluster Profiles

Variable	Lovers	In-Betweeners	Haters
<i>Impact Statements</i>			
Too many people	20% yes 80% no	30% yes 60% no 10% don't know	91.7% yes 8.3% don't know
<i>Activities</i>			
Number - Mean	7.8 activities	6.5 activities	9.4 activities
Behaviour in summer months	70% normal activities 10% decrease in activities 20% increase in activities	70% normal activities 10% decrease in activities 10% increase in activities 10% leave Tofino	33.3% normal activities 41.7% decrease in activities 8.3% increase in activities 16.7% leave Tofino
<i>Image Comparison</i>			
Photo F Acceptability**	44.4%/44.4% Unacceptable 22.2%/22.2% Unacceptable/Acceptable 33.3%/33.3% Acceptable	50%/70% Unacceptable 40%/20% Unacceptable/Acceptable 10%/10% Acceptable	100%/100% Unacceptable
Preference	60%/20% Photos A and B 30%/40% Photos C and D 10%/40% Photos E and F	60%/0% Photos A and B 30%/90% Photos C and D 10%/10% Photos E and F	75%/16.7% Photos A and B 18.8%/83.3% Photos C and D 6.3%/0% Photos E and F
Experienced	100%/100% Photos E and F	10%/4.2% Photos C and D 90%/95.8% Photos E and F	34.4%/3.1% Photos C and D 65.6%/96.9% Photos E and F
Acceptable	40%/10% Photos C and D 60%/90% Photos E and F	40%/0% Photos C and D 60%/100% Photos E and F	56.3%/8.3% Photos C and D 43.8%/91.7% Photos E and F
Promoted	10%/0% Photos A and B 40%/10% Photos C and D 50%/90% Photos E and F	60%/20% Photos C and D 40%/80% Photos E and F	9.4%/8.3% Photos A and B 59.4%/41.7% Photos C and D 31.3%/50% Photos E and F
<i>Tourism Seasonality</i>			
Very High' Months - Mean	2.3 months	2.3 months	2.7 months
<i>Tourism Development</i>			
Number of Opposed - Mean	2.9 proposed developments	2.3 proposed developments	5.7 proposed developments
Number of Supported - Mean	3.8 proposed developments	4.2 proposed developments	4 proposed developments
<i>Demographics</i>			
Years Resided - Mean	20.1 years	21.2 years	15.1 years
Own or Rent	80% own 20% rent	30% own 70% rent	58.3% own 41.7% rent
Gender	50% female 50% male	30% female 70% male	66.7% female 33.3% male
Age	40% 36-45 years old 50% 46-65 years old 10% over 65 years old	10% under 25 years old 20% 26-35 years old 10% 36-45 years old 40% 46-65 years old 20% over 65 years old	8.3% under 25 years old 16.7% 26-35 years old 33.3% 36-45 years old 25% 46-65 years old 16.7% over 65 years old
Involved in tourism	80% are involved 20% not involved	40% are involved 60% are not involved	50% are involved 50% are not involved
Employment	40% tourism industry 10% professional 10% trades person 20% government employee 20% retired	20% tourism industry 30% professional 10% government employee 30% retired	25% tourism industry 8.3% crafts person 16.7% professional 16.7% government employee 8.3% housewife/househusband 8.3% retired 16.7% other

(\* includes beach scene/downtown scene, \*\* -4 to -2 = Unacceptable, -1 to +1 = Unacceptable/Acceptable, +2 to +4 = Acceptable)

Table 7.17: Summary of Business Cluster Profiles

Variable	Lovers	In-Betweeners	Haters
<i>Impact Statements</i>			
Too many people	10% yes 90% no	29.2% yes 66.7% no 4.2% don't know	66.7% yes 33.3% don't know
<i>Image Comparison*</i>			
Photo F Acceptability**	40%/36.8% Unacceptable 20%/21.1% Unacceptable/Acceptable 40%/42.1% Acceptable	58.3%/52.2% Unacceptable 33.3%/26.1% Unacceptable/Acceptable 8.3%/21.7% Acceptable	66.7%/100% Unacceptable 33.3%/0% Acceptable
Preference	50%/0% Photos A and B 35%/50% Photos C and D 15%/50% Photos E and F	70.8%/13% Photos A and B 25%/73.9% Photos C and D 4.2%/13% Photos E and F	33.3%/8.7% Photos A and B 66.7%/63% Photos C and D 0%/28.3% Photos E and F
Experienced	60%/0% Photos C and D 40%/100% Photos E and F	43.5%/4.2% Photos C and D 56.5%/95.8% Photos E and F	100%/100% Photos E and F
Acceptable	55%/10.5% Photos C and D 45%/89.5% Photos E and F	4.3%/0% Photos A and B 60.9%/16.7% Photos C and D 34.8%/83.3% Photos E and F	2.2%/0% Photos A and B 60.9%/17.4% Photos C and D 37%/82.6% Photos E and F
Promoted	5%/0% Photos A and B 55%/20% Photos C and D 40%/80% Photos E and F	8.3%/0% Photos A and B 62.5%/63.6% Photos C and D 29.2%/47.2% Photos E and F	6.4%/0% Photos A and B 59.6%/23.4% Photos C and D 34%/76.6% Photos E and F
<i>Tourism Seasonality</i>			
Very High' Months - Mean	2.3 months	2.3 months	1.67 months
<i>Tourism Development</i>			
Number of Opposed - Mean	3.3 proposed developments	10.7 proposed developments	3.7 proposed developments
Number of Supported - Mean	6.7 proposed developments	4 proposed developments	4.5 proposed developments
<i>Demographics</i>			
Years in Operation - Mean	12.4 years	7.48 years	not specified
Marketing	95% COC/Tourism Centre 95% internet 40% newspaper/magazine 10% television 60% other	79.2% COC/Tourism Centre 79.2% internet 58.3% newspaper/magazine 33.3% other 8.3% none	33.3% COC/Tourism Centre*** 33.3% internet 33.3% newspaper/magazine
Business Associations	85% TCOC 15% TBA 10% not a member	75% TCOC 16.7% TBA 12.5% not a member	33.3% TCOC***
Employees - Mean	64.7 full-time 14.9 part-time	86.1 full-time 9.8 part-time	0 full-time*** 2 part-time
Change Careers	55% changed careers	54.2% changed careers	33.3% changed careers***
Future Growth	65% plans for growth	58.3% plans for growth	33.3% no plans for growth***
Capacity per Day - Mean	105.7 people per day	241 people per day	6 people per day***

(\* includes beach scene/downtown scene, \*\* -4 to -2 = Unacceptable, -1 to +1 = Unacceptable/Acceptable, +2 to +4 = Acceptable

\*\*\* includes only one participant)

### Lovers' Cluster

The cluster represented 31.25% of the resident sample and 42.6% of the business sample, and can be regarded as the participants who were the most positive in regards to tourism in Tofino. The resident cluster had only nine negative means with the lowest mean being

traffic congestion (-2.1) and the business cluster had eleven negative means with the lowest mean being litter on beaches (-0.85). The issues that had the greatest impacts on both clusters are presented in the below table (Tables 7.18).

Table 7.18: Highest Positive Means for Resident and Business Lovers Cluster

Resident		Business	
1. employment opportunities	2.7	29. increased local economy	2.9
2. trade for local businesses	2.5	25. attract new customers	2.6
12. life in Tofino	2.4	14. pride	2.1
25. meet new people	2.4	2. trade for local businesses	1.9

As 80% of the resident cluster was involved in the tourism industry and 40% were directly employed by tourism, this may indicate why the first two factors are at the top of the list. The residential 'Lovers' cluster has lived in Tofino for an average of 20 years and 90% were within 35 – 65 years of age, evenly split between female and male. This cluster was more likely to own their residence (80%) compared to the other clusters and were more tolerant to crowding than the more negative clusters. As the majority of these participants are directly affected by the tourism industry it would be expected that this group would have generally positive perceptions of tourism because it provides their income and consequently their quality of life. From the other listed factors one could speculate that this group enjoys the influx of new people, and the hustle and bustle during the summer months.

The business 'Lovers' cluster represents the longest operating group, with a mean of 12.4 years of operation. This cluster group has a more developed marketing approach and are members of Tofino business associations. As three of the four factors in the above table are directly related to business growth, it wouldn't be surprising that 55% of the cluster changed careers to enter into the tourism industry and 65% are planning for future growth, more

than any other cluster. They also have more tolerance to down town crowding than the beach scene, suggesting business owners prefer busy streets.

#### 'Haters' Cluster

The cluster group represents 31.25% of the resident participant group and only 6.4% of the business participant group. Due to tourism businesses being targeted for survey completion, it is not surprising that the 'Haters' cluster is so small, consisting of three participants. Their businesses provide their source of income and if people are not coming in (or are not welcomed) this would directly affect their personal quality of life. Within the clusters, the resident group perceived 9 of the impact statements to be positive, with the highest mean being the ability to meet new people (1.17) and the business group indicating six positive statements, with entertainment, ability to attract new customers and increased local economy being the highest (1). Table 7.19 highlights the most negative impact statements associated with tourism in Tofino for both participant groups.

Table 7.19: Highest Negative Means for Resident and Business Haters Cluster

Resident		Business	
10. litter around beaches	-2.5	15. traffic congestion	-3
15. traffic congestion	-2.42	4. prices of goods and services	-2.67
3. housing property values and rental costs	-2.25	7. damage to terrestrial environment	-2.67
24. quality of life	-1.92	24. quality of life	-2.67

The resident cluster indicated that 92% agree that too many people are coming to Tofino; these perceptions agree with the decrease in normal activities during the summer months (42%) and are the most likely group to leave Tofino for extended periods of time (16.7%). The resident group is the least tolerant to levels of crowding for both the beach and

downtown scenes and have consequently opposed more future developments than the other clusters. The tolerance is seen in the first two factors presented in Table 7.19, as more people come there is more litter around the beaches and more traffic. Sixty percent of the cluster group own their place of residence and 40% rent, perhaps indicating why housing and renting costs are on the top of their list of complaints. This group has lived in Tofino for an average of 15 years, where 67% are female and all age categories are represented in this cluster. Half of the participants are involved in tourism, with 25% of them directly employed in the tourism industry.

The business 'Haters' cluster had a majority of participants (66.7%) indicating that too many people are coming to Tofino. As this group had only three participants, and two didn't contribute much information in regards to demographics it is unrepresentative to summarize the group. From the available information, it appears that the group perceived the shortest seasonality and were smaller businesses, which market less than their countering clusters.

#### 'In-Betweeners' Cluster

For this cluster, 37.5 % of residents and 51% of business participants fell within this classification, the highest of all three. It is acknowledged that tourism has both positive and negative effects on all levels of physical and social environments, and this group readily identified both instances with their means hovering almost equally in the positive and negative. Table 7.20 highlights the most positive and negative impacts as perceived by the resident and business participant group.

Table 7.20: Highest Means for Resident and Business In-Betweeners Cluster

Resident		Business	
15. traffic congestion	-1.7	15. traffic congestion	-1.88
28. disrupted tranquility	-1.4	4. prices of goods and services	-1.54
1. employment opportunities	1.3	25. attract new customers	1.79
25. meet new people	1.3	1. employment opportunities	1.75

As to be expected, the resident 'In-Betweeners' group fell between the positive and negative extremes of the 'Lovers' and 'Haters' clusters. Only 30% indicated that they perceived too many people coming to Tofino, but it appeared that most carry on with their normal day-to-day activities (70%). This group has lived in Tofino for an average of 21 years and 70% of them rent their residences, which is interesting that the problem of rent and housing costs was not a main issue identified by the group. The majority of the group was male (70%) and had a great mix in ages, from the youngest (10%) to the oldest (20%). Only 40% were involved in the tourism industry, with 20% being directly employed by tourism and other high categories being professionals (30%) and retirees (30%). From the above impacts in the table, it appears that this group has moved to Tofino for a certain life style, as disrupted tranquility is high on the list.

The majority (66.7%) of the business 'In-Betweeners' group perceived there were not too many tourists visiting Tofino. Once again, as found with the resident 'In-Betweeners' cluster, the tolerances to crowding fell between the other two clusters and all factors have been discussed in other cluster's tables. The cluster opposed the most future developments and supported the least. The businesses have operated for a mean of 7.5 years, less than the 'Lovers' cluster, potentially due to not yet reaching their return of investment. The businesses within this cluster had more full-time employees and could provide service to more people, which could represent larger tourism operations than the other two clusters.

### 7.3.4 Summary of 'Don't Know' Responses

As followed by Fredline (2000), investigation of the 'Don't know' responses allowed in Section B of the tourism impact statements may provide insight into how the different clusters answered. It would be intuitive that the 'In-Betweeners' cluster in both cases should have a higher number of 'Don't know' responses than the other two groups, as their general perceptions fall within the middle of the allowable answers and clusters. First, each 'Don't know' response was counted for each cluster and the mean was calculated (presented in Table 7.21).

Table 7.21: Mean responses of 'Don't Know' by Cluster

	<b>Lovers</b>	<b>In-Betweeners</b>	<b>Haters</b>
<b>Resident</b>	0.58	0.71	1.00
<b>Business</b>	2.23	1.94	0.29

The above hypothesis was not proven, but Table 7.21 highlights that the 'Haters' cluster for the resident participant group and the 'Lovers' cluster for the business participant group answered the tourism impact statements with the most 'Don't know' responses, it is also apparent that the business participant group used this response more often than the resident participant group. Further investigation into the questions that received the most 'Don't know' responses for each cluster is presented in the following table (Table 7.22)

Table 7.22: Questions of Highest 'Don't Know' Responses

<b>Resident</b>	<b>Business</b>
Promotion of British Columbia	Crime
Enhanced hospitality	Pride
Pride	Promotion of British Columbia, Damage to marine environment, Relationships

The questions identified for the resident participant group are considered to be positive impacts associated with tourism, the reasons why the 'Haters' cluster answered 'Don't know' more often could be the safe option between acknowledging the benefits for people who dislike tourism in Tofino, but could be due to the participants not genuinely knowing as only half of the participants were involved in the tourism industry. The same explanation can be applied to the business 'Lovers' cluster, where crime is at the top of the list, which could be a result of not knowing the exact numbers of occurrences or is again a safe option instead of acknowledging the negative impact on the community of Tofino. It is difficult to conclude what the reason may be, but it is clear that the residents and businesses need to be informed of the tourism impacts that affect the community of Tofino.

### **7.3.5 Discussion**

The cluster analysis performed identified three main groups for each participant group; 'Lovers', 'In-Betweeners' and 'Haters', in efforts to address social carrying capacity. As this survey was directed to business owners and managers, an associated positive perception of tourism in Tofino is inherent for the business participant group, which was found with the majority of participants falling within the 'Lovers' and 'In-Betweeners' clusters.

If social carrying capacity was assessed using the resident participant group, it would prove to be bordering along the cusp of being exceeded. As one cannot conclude whether social carrying capacity has previously been surpassed, the cluster analysis provides valuable insight into residents' perceptions of how tourism affects them personally. The clusters can be summarized by more than 1/3 of surveyed participants falling within the 'Haters' cluster and the 'In-Betweeners' cluster, identifying the need to address the issues that are affecting the

residents. Whether this is through communication or allowing the locals to be involved in tourism planning decisions, it is a necessary step as the residents of a community will ultimately guide whether the visitors experiences are positive or negative, through daily interactions and business practices.

All the cluster solutions provided valuable information, as all clusters perceived both positive and negative tourism impacts, recognizing the benefits and disadvantages of the industry. Addressing the main tourism impacts that are having both positive and negative influences on the community is imperative for favourable growth in Tofino and informing the community of impacts they are not aware of, in reference to the 'Don't know' responses, is another approach for management/planning decisions to incorporate the community.

Has social carrying capacity been exceeded in Tofino? From the surveys it can be concluded that social carrying capacity for the business participant group has not been exceeded as the majority of respondents were 'Lovers' and 'In-Betweeners', allowing more room for tourism growth, and for the resident participant group it has not yet been exceeded but is bordering on the edge of being so, as participants were almost evenly split between the three cluster groupings. Therefore addressing the needs and issues raised by the residents is needed to promote future growth in Tofino.

#### **7.4 Qualitative Analysis**

As mentioned in the Methods chapter, the survey instrument began with a series of four questions tailored to each participant group. It was hoped that these questions would be responded to first, to not bias the first page if the following pages were viewed. All questions

contained on the survey's first page were open-ended questions, prompting the need for qualitative analysis. The data was analyzed using the N5 software package; therefore all responses were transcribed, saved in text files and imported into N5. Each question followed a different methodology, but remained consistent between participant groups.

#### **7.4.1 Question 1 – First Words**

In each survey the participant was asked to write down the first word that came to mind when they thought of Tofino. A total of 7 participants from all participant groups did not provide an answer, therefore a total of 122 participants wrote 80 unique words. Following an approach taken by Fredline (2000), words were categorized by two means, first whether the word was positive, negative or neutral, and secondly whether the word was cognitive or affective, with cognitive words representing something that is associated or related to Tofino and affective words describing an emotion associated with Tofino. After the initial table was formed, others not associated with the study classified the words into the categories as well. The below table (Table 7.23) presents the words that were classified by the majority (2/3).

Three words provided by the resident participant group were not agreed upon, which included busy, growing and ubiquitous; due to the nature of the question one could not classify these words as the residents' stance towards tourism growth was not known.

Table 7.23: First Word Classifications by Participant Group

	<b>Cognitive</b>			<b>Affective</b>		
	<u>Resident</u>	<u>Business</u>	<u>Tourist</u>	<u>Resident</u>	<u>Business</u>	<u>Tourist</u>
<b>Positive</b>	cha-ching	beach	beach	booming	beautiful	beautiful
	money	beaches	beaches	energy	beauty	heaven-on-earth
	nature	fishing	coast	incredible	busy	paradise
	prosperity	getaway	natural	popular	heavenly	pristine
		home	ocean		magical	quaint
		Long Beach	rainforest		paradise	relaxing
		natural	seashore		peaceful	serenity
		nature	surf		special	spectacular
		ocean	surfing		tranquility	wow
		surf	verdant		vibrant	
		surfing	water		wild	
		wilderness				
	<b>Neutral</b>	<u>Resident</u>	<u>Business</u>	<u>Tourist</u>	<u>Resident</u>	<u>Business</u>
coast		tourism	village			
economy		tourists	Whalers			
majority people		west coast				
<b>Negative</b>	<u>Resident</u>	<u>Business</u>	<u>Tourist</u>	<u>Resident</u>	<u>Business</u>	<u>Tourist</u>
	congestion	rain	expensive	annoying	noisy	over-developed
	motorhomes		wet	crazy		
				erratic		
				exasperating		
				excess		
				excessive		
				invasive		
				over-rated		
				overwhelming		
				too many !		
				uncontrollable		
				undervalued		
			unstoppable			

The table highlights the number of positive first words from the business and tourist participant groups, and the number of negative words from the resident participant group. Overall there were more positive words than negative, and an even split between cognitive words and affective words. In regards to the cluster membership of the resident and business participant groups, although significance could not be tested (as described in previous section), Table 7.24 summarizes the first words by cluster membership.

Table 7.24: First Words by Cluster Membership

	<b>Lovers Resident</b>	<b>Lovers Business</b>	<b>In- Betweeners Resident</b>	<b>In- Betweeners Business</b>	<b>Haters Resident</b>	<b>Haters Business</b>
<b>Positive (p)/ Negative (n)</b>	50% positive 25% neutral 25% negative	89.5% positive 10.5% neutral	25% positive 75% negative	91.3% positive 4.3% neutral 4.3% negative	100% negative	100% positive
<b>Cognitive (c)/ Affective (a)</b>	75% cognitive 25% affective	63.2% cognitive 36.8% affective	12.5% cognitive 87.5 % affective	60.9% cognitive 39.1 % affective	14.3% cognitive 85.7% affective	100% cognitive
<b>Combination</b>	37.5% pc 12.5% pa 12.5% nga 25% nta	52.6% pc 36.8% pa 10.5% nta	25% pa 75% nga	52.2% pc 39.1% pa 4.3% ngc 4.3% nta	14.3% ngc 85.7% nga	100% pc

The 'Lovers' clusters for both participant groups and the 'Haters' and 'In-Betweeners' clusters for the business participant group had mainly positive first words. The resident 'In-Betweeners' and 'Haters' clusters had mostly negative first words, which may suggest that the resident clusters were predominately negative towards the situation in Tofino, whereas the business clusters were all generally favorable in describing Tofino.

#### 7.4.2 Question 2 – Reasons for Living/Operating/Visiting Tofino

The second question in each survey asked the appropriate reason of why they chose to live, run a business, or visit Tofino. All answers were coded using prominent themes that were identified in the analyses, allowing for each response to be coded into multiple themes. Each participant group will be discussed individually and where appropriate direct quotes will be used to describe the nature of the participants.

## Residents

All 40 participants answered the question - what is their main reason for living in Tofino,

Table 7.25 highlights the results of the coding.

Table 7.25: Coding of Main Reasons for Living in Tofino

Main Reason for Living in Tofino	Frequency	%
Scenery/environment	22	55.0
Work	15	37.5
Small/peaceful/quiet community	14	35.0
Family	6	15.0
Lifestyle	5	12.5
People	5	12.5
Born/raised in Tofino.	4	10.0
Weather	3	7.50
Remote/secluded	3	7.50
Meet people from around the world	1	2.50
Lack of large industries	1	2.50
Escapism	1	2.50
Quality of life	1	2.50
"Loved it"	1	2.50
Tofino is similar to where participant was raised.	1	2.50

The majority of participants (55%) main reason for living in Tofino was due to the scenery or the surrounding environment, responses included:

*"the natural awe-inspiring splendor of the surrounding environment";*

*"one of the most beautiful places in the world";*

*"Love the beautiful, peaceful environment"*

The following two reasons received similar frequencies 37.5% for work related reasons, and 35% due to the nature of the community, responses included:

*"Business opportunities/place for income";*

*"My husband was transferred here for employment"; and*

*"to enjoy the many benefits offered by a small, oceanside, remote community";*

*“Small town. Alternative culture”*Businesses

From the 60 original participants, two did not answer and three were not applicable (due to being a NPO), therefore a total of 55 participants were included in the qualitative analysis and is summarized in Table 7.26.

Table 7.26: Coding of Main Reasons for Starting a Business in Tofino

<b>Main Reason for Starting a Business in Tofino</b>	<b>Frequency</b>	<b>%</b>
Business opportunities	21	38.2
‘To live in Tofino’	16	29.1
Earn a living	15	27.3
Scenery/environment	14	25.5
Family run businesses	5	9.09
Entrepreneur	4	7.27
Available activities	3	5.45
Investment	3	5.45
Lifestyle	3	5.45
Environmental awareness	2	3.63
Guest satisfaction	2	3.63
Home-based businesses	2	3.63
Meet people	2	3.63
Provide retirement and earn a living	2	3.63
Seasonal work	2	3.63
Already established business	1	1.81
Career change	1	1.81
Young business owners	1	1.81

The four main reasons for business owners for starting their business in Tofino were due to business opportunities, to live in Tofino, to earn a living, and due to the scenery and environment. Following these responses there was quite a drop in frequency detailing the specific reasons why people chose to run a business in Tofino, which include:

*“We could not otherwise afford to own property and build here”;*

*“So I can retire and still have money coming in”;*

*“wanted to be my own boss and work at home on my terms!”;*

Others felt they did not have a choice,

*“Tourism is the main industry; it is the only way to make money in Tofino”*

### Tourists

The tourist participant group was asked what their main reason was for visiting Tofino, a total of 27 participants replied with two not responding. Following the same coding procedures as the other participant groups, the results are presented in Table 7.27.

Table 7.27: Coding of Main Reasons for Visiting Tofino

<b>Main Reason for Visiting Tofino</b>	<b>Frequency</b>	<b>%</b>
Scenery/environment	14	51.9
Vacation	7	25.9
Recommended tourist attraction	6	22.2
Activities	4	14.8
Relax	4	14.8
Have visited before	2	7.41
Small town community	2	7.41
Atmosphere	1	3.70
Long Beach	1	3.70
Remote/secluded	1	3.70
Visiting friends and family	1	3.70
Volunteer	1	3.70

The most frequent response, for the scenery and the environment, was mentioned by 52% of all participants, which was similar to the sentiments of the resident and business participant groups. For participants who were coded into the scenery/environment theme, 50% specifically indicated the ocean or beaches. The following two themes, vacation and recommended tourist attraction, were mentioned 26% and 22% by participants respectively. For the vacation theme, family holidaying was mentioned by 43% of participants and for the recommended tourist destination some statements included:

*“People said that you have to go to Tofino if you go to BC”;*

*“Heard about it, recommended for families”;*

*“Heard it was a great place to see”;*

Fifteen percent of the tourist participants indicated their main reasons for visiting Tofino were the choice in activities and to relax, specifically for activities, surfing, sea kayaking, camping, and whale watching were mentioned, and to summarize why tourists chose Tofino:

*“I’m here to relax and enjoy the most beautiful place I’ve ever been to”*

#### **7.4.3 Question 3 – Positive Impacts/Features of Tourism in Tofino**

The last two open-ended questions allowed the resident and business participants to write multiple responses to what they perceived were the most positive and negative impacts of tourism in Tofino. Resident and business responses were coded into the impacts that were addressed in Section B of the surveys and new impacts not examined in the survey were identified. The tourist participant group was asked what they considered to be the most positive features of Tofino, as no comparison could be performed responses were coded following the procedures in Question Two.

##### Resident

All 40 resident participants answered the question, where a total of 41 positive impacts related to one of the impact statements in Section B (Table 7.28), with four new impacts being identified (Table 7.29). From the responses to the question, three participants indicated there were no positive impacts associated with tourism in Tofino.

Table 7.28: Resident - Positive Impacts of Tourism in Tofino

	Impact Statement	Frequency	%
1	Because of Tourism, employment opportunities in Tofino have...	16	40.0
29	Because of Tourism, the local economy has increased.	16	40.0
25	Because of Tourism, the opportunity to meet new people has ...	4	10.0
6	Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	2	5.00
11	Because of Tourism, the appearance of the town is ...	1	2.50
19	Because of Tourism, the range of goods and services available is ...	1	2.50
30	Because of Tourism, local residents' hospitality is enhanced.	1	2.50
	<b>Total</b>	41	

The two most common responses were the positive impacts of employment and the increased local economy, where 80% of participants indicated either of these impacts. The remaining variables were only mentioned by 10% or less of participants, concluding that tourism in Tofino is primarily seen as an economic means to the community:

*"Prosperity to businesses. Larger tax base";*

*"Increased availability of good and services provided to residents";*

*"Economic growth. New Development. Happy Visitors";*

There remained doubt for some participants to the actual economic benefits:

*"Brings much needed money into the local economy due to other industries driven away";*

*"Personally don't consider any positive aspects with possible exception of creating employment (although typically menial, low-skilled, low-paying) for some locals";*

*"It should be a boost for the infrastructure i.e. streets, sidewalks, general attractiveness of the town but this has not really happened"*

Table 7.29: Resident – New Positive Impacts

Because of Tourism, economic diversity has increased/resource-based industries have decreased.	8
Because of Tourism, the environmental issues of the area have been broadcasted nationally/internationally.	5
Because of Tourism, the opportunity to share the natural scenery with tourists is enhanced.	5
Because of Tourism, the population has grown.	3

The new impacts focused on the switch of resource-based industries such as logging and fishing towards tourism providing more economic diversity, and the promotion of the environment/scenery to national and international audiences. Responses of the new impacts included:

*“Economic diversity – the environmental impacts of the fishing and logging industries has been lessened”;*

*“Tourism has turned Tofino away from being a totally resource-based town”;*

*“We don’t need to log Clayoquot Sound to survive economically”*

### Business

A total of 54 participants were included in the analysis, three participants did not respond and three NPO were not applicable. A total of 16 statements matched the impact statements in Section B (Table 7.30), 9 new business impacts identified with a combined frequency of 71 (Table 7.31). All participants indicated a positive impact associated with tourism in Tofino.

Table 7.30: Business – Positive Impacts of Tourism in Tofino

	Impact Statement	Frequency	%
25	Because of Tourism, the opportunity to meet new people has ...	8	14.8
6	Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	3	5.56
2	Because of Tourism, trade for local businesses in Tofino has ...	2	3.70
5	Because of Tourism, local business opportunities have ...	2	3.70
14r*	Because of Tourism, the pride of local residents of their town has ...	1	1.85
	<b>Total</b>	16	

(\*question from the Resident survey – Section B)

Only a small number of responses were coded into the existing Section B themes, with the highest having 14.8% participants indicating that the opportunity to meet new people is a positive impact. Other Section B themes were mentioned a small number of times in all responses, where the majority of responses identified new variables.

Table 7.31: Business – New Positive Impacts

Because of Tourism, businesses operate in a beautiful location.	22
Because of Tourism, businesses can operate in a 'great' community.	12
Because of Tourism, businesses can make money and provide income.	9
Because of Tourism, businesses can be either seasonal or full-time operations.	8
Because of Tourism, guests are satisfied.	8
Because of Tourism, being an entrepreneur is more prominent and desirable.	7
Because of Tourism, marketing is limited.	2
Because of Tourism, there are a variety of businesses.	2
Because of Tourism, real estate values have gone up.	1

Business owners and managers highlighted 9 new variables that they considered to be the most positive impacts associated with tourism in Tofino. The most frequent new variable was that businesses could operate in a beautiful location, followed by being able to operate in a 'great' community. Interestingly these variables have nothing to do with the increased economy but more with the physical location and the social community of Tofino, which included:

*"Opportunity to live in a beautiful place and still make a living";*

*“The setting, it’s not a difficult product to sell”;*

*“Community support on both a personal and business level”;*

*“Tofino is a small, close-knit community. People live here because they want to”;*

The remaining new variables included economic impacts that included being able to make a profit, having the choice of being a seasonal or full-time business, allowing the opportunity to be an entrepreneur, and that you can still attract customers with limited marketing.

Participants’ statements included:

*“Working for myself, more ‘free’ time, knowing I’m “doing it right” with the large volume of repeat guests year round”;*

*“Guaranteed 100% occupancy during the peak season”;*

*“Thousands people of come here and there aren’t that many places to shop”;*

*“The fact that you work extremely hard for the summer, to achieve and make enough to enjoy the winter”*

### Tourist

The tourist population is one where they travel to a tourism destination, but why do they choose to visit a particular location? Question Three for the tourist participant group asked participants what they considered to be the most positive features of Tofino. As no comparison existed in coding the tourist responses, the answers were coded into common themes as previously performed. Only one participant did not answer, providing 27 tourists responses to be coded into twelve positive features (Table 7.32).

Table 7.32: Tourist – Positive Features of Tourism in Tofino

Positive Features	Frequency	%
Scenery and Environment	20	74.1
Small town feel	6	22.2
Range of activities	6	22.2
Food and Restaurants	4	14.8
People: Locals and Tourists	4	14.8
Remoteness	2	7.41
Trans Canada Hwy. and Driving	2	7.41
Accommodation	1	3.70
Amenities	1	3.70
First Nations culture	1	3.70
International destination	1	3.70
Relaxing	1	3.70
<b>Total</b>	49	

The most common response by far, with 74% of tourists surveyed, indicated that the most prized feature of Tofino was the scenery and the environment, which is conclusive with the positive impacts associated with tourism by the resident and business populations.

Responses from tourists included:

*“Physical beauty of the harbor setting”;*

*“Beaches, water, wildlife, air”;*

*“Natural beauty of the juxtaposition of mountains, rugged coast and beaches”;*

Other common features were the small town feel of Tofino and the range of activities provided, which included:

*“Atmosphere of friendliness and alternative thought”;*

*“Small, not too touristy”;*

*“Lots of interesting activities – sea kayak, whale watching, surfing, etc.”*

#### 7.4.4 Question 4 – Negative Impacts/Features of Tourism in Tofino

The last question of Section A of all surveys asked the participants to write down the negative impacts and negative features of tourism in Tofino. As all participant groups had a method for comparison, the participant groups responses were first coded into the themes found in Section B of the corresponding surveys and where variables did not match new themes were coded. Each response could be coded into multiple themes, again allowing the participants to freely indicate all issues that personally address them.

#### Resident

All resident participants answered the question, the majority provided a number of negative impacts associated with tourism and one participant perceived no negative impacts associated with tourism. A total of 77 statements matched the themes found in Section B (Table 7.33), with 15 new variables being identified (Table 7.34).

Table 7.33: Resident – Negative Impacts of Tourism in Tofino

	Impact Statement	Frequency	%
7/8	Because of Tourism, damage to the terrestrial/marine environment around Tofino has ...	13	32.5
3	Because of Tourism, housing property values and rental costs in Tofino have ...	11	27.5
31	Because of Tourism, too many people visit Tofino.	9	22.5
4	Because of Tourism, prices of goods and services in local shops have ...	8	20.0
15	Because of Tourism, traffic congestion has ...	8	20.0
27	Because of Tourism, the local residents' lives are disrupted.	6	15.0
9/10	Because of Tourism, litter around the town/beach has ...	5	12.5
24	Because of Tourism, the quality of life of local residents has ...	5	12.5
20	Because of Tourism, the number of available parking spaces has ...	4	10.0
26	Because of Tourism growth, the local community is divided over issues.	3	7.50
17	Because of Tourism, the ease for local residents to use local facilities has ...	2	5.00
27b*	Because of Tourism, it is difficult to find housing for staff during the summer months.	2	5.00
23	Because of Tourism, rowdy behaviour and/or excessive noise in Tofino has ...	1	2.50
28	Because of Tourism, the tranquility of Tofino has been disrupted.	1	2.50
	<b>Total</b>	77	

(\* question from Business survey: Section B)

The negative impacts were coded with 14 variables from Section B, all but one of the negative impacts included in the survey. The most frequent theme described by the residents surveyed is tourism negatively impacts the terrestrial and marine environments around Tofino, followed by substantially increased property values and rental costs. Other shared themes were that too many people are visiting Tofino, and the prices in local shops and the traffic congestion continue to increase, common comments include:

*“They leave garbage everywhere”;*

*“Real estate market is now worldwide instead of local/ regional which drives up real estate prices for locals”;*

*“Too many people and not enough space in the high season”*

*“The price of everything goes up every year because of the tourists and locals suffer for it”;*

*“Crowded roads, sidewalks and stores”;*

Table 7.34: Resident – New Negative Impacts

Because of Tourism, the infrastructure of Tofino is under stress.	11
Because of Tourism, there are too many vacation rentals and absentee landowners and business owners.	7
Because of Tourism growth, there are too much large tourism developments	5
Because of Tourism growth, the local residents are moving due to high costs of living.	2
Because of Tourism, nothing is “brought in” to Tofino.	2
Because of Tourism, the politics over tourism planning and development has increased.	2
Because of Tourism, secluded areas are diminishing.	2
Because of Tourism, the dominance of the industry hinders other industries.	1
Because of Tourism growth, the industry is not sustainable.	1
Because of Tourism growth, there is a lack of public washrooms on the beaches.	1
Because of Tourism, policing should be increased.	1
Because of Tourism, taxes have increased.	1
Because of Tourism, there are no family supporting jobs.	1
Because of Tourism, there is a lack of sensitivity of the First Nations culture.	1
Because of Tourism seasonality, year round full-time work and accommodations are not available.	1

Although almost all negative impacts examined in the survey were identified, another 15 negative impacts were identified by the residents surveyed. The most prominent new theme

was the increased stress on the infrastructure of Tofino; this includes amenities such as roads, water, garbage and sewer systems as described by participants:

*“Too many people and not enough space in the high season (e.g. water shortages, no parking spots, noise, traffic, accidents, etc.)”;*

*“Poor infrastructure for the number of resorts and for vacation rentals that have been allowed”;*

*“Huge tax burden on local tax payers for services and infrastructure”;*

*“The inability of existing infrastructure to accommodate the requirements of a massive influx of people from June – October”;*

Vacation rentals were another commonly used complaint by residents, believing that vacation rentals change the fabric of the community, described as:

*“There is nowhere for residents to live because so many homeowners have turned their houses into vacation rentals. It’s turning into Whistler”;*

*“Tourism attracts absentee landlords and business owners who don’t have a stake in the community”*

*“Every time a house sells a family with children moves out and gets replaced with vacation rentals”;*

Large tourism developments and the growth of tourism in Tofino were identified, summarized by one participant:

*“Where and when does it stop?”*

### Business

Fifty-five participants were included in the coding of Question Four, two did not respond and three were not applicable. A total of five impact statements were coded with the survey questions (Table 7.35), 1/3 of available themes, and eleven new variables were identified

(Table 7.36). Six participants indicated no negative impacts associated with tourism in Tofino.

Table 7.35: Business – Negative Impacts of Tourism in Tofino

	Impact Statement	Frequency	%
4	Because of Tourism, prices of goods and services in local shops have ...	8	14.8
31	Because of Tourism, too many people visit Tofino.	6	11.1
27	Because of Tourism, it is difficult to find housing for staff during the summer months.	3	5.56
9/10	Because of Tourism, litter around the town/beach has ...	1	1.85
15	Because of Tourism, traffic congestion has ...	1	1.85
	<b>Total</b>	19	

The most frequent theme mentioned as coded by Section B impacts was the increased prices of goods and services, followed by too many people visiting Tofino. Individual responses included:

*“Many tourists seem put off by our high prices”;*

*“When the tourists outnumber the locals for longer and longer “peak seasons” it no longer feels like a community but more like a tourist-party town”;*

*“Difficult to enjoy the summer when it is so busy”;*

Table 7.36: Business – New Negative Impacts

Because of Tourism growth, qualified staffing is limited.	12
The tourism season in Tofino suffers from extreme seasonality.	7
There are not enough services and goods available in Tofino.	5
Shipping and delivery costs to Tofino are expensive and slow.	4
By-law restrictions.	3
Tofino is isolated; proximity to other centers is far.	2
Medical services are lacking in the summer.	2
Strangers in the community	2
New councils every three years.	2
Increased use on infrastructure.	1
Weather.	1
With tourism growth, the community of Tofino is being overrun/lost.	1
Lack of environmental awareness by guests.	1
Being ‘tied’ to the industry, doing all the work by your self.	1

The majority of new variables identified were related to the economics of the industry, in relation to qualified staffing, seasonality, and the goods and services available in Tofino.

Responses included:

*“The job pool is not very big so we have to source employees from elsewhere”;*

*“Difficult to attract qualified staff – many transients who are interested in “lifestyle” not work”;*

*“Short season, long down season (six months)”;*

*“Run out of something? Something breaks? There are not enough trades people or stores. Freight costs are huge”*

Another variable highlighted by B&B participants was the Bylaw that prohibits them having more than three rooms available, unless they fall under the ‘grandfather clause’. This limiting factor in the growth of their business was having negative influences on the amount of profit they could be potentially make.

### Tourist

A total of 28 tourist participants replied to question four, with four participants not perceiving any negative features associated with tourism in Tofino. The provided answers were themed to the features examined in Section B of the tourist survey, and then new variables were listed. Eight impacts common to the tourist survey were identified (Table 7.37) and two new impacts were identified by the tourist participant group (Table 7.38).

Table 7.37: Tourist – Negative Features of Tourism in Tofino

	Feature Statement	Frequency	%
A	Limited road access into Tofino.	6	21.4
P	Too much tourism development	4	14.3
Q	Expensive pricing.	4	14.3
S/T	Too many other people downtown/on the beach	3	10.7
B	Too much traffic congestion.	2	7.14
C/D	Lack of available tourist accommodation/low-budget accommodation.	2	7.14
E	Lack of community facilities.	1	3.57
R	Wet weather.	1	3.57
	<b>Total</b>	17	

The most common problem associated with Tofino was the limited road access into Tofino, which was mentioned by 21% of the participants. A number of returning visitors to Tofino mentioned that there was too much tourism development since their last visit, and many new and returning visitors agreed that the pricing in Tofino was ‘a bit steep’.

Table 7.38: Tourist – New Negative Impacts

Lack of variety of things to do.	3
Lack of available parking.	3

Only two more new variables were identified, the lack of things to do and the lack of available parking. Tourists mentioned that there was a lack of things to do when the weather was poor, as the majority of activities in Tofino are outdoor activities. Parking was seen as another problem, when they went into town they had problems finding space to park.

#### 7.4.5 Discussion

After performing quantitative analysis addressing the research questions of physical, psychological and social carrying capacities, the qualitative responses provided by participants offered additional insights into the underlying factors that influenced how participant groups perceived tourism in Tofino. The sentiments of the individual participant groups coincided with the overall perceptions found in the quantitative analyses, where

positive and negative feelings were similar, but identified some new similarities between participant groups.

The first question, what was the first word that came to mind when you thought of Tofino, produced a majority of words that were positive and were evenly split between cognitive and affective words. The second question, why they chose to visit/reside/operate in Tofino, gave an overall positive perception as experienced with the first question. It was interesting to note that the business and resident participant groups had similar responses, remembering that the business owners and managers are residents of Tofino.

The third question, addressing the positive aspects of tourism in Tofino, was mainly related to sharing the beautiful surroundings of Tofino, and the economic benefits accrued for the resident and business participant groups. The tourists heavily focused on the surrounding environment, the combination of the mountains and ocean, as the most positive aspect of Tofino additionally with the small town feel of the community of Tofino.

The last questions in the open-ended series provided a wide range of responses for each participant group, which dealt with the negative impacts of tourism in Tofino. The tourist participant group mainly focused on the limited access into Tofino, the amount of development and expensive pricing. Businesses focused on new issues identified in relation to the large seasonality differences during the year and lack of qualified staffing. The resident participant group offered the most negative impacts associated with tourism, which included damage to the marine/terrestrial environments and the increases in housing/renting costs; two prominent themes emerged from the qualitative analysis that were not addressed in the

quantitative portion of the survey, which included the stress on local infrastructure and the issue of vacation rentals.

Overall, all the participant groups agreed on the beauty of the natural environment of Tofino and the community that makes the town thrive. Most participants recognized the positive benefits to the community in regards to employment and economic opportunities. When analyzing the negative impacts a number of unseen variables were highlighted, which could be used as variables for subsequent analyses.

## **7.5 Summary**

The attitudes towards tourism were addressed from the perspectives of three stakeholder groups; residents, tourism businesses and tourists. The administered surveys adapted to each participant group addressed the objectives of the research; specifically the concept of tourism carrying capacity was examined. Each capacity; physical, psychological and social, was analyzed using a variety of methods performed in previous tourism literature.

First, a series of descriptive statistics were performed, first to summarize the demographic profile of each stakeholder group and proceeded to summarize each survey theme as identified in the previous chapter. Psychological carrying capacity was addressed in the image comparison theme, where it was found the tourists did not perceive an unacceptable level of use or exceeded measurements of standards of quality; therefore the capacity type was perceived by participants as not being exceeded in Tofino. Physical carrying capacity was addressed in terms of the number of people that could be accommodated over night, this

capacity was found to be exceeded, but only for a couple of weeks during the summer tourism season.

Secondly, multivariate statistics were used; which included a two-step cluster analysis to describe how the resident and business participants groups perceived the impacts of tourism, addressing social carrying capacity. A three cluster solution was selected, which summarized the participants into 'Lovers', 'Haters' and 'In-Betweeners'. For the business stakeholder group the majority of participants fell into the 'Lovers' and 'In-Betweeners' clusters, with only three participants falling within the 'Haters' cluster. The resident stakeholder group was evenly split amongst all cluster groupings, highlighting the rift between those for pro-tourism and those against the industry. In terms of social carrying capacity, there is still room for growth for the business participant group, where carrying capacity has not been exceeded for this group, but the resident participant group remains divided and could lean either way depending on the future growth of tourism in Tofino.

The last part of the survey examined in this chapter focused on the comments given by the participants to four open-ended questions. An overall positive feeling was present for all participant groups for describing how they perceive Tofino generally. Differences were apparent when summarizing the negative impacts identified by the resident participant group further justifying the need to investigate the sentiments of residents and of incorporating the opinions of this stakeholder group into the future planning and management of the town of Tofino.

Overall, from the analyses results it can be summarized that tourists are still enjoying their experiences in Tofino during their stays, indicating that there is room for growth from that perspective, and is similar to the stance of the majority of business participants, where they believe that tourism has more positive impacts than negative ones. The resident population has an obvious split in perceptions of tourism in Tofino. Some believe tourism is a positive industry and others would prefer that no one visit Tofino, and the middle group recognizes both the positive and negative effects of tourism on Tofino.

In relation to a spatial context, are these differences in perceptions apparent between participant groups? The following chapter examines the second concept under investigation in this research study, tourism space. Chapter Eight discusses the findings from the maps provided by the three participant groups, addressing perceived tourism space and identifies the current boundaries of tourism as defined by the Official Community Plan of Tofino.

## CHAPTER EIGHT

### TOURISM SPACE ANALYSIS

#### 8.0 Introduction

As discussed in previous chapters, space at tourism destinations can be described by the official boundaries designated by the local government (actual), the activities that are performed within the boundaries (functional) and how these spaces are viewed by the multiple stakeholders of a tourism community (perceived). Although the town of Tofino, British Columbia is relatively small, it attracts thousands of people throughout the summer months, which ultimately affects how these spaces will grow, disappear or relocate, and what tourists and local residents/business owners do at these various spaces.

Understanding and incorporating the current boundaries, in terms of uses and perceptions of space into local management in the public and private sectors, will assist the community plan for future scenarios. If an area/space is being overused by tourists and the local community, it can be incorporated into future zoning bylaws and marketing schemes could focus on other less-used or newly developed areas. The decisions regarding tourism space involve both the private and public sectors which will rely on each other to promote and expand specific areas and the activities that can be performed at these sites. This in turn will affect the types of tourists that come to Tofino. As tourism destinations inevitably evolve, analyzing the change in space is required to keep up with the demands of an ever-growing tourist population.

The chapter will address the research objectives and questions relating to how the stakeholders of Tofino define and determine their tourism space, which will be answered by examining each type of tourism space; actual, functional and perceived summarized in the tourism literature. The chapter begins by defining the tourism boundaries set by the local municipal government, the actual tourism space, as it provides the context for describing the other types of tourism space. Functional tourism space will then be described in relation to the actual tourism space set by zoning boundaries, where the marketing of activities will be summarized per defined area. In the survey that the three stakeholder groups responded to, perceived tourism space was addressed by asking the participants to indicate on maps where they perceived tourism to occur within the district and downtown area of Tofino. The chapter concludes by combining all three tourism space approaches to generate a holistic view of the tourism space of Tofino, which can be used for future planning by the local government and businesses.

### **8.1 Actual Tourism Space**

Actual tourism space refers to the boundaries set by the governing body in regards to delineating the boundaries of areas specifically planned for tourism development, at the time of research the latest documentation of the land use zoning of Tofino was published in the Official Community Plan (OCP) in 2002, which will be used to determine the boundaries of actual tourism space established by the District of Tofino. As previously discussed, time is important to consider, as boundaries commonly change with each revision of the land use zoning. Therefore it would be useful to compare existing land use boundaries with past boundaries to compare the changes throughout the years. Unfortunately past documentation was not available for the research project, but the current land use boundaries provide a

basis for comparison with future community plans, which can help plan for the future growth of the local and tourist populations in Tofino, British Columbia.

The district of Tofino is divided into several land use zones, including tourism focus and tourism reserve (Appendix H). Two areas were identified as tourism focus, Cox Bay and MacKenzie Beach, which are areas that are predominated by tourism accommodations. Cox Bay is situated at the beginning of the peninsula, bordering the Pacific Rim National Park Reserve (PRNPR) and is the farthest beach from downtown Tofino. Only one resort development is situated on the beach, Pacific Sands Beach Resort. The remnants of a large campground are also present. Inevitably more development will occur at this location. MacKenzie Beach, the most developed of the two focus areas, provides a wide range of tourist accommodations, including three large cabin/campground establishments; Ocean Village Beach Resort, Crystal Cove Resort and Bella Pacifica Campground, and three resort hotels; MacKenzie Beach Lodge, Middle Beach Lodge and the Tin Wis Resort. All of the accommodations face the ocean and are within a short driving distance to the downtown core of Tofino. The one area identified as a tourism reserve is situated between Middle Beach and MacKenzie Beach. Development here would provide additional access to remote Middle Beach.

The downtown core or village of Tofino provides tourist accommodation, but additionally provides the majority of commercial development in the district of Tofino. Appendix H highlights the designated downtown commercial core area, where the majority of tourism provisions are situated, which ranges from the local grocery store and bank, to various restaurants and local shops, and to the businesses that provide activities for tourists to do

during their stay. The waterfront is the setting for the downtown core as there are many access points to the public through working harbours. The main tourist region within the downtown core is relatively small and is readily completed in a couple of hours; therefore other areas of interest are typically included in tourists stays in Tofino.

Besides the specifically defined tourism focus and reserve areas and the downtown core, park space is allocated throughout the district of Tofino. These parks spaces are used by the locals and the tourists. Currently two prominent park areas are in use by both populations. Tonquin Park, located on the border of the village of Tofino, is becoming an increasingly popular beach for tourists due to the proximity of town and the growing number of tourist accommodations situated near the park access. On the eastern side of the peninsula, the park's space consists of mud flats that host a variety of birds and other wildlife. A number of private residences, including a number of tourist accommodations, and undeveloped land border the eastern coastline.

A common theme mentioned throughout the research paper is that Tofino only has a certain amount of land available for future growth. Whether the land is to be used for residential or economic development is ultimately dependent on the current owners of the land. Appendix H highlights the undeveloped land in the district by owner; municipal, provincial and private. When comparing these regions with the regions identified in the 2002 OCP the majority of the designated park space is owned by the Provincial government and the other beach accessible areas are privately owned. The municipal government owns a large amount of land directly behind the development in the village of Tofino, which will provide room for future growth of the downtown core.

All of the identified tourist regions – tourist focus, tourist reserve, park space, and the downtown commercial core, as delineated by the municipal government, are situated on the waterfront. The characteristics of the delineated tourism boundaries, or the actual tourism space, define the activities that attract tourists to particular areas, also known as the functional tourism space of a tourist destination.

## 8.2 Functional Tourism Space

The majority of actual tourism space allocated in Tofino borders the water, either the rough Pacific Ocean or the calm Tofino Inlet on the eastern side of the peninsula. The two types of water settings greatly influence the types of activities that can be performed within the identified tourism space boundaries and will determine the type of tourist visiting these particular regions. Tofino has been marketed as an ecotourism destination, emphasizing the importance of preserving the natural environment whilst enjoying the natural surroundings; another factor that will influence the activities that are performed within Tofino. Combining all the mentioned factors, a number of activities are performed at specific locations but are all similar in terms of enjoying the natural environment.

The areas of Cox Bay and MacKenzie Beach/Middle Beach identified as actual tourism space host a variety of tourist types, due to the number of accommodation types ranging from campgrounds to 5-star resort hotels. The Pacific Ocean borders the two areas, allowing a range of beach activities to occur, including sun bathing, swimming, boogy boarding and surfing. MacKenzie Beach has calmer surf conducive to boogy boarding and Cox Bay has rougher surf, making it a popular spot for surfing amongst the locals. The beach at Tonquin Park is another area predominately used for sun bathing.

On the eastern side of the peninsula the water is calmer as it is channelled into an inlet and moving further south are the mud flats. The water is ideal for sea-kayaking and many businesses rent out kayaks or provide options for daily and overnight tours for tourists. A popular activity at the mud flats is wildlife watching; migratory birds are commonly viewed when the tide is out and many boating companies additionally offer bear-watching, where small boats are taken along the coastline in attempts to view black bears and other wildlife.

The majority of the businesses catering to tourism activities are located in the downtown commercial core. These include shopping, boating, fishing, surfing, and airplane touring. A number of locally owned shops are located within the blocks of First Street and Fourth Street; the majority sell regional artists' work including First Nations artwork, paintings, photography, clothing, jewellery, dish ware, and trinkets. In regards to boating, activities include whale watching, sea-kayaking, traditional First Nations canoe trips, trips to Hot Springs Cove and Ahousaht, and wildlife watching. A number of competing businesses offer these and other services to tourists, providing a one-stop shop for all the tourist's needs. Fishing excursions are run by businesses and individuals who personally take tourists out for the afternoon on their boats, bringing back salmon, halibut, steelhead and trout. A number of surf shops are located throughout the district, where many provide rental gear and daily surf lessons for tourists – promising that you can stand on the surf board after one lesson. Airplane touring provides an eagle's view of the beauty of Tofino and additionally is a quicker route to many common destinations, including, Ahousaht and Hot Springs Cove.

Whether visitors want to relax on the beach or to go on a guided tour of the area, Tofino offers a number of activities that can be performed by the visiting population. The range of

activities that are available to tourists all focus on the natural surroundings of the area, including other tourism spaces outside the actual defined boundaries, including Ahousaht and Hot Springs Cove. The main questions that remain are - where do tourists go and where do residents and businesses perceive tourists to go? In the following section, perceived tourism space is examined to compare whether the identified actual and functional tourism spaces located throughout the district of Tofino match where the stakeholder groups perceive tourism to be evident.

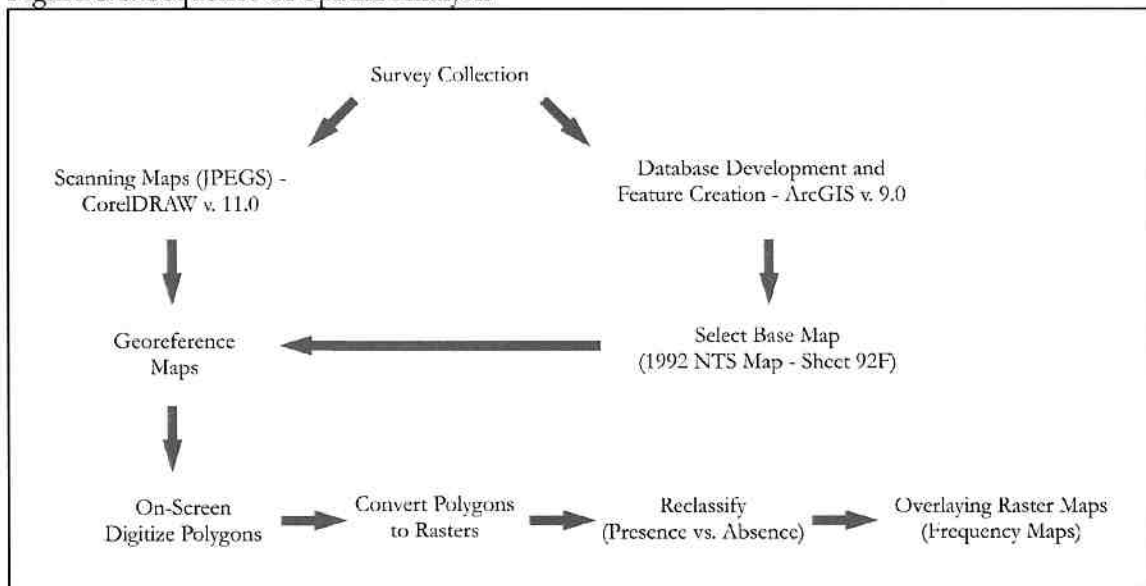
### **8.3 Perceived Tourism Space**

To determine what defines tourism space for the community of Tofino or how tourism space is perceived by the identified stakeholder groups, a research design by Keller (in progress) and a methodology performed by O'Connell and Keller (2002) was followed in the survey design. The resident and business groups were asked to indicate on two maps where they perceived tourists to go and for the tourist participant group, where they went during their trip to Tofino. Specifically, the resident and business participant groups were asked to indicate areas of high concentrations of tourists and other peripheral areas of tourism through circling and shading the chosen regions, and the tourist participant group was asked to indicate where they visited and areas that were memorable to them during their stay in Tofino through circling and numbering the regions.

As described in the methods chapter, all completed maps from the participants were first scanned and converted into JPEGs in CorelDRAW v.11.0 in order to be entered into a GIS platform. Before the maps were brought into the GIS platform, a geodatabase was created to represent each map and their corresponding polygons/circles and a reference map was

selected in order to match the scanned maps with a geographic representation. Using ArcGIS v.9.0, maps were first referenced to the chosen base map and using spatial editing techniques all of the polygons were on-screen digitized, resulting in hundreds of polygons per participant group. The polygons were rasterized and reclassified for spatial analysis, which included adding the maps together to produce frequency maps, summarized in Figure 8.1.

Figure 8.1: Sequence of Spatial Analysis



The two main purposes of this section are to identify where each participant group perceives tourism to take place in Tofino and to compare the perceptions of the three groups; therefore each group will be examined individually and will be compared and contrasted to the other participant groups. As perceptions alter with time, the community mapping project performed in 2004 will be discussed to incorporate past studies performed on the tourism space of Tofino. The section closes with a discussion on the issues raised and recommendations for future research of perceived tourism space.

### 8.3.1 Data Processing

Following the research design by Keller (in progress) and the methodology performed by O'Connell (2003), each survey asked the participants to draw polygons where they perceived concentrations of tourism on two maps, a 1:40,000 District of Tofino Map (Figure 8.2) and a detailed 1:14,000 Village of Tofino Map (Figure 8.3). Following the instructions, the resident and business participant groups were asked to shade-in the polygons of high concentrations of tourists and leave the polygons blank for peripheral areas of tourism. The tourist participant group was asked to indicate where they visited during their stay and any memorable locations they had during their visit to Tofino by numbering the locations. The numbering section was analyzed using the N5 qualitative software as the participants were given space to discuss their memorable experiences, which will be discussed in the tourist group summary.

Figure 8.2: Map One – District of Tofino

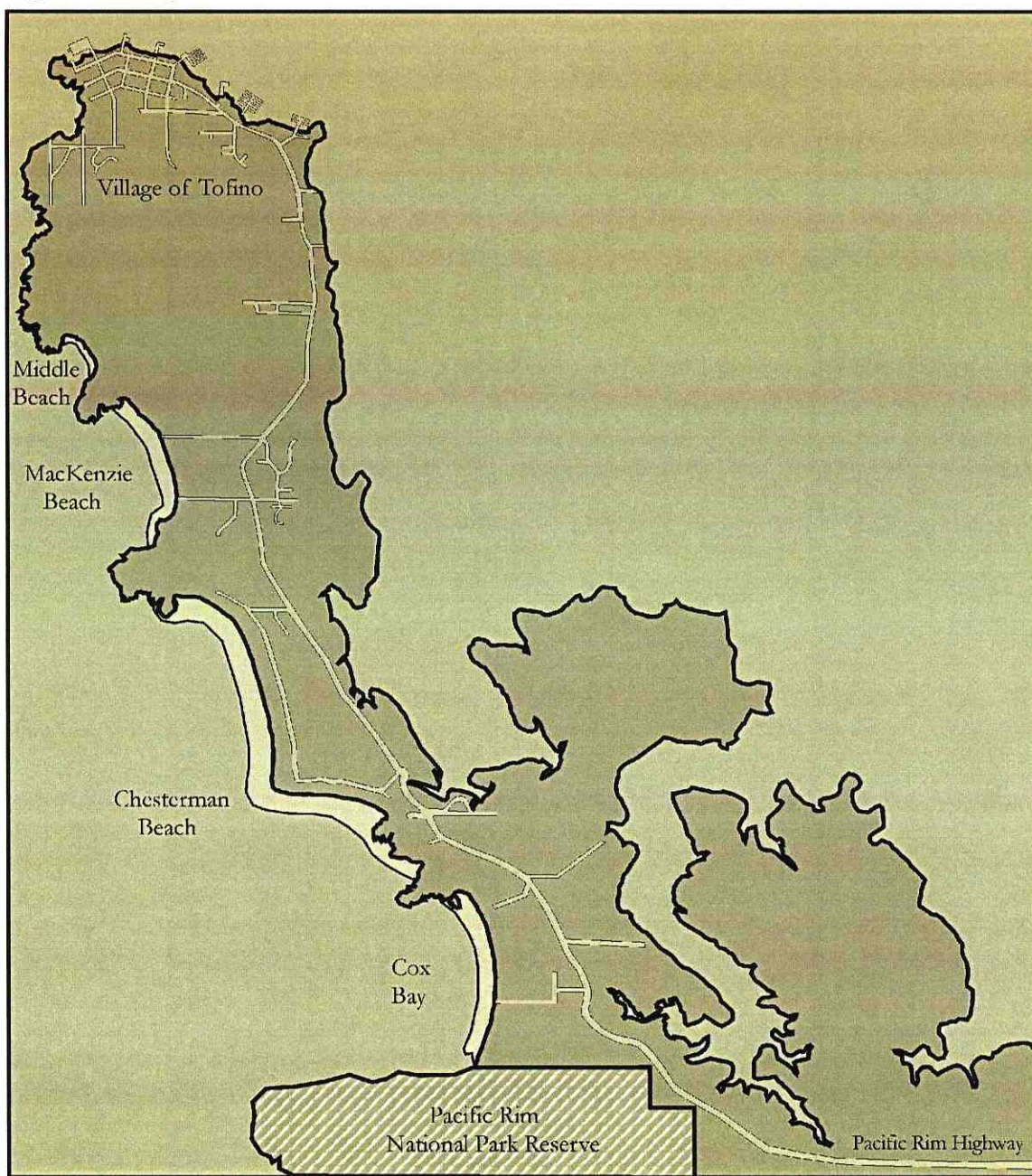
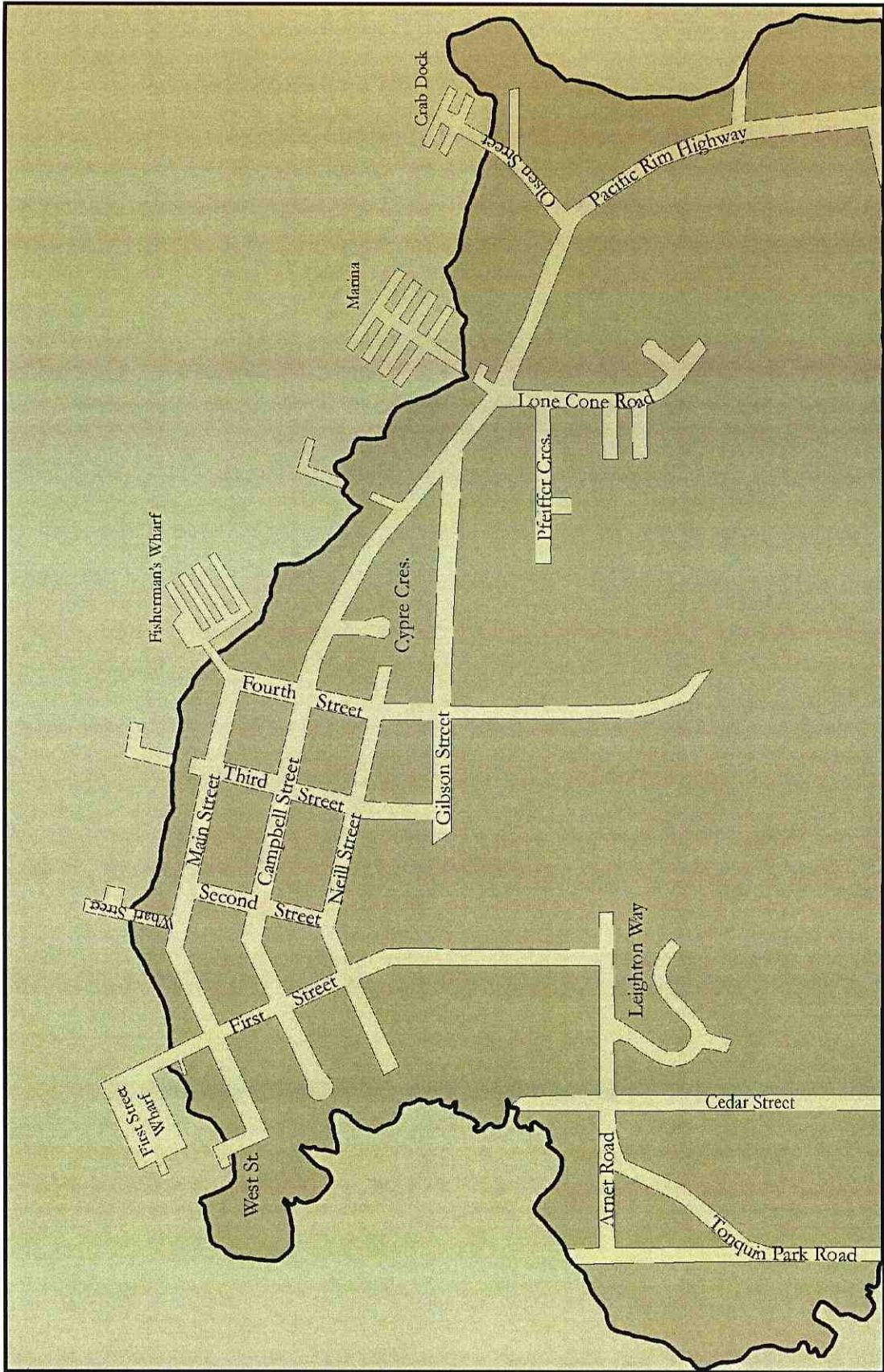


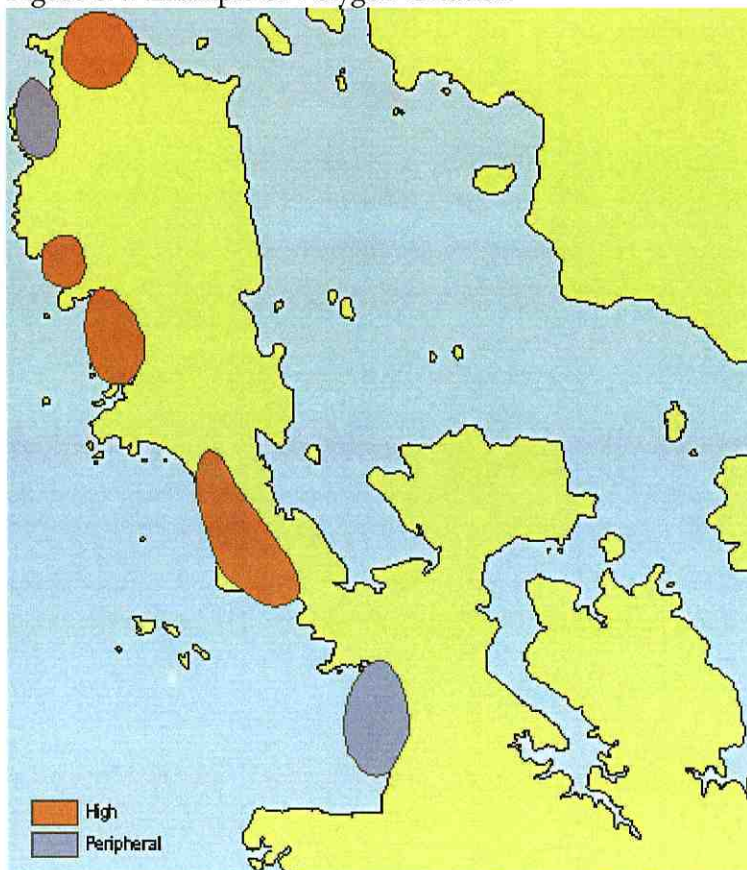
Figure 8.3: Map Two – Village of Tofino



Briefly described in the introduction to the section, each map was scanned into CorelDRAW v.11.0, the software used to create the two maps, and converted into JPEG format so they could be opened in the ArcGIS v.9.0 software. Within ArcCatalog, a personal geodatabase was created using the coordinate system obtained from the chosen base map; a 1:250,000 1992 NTS map (sheet 92F – Port Alberni). A new feature dataset was created for each polygon feature class, for the business and resident participant group a maximum of four features classes were created (Map One – High, Map One – Peripheral, Map Two – High, Map Two – Peripheral) and a maximum of two feature classes for the tourist participant group (Map One – Visited, Map Two – Visited).

To create the polygons for GIS analysis, the participant maps first had to be aligned or registered to the base map. Five control points distributed throughout each map (Map A and Map B) were chosen to match the participant maps to the NTS base map in ArcGIS. ArcMap calculates the associated RMS (root mean square) error which indicates how well the control points match the locations on the base map. A value less than 0.008 digitizing inches is desired but ideally an RMS value between 0.004 and 0.005 digitizing inches is preferred, which is dependent on the nature of the data, the scale of the base map, and the material from which the data is digitized. An accepted RMS value of 0.004/0.005 was strived for, but values below 0.008 were accepted due to the nature of the printed map generated in CorelDRAW. Some of the resulting RMS values were higher than wished for through multiple efforts ( $>0.008$ ), but as a general picture of perceptions was obtained these values were kept. Once the participant maps were georeferenced, polygons were created by on-screen digitizing techniques using ArcGIS's Spatial Editor tool (Figure 8.4).

Figure 8.4: Example of Polygon Creation

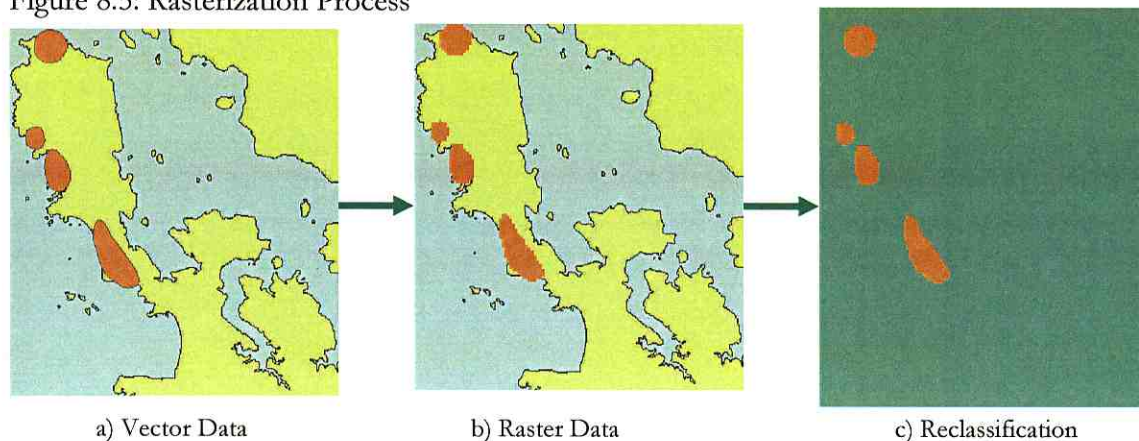


In some instances there were issues with digitizing polygons, which were commonly associated with overlapping polygons (slivers) and overlapping feature class boundaries. To remain consistent in the spatial analysis, efforts were made to digitize along the centre of the overlapping areas. The resulting polygon feature classes were joined with their attribute data (coded responses to survey questions), which could be used for further analysis and querying.

In order to summarize the identified areas by the participant groups using spatial analyses, it was decided to convert all vector polygon data into raster format. Map One polygons were rasterized using a cell size of 50m and Map Two polygons were rasterized using a cell

resolution of 25m, rasterization resulted in a total of 20,550 and 3,871 cells for the two maps respectively. Once all polygons were rasterized, the raster maps were then reclassified into Presence (1) vs. Absence (0) (Figure 8.5), performed by the Spatial Analyst tool.

Figure 8.5: Rasterization Process



After all data processing was completed the overlaying of the multiple raster maps was performed. Each participant group's maps were added together to produce a frequency map for high and peripheral areas of tourism for the resident and business participant groups, and visited areas for the tourist participant group. Following the completion of the frequency maps, each was compared to the other stakeholder groups to identify similarities and differences between the stakeholders of the community of Tofino.

### 8.3.2 Stakeholder Group Summary

Before producing the frequency maps, all the completed maps for each participant group were summarized in relation to the number of polygons used and the percentage of area covered by the polygons for the two maps. The table format can provide stakeholder groups “with information about how individuals respond, how their responses compare with others,

and how individual responses compare with an average of all responses” (O’Connell and Keller, 2002:614). Following the descriptive summary of the maps for each stakeholder group, the resulting frequency maps were examined. The frequency maps identified areas of tourism space that were similar for stakeholder group participants, where areas of greater consensus are explored.

### *Resident*

From the 40 surveys collected from the resident stakeholder group, only one participant did not complete the mapping exercise, leaving 39 participant maps or 78 individual maps to be summarized (Table 8.1).

Table 8.1: Resident GIS Descriptive Summary

1:55,000/ 1:14,000	<i>Min.</i>	<i>Max.</i>	<i>Range</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Skew.</i>	<i>Kurt.</i>
<i># of Polygons</i>							
Total # of Polygons	1/1	9/8	8/7	5.1/3.2	2.3/2.0	0.1/0.8	-1.1/0.0
High	1/1	9/7	8/6	3.2/1.7	2.1/1.4	1.2/2.6	1.2/7.1
Peripheral	1/1	5/6	4/5	2.9/2.5	1.5/1.4	0.1/1.2	-1.4/1.1
<i>% Area covered by</i>							
High	0.1/0.6	13.5/41.5	13.3/40.9	4.0/8.9	3.4/9.2	1.3/2.7	1.3/7.8
Peripheral	0.2/0.1	9.5/20.5	9.3/20.4	2.6/4.7	2.5/4.3	1.6/2.3	1.8/6.9

(Note: Map One/Map Two)

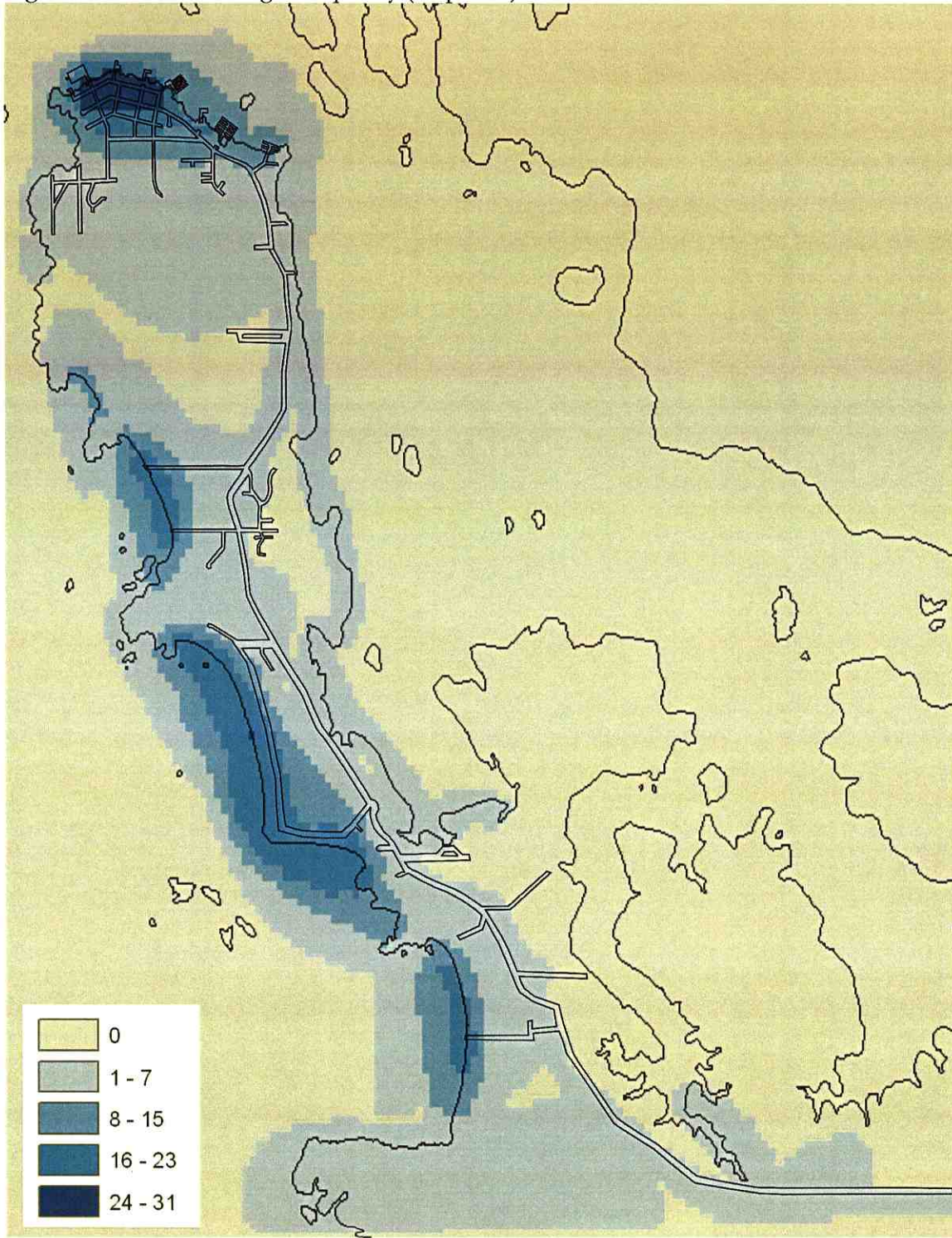
Comparing the results of the number of polygons for both maps, residents used a similar number of polygons to define both high and peripheral areas of tourism space, resulting in a similar mean for all maps. In regards to the percent area covered by the polygons differences exist between the maximum areas of the two maps, Map Two had a maximum of 41.5% covered by high tourism concentrations whereas Map One has a maximum of 13.5%, which is due to the different map scales and that Map Two focuses only on the downtown core.

Differences additionally existed between identified high and peripheral areas, in particular for maximum percentages covered in Map Two, where high areas covered a maximum of 41.5% and the peripheral areas only consisted of 20.5%. The differences between maps influence the other descriptive statistics but the differences are more prominently seen in the resulting frequency maps in Figures 8.6 – 8.9.

Figures 8.6 and 8.7 summarize Map One's high and peripheral areas of tourism space, respectively. In both figures the majority of the area falls within the lowest category, where 0 participants indicated no areas of high or peripheral tourism space. The areas of particular interest are the areas with the most frequency, in Figure 8.6 where more than 24 participants identified the same region and in Figure 8.7 where more than 10 participants identified the same region. It is noted that large differences exist between the frequencies of the high and peripheral maps as many participants did not indicate any areas of peripheral tourism space and only drew polygons of high tourism space; this could be a result of participants not following the instructions properly even though a visual aid was provided, but it is believed by the researcher that all areas of tourism use were perceived as high to the individual participants.

Figure 8.6 highlights the resident participants' perceptions of high areas of tourism concentrations. Four main areas were identified by the participants as being the highest areas of tourism space. The most common area was the downtown core, particularly in the commercial centre that consists only of a small number of blocks. The second most identified region was Chesterman Beach, particularly on North Chesterman Beach where a number of B&B and vacation rentals are located, and the well-known Wickaninnish Inn.

Figure 8.6: Resident – High Frequency (Map One)



The other two areas identified by the resident participants were MacKenzie Beach and Cox Bay; both have tourist accommodations right on the beach for tourist use. Middle Beach fell within the middle frequency class, possibly indicating the future growth in tourist use of this beach or to leave as low density tourism. A small number of participants followed the road that was provided on Map One to indicate high areas of tourist concentrations, possibly indicating that they perceive many tourists coming into Tofino.

Figure 8.7: Resident – Peripheral Frequency (Map One)

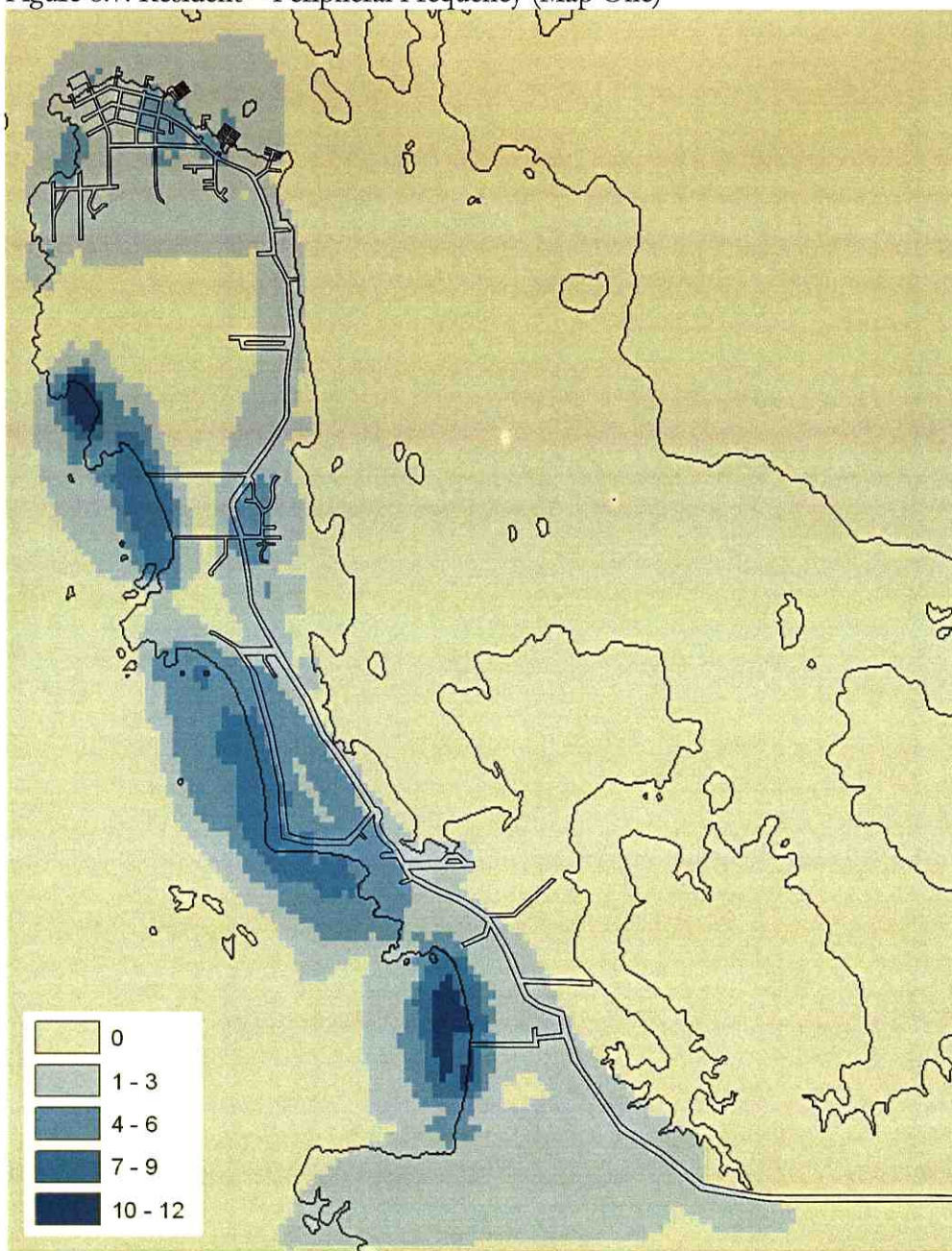


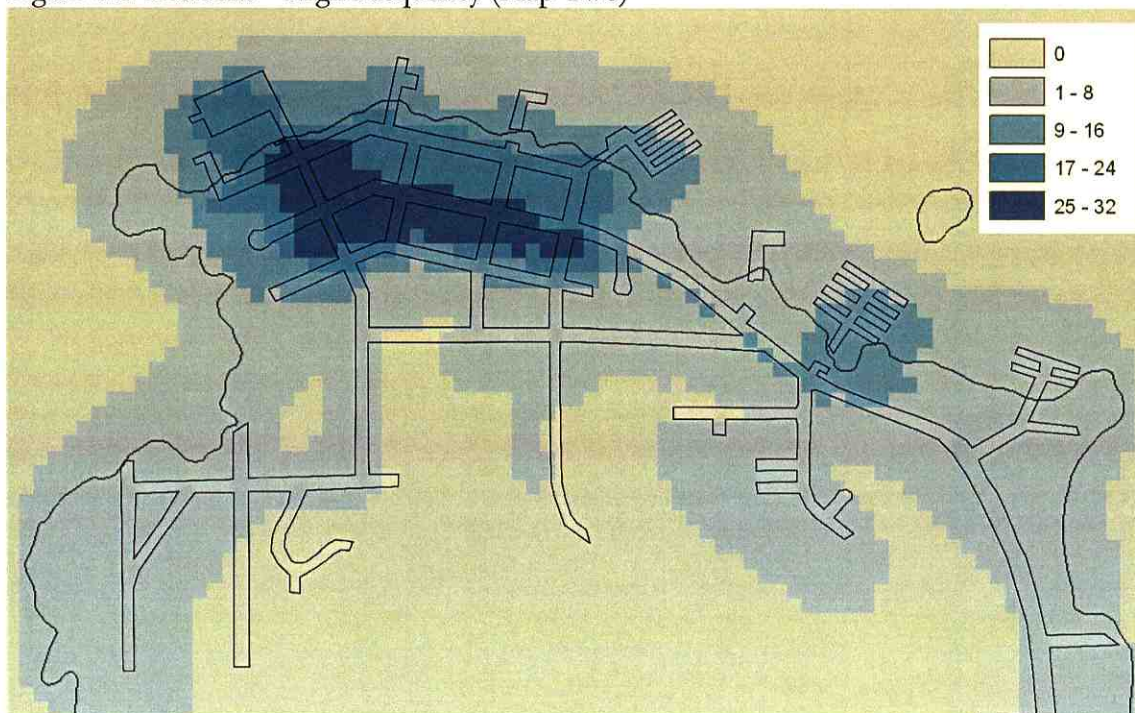
Figure 8.7 details the areas that the resident participant group indicated as peripheral areas of tourism space. Four predominate regions were identified - Cox Bay, Middle Beach, MacKenzie Beach and Chesterman Beach. The most frequent areas were Cox Bay and Middle Beach; both areas currently have one resort development for tourist accommodation,

Pacific Sands and Middle Beach Lodge. The two areas identified by the resident participants could possibly indicate potential areas of high tourism concentrations, which may be useful for the future planning of Tofino's tourism development. The other peripheral areas, MacKenzie and Chesterman Beaches, were commonly selected by participants who identified the downtown core as the only area for high tourism use.

Two main differences were exhibited between the high and peripheral frequency maps; the downtown core was not seen as peripheral tourism space but as highly used tourism space and the small commercial space located in the middle of Highway 4 by MacKenzie Beach was only prominent in the peripheral tourism space map. This commercial area consists of a small grocery store and video store, a number of local food outlets including the popular Sobo's, and two surf shops (Surf Sister and Tofino Surf School); this area is becoming increasingly popular with the growing residential development immediately behind the area and the number of tourist accommodations that are located in close proximity. It is additionally interesting to note that only a small number of the resident participants indicated that the Pacific Rim National Park Reserve was part of Tofino's tourism space, possibly indicating that many view the national park as a separate entity.

To summarize more detailed information about the tourism space in the village of Tofino, Map Two was used to capture the perceptions of high and peripheral tourism space in the downtown area of Tofino. Within the village of Tofino only a small number of blocks are commercial space but a number of surrounding regions are highlighted in both maps.

Figure 8.8: Resident – High Frequency (Map Two)



In Figure 8.8 frequencies of the downtown area radiate out from the main commercial core, indicating that the blocks within these areas are the predominate areas of high tourism space. The highest frequency area contains the largest number of local shops and restaurants, and includes the area leading to the main dock, First Street Wharf. The other area identified by more than nine resident participants was the marina, which houses the Days Inn tourist accommodation, pub and restaurant, and a large marina where a number of tourist activities are arranged and from which they depart from including whale/wildlife watching, fishing and kayaking. The peripheral areas of tourism space are mainly located along the northern coastline of Tofino but the Tonquin Beach area located on the western coast was additionally identified by a smaller number of resident participants as a high area of tourism space.

Figure 8.9: Resident – Peripheral Frequency (Map Two)

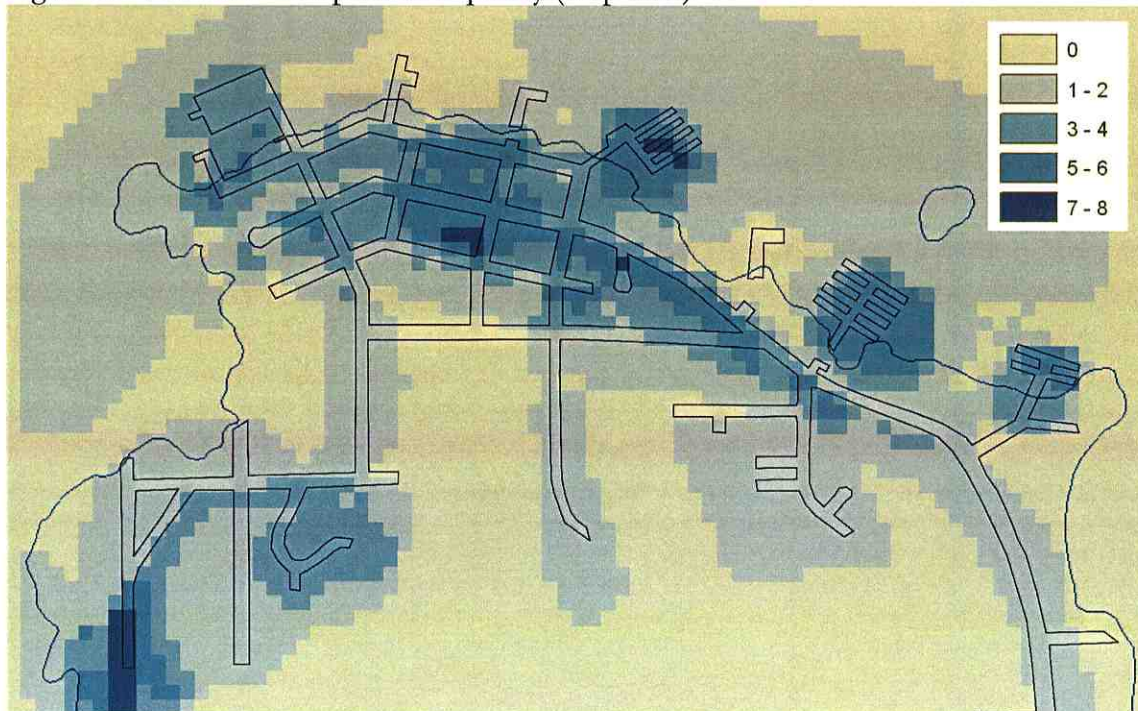


Figure 8.9 is visually different from the high downtown areas, where a number of new regions were identified by the resident participant group. The peripheral regions include all of the wharfs in the downtown area of Tofino, particularly Fisherman's Wharf, a number of residential streets, and water regions surrounding the town of Tofino. All the wharfs in Tofino are open to the public. Fisherman's wharf is the predominate area for boats needing gas and other supplies. The residential areas identified are mainly areas where various tourist accommodations are located, including B&Bs, vacation rentals, and motels/hotels. The access point to Tonquin Park is more frequent in the peripheral tourism space, where a growing number of tourist accommodations are becoming established. Interesting regions identified in the peripheral tourism space include the water, which one resident participant included as a perception of tourism space.

*Business*

From the 60 participants who completed the survey, eight did not complete the mapping section of the survey and two participants only completed one map (Map One), therefore 102 maps were summarized (Table 8.2) and used for further GIS analysis.

Table 8.2: Business GIS Descriptive Summary

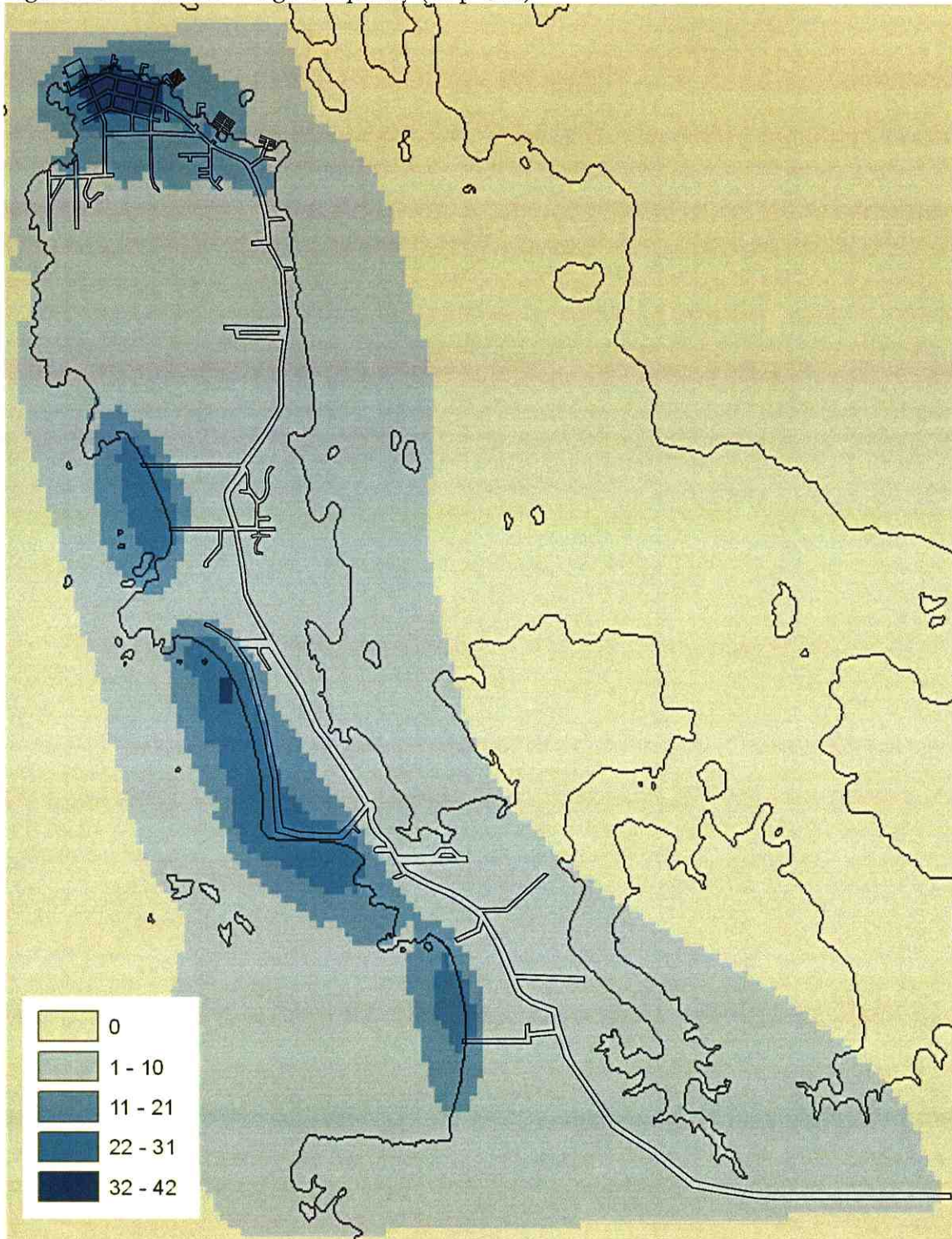
1:55,000/1:14,000	<i>Min.</i>	<i>Max.</i>	<i>Range</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Skew.</i>	<i>Kurt.</i>
<i># of Polygons</i>							
Total # of Polygons	1/1	12/12	11/11	5.2/2.9	2.6/2.4	0.8/2.1	0.4/4.3
High	1/1	8/8	7/7	3.4/2.6	1.8/1.6	0.4/1.5	-0.5/3.0
Peripheral	1/1	10/7	9/6	1.7/2.0	1.5/1.5	4.0/2.0	19.4/4.3
<i>% Area covered by</i>							
High	0.2/1.5	48.3/50.4	48.1/48.9	5.6/9.3	7.9/9.1	3.7/2.7	17.8/8.9
Peripheral	0.1/0.4	20.2/40.3	20.1/39.9	3.2/6.2	4.6/8.9	2.6/3.1	6.4/9.8

(Note: Map One/Map Two)

The descriptive summary of the business participant group is similar to the residents' in terms of the number of polygons used to indicate areas of high and peripheral tourism space, where the means are similar for both groups. The main difference between the participants exists in the amount of area allocated within each categorization, where the business stakeholder group included more tourism space for both the high and peripheral maps, as described by the means. For example, the business participants' maximum areas were at least 10% higher for Map One than the resident participants (i.e. 48.3% vs. 13.5% for high and 20.2% vs. 9.5% for peripheral) and were also higher for Map Two. Overall, the business participant group included more area within the district of Tofino as either high or peripheral tourism space than the resident participant group.

Figures 8.10 and 8.11 highlight the regions identified as high and peripheral areas of tourism space, respectively. The two highest categories of frequency provide the most insight to where business owners and managers perceive tourists to go during their stays and on the peripheral tourism space map, it may potentially provide insight to where they believe new niches for tourists will become more apparent with the increase of tourism development in Tofino.

Figure 8.10: Business – High Frequency (Map One)



In Figure 8.10, four areas of high tourism space were identified by the business participant group, which include the downtown core, MacKenzie Beach, Chesterman Beach and Cox

Bay. All of the beaches are included in the second highest frequency classes, where over 22 participants indicated as high areas of tourism use. The main access point to Chesterman beach, at the north end where parking lots are located for tourist and local use, is within the highest class. The downtown core with the highest frequency radiates outwards, which is similar to the beach areas.

Figure 8.11 highlights different areas as peripheral tourism space than the high tourism space locations, where Middle Beach, Cox Bay, and central Chesterman Beach are included. As mentioned previously, currently Middle Beach Lodge and Pacific Sands are the only tourism development on Middle Beach and Cox Bay, respectively, but access to these beaches will become more prominent when future development of these prime locations happens. It is interesting that the central area of Chesterman Beach was identified as a peripheral area, where many access points to the beach exist by foot but the majority of the access is through the beachfront vacation rentals and B&Bs. The main public entrances to Chesterman Beach are at the north and south ends where parking lots are located for local and tourist use. Specific areas within the downtown core were highlighted as peripheral tourism space but will be elaborated upon in Figures 8.12 and 8.13.

Figure 8.11: Business – Peripheral Frequency (Map One)

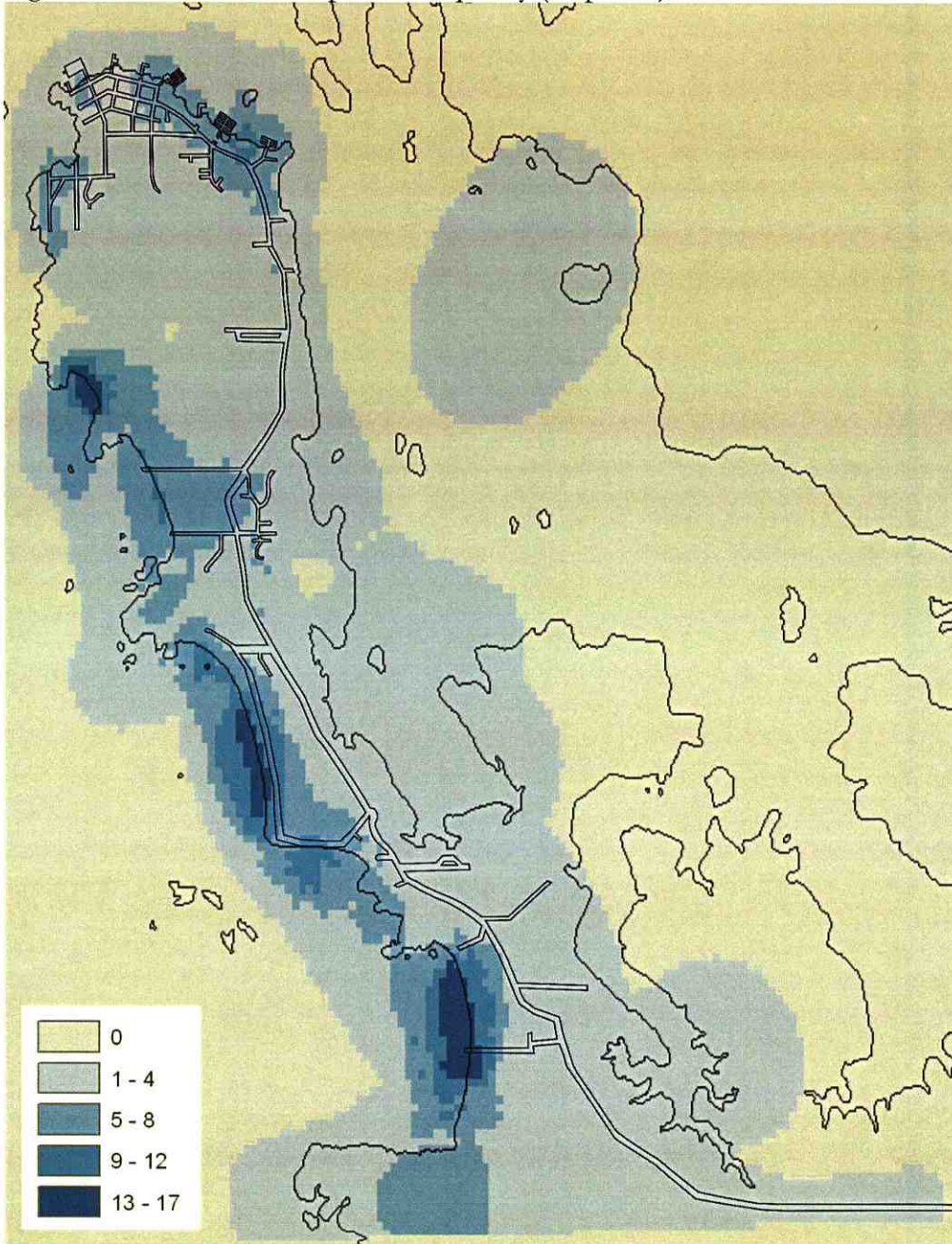


Figure 8.12: Business – High Frequency (Map Two)

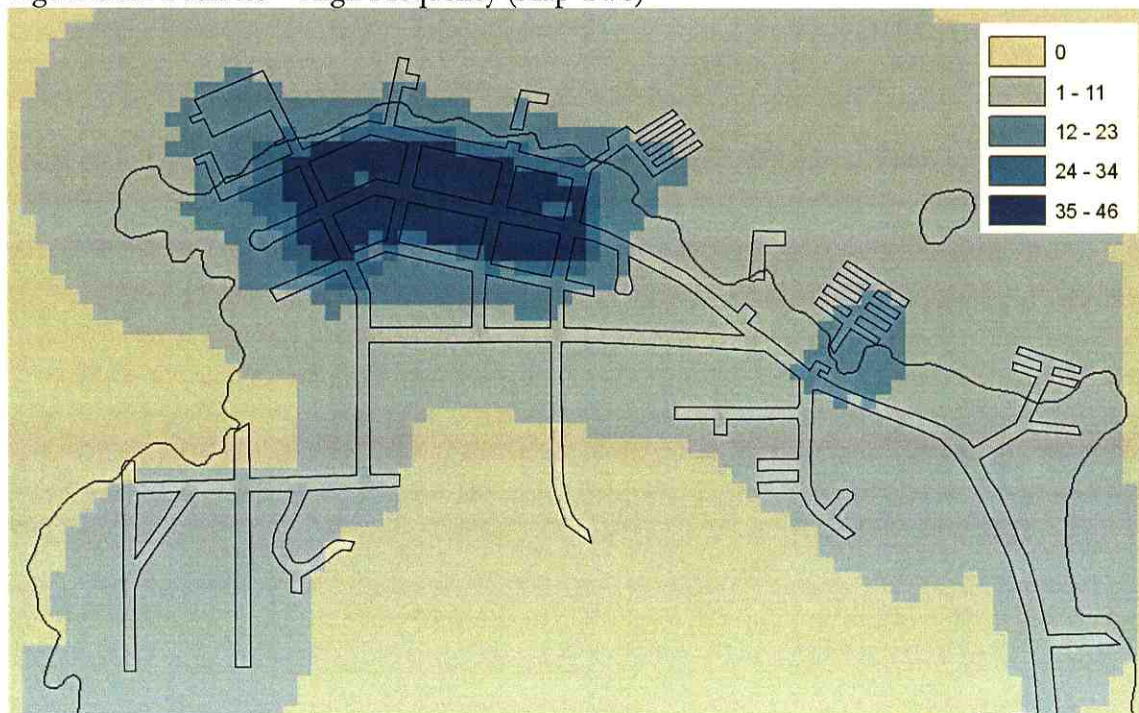
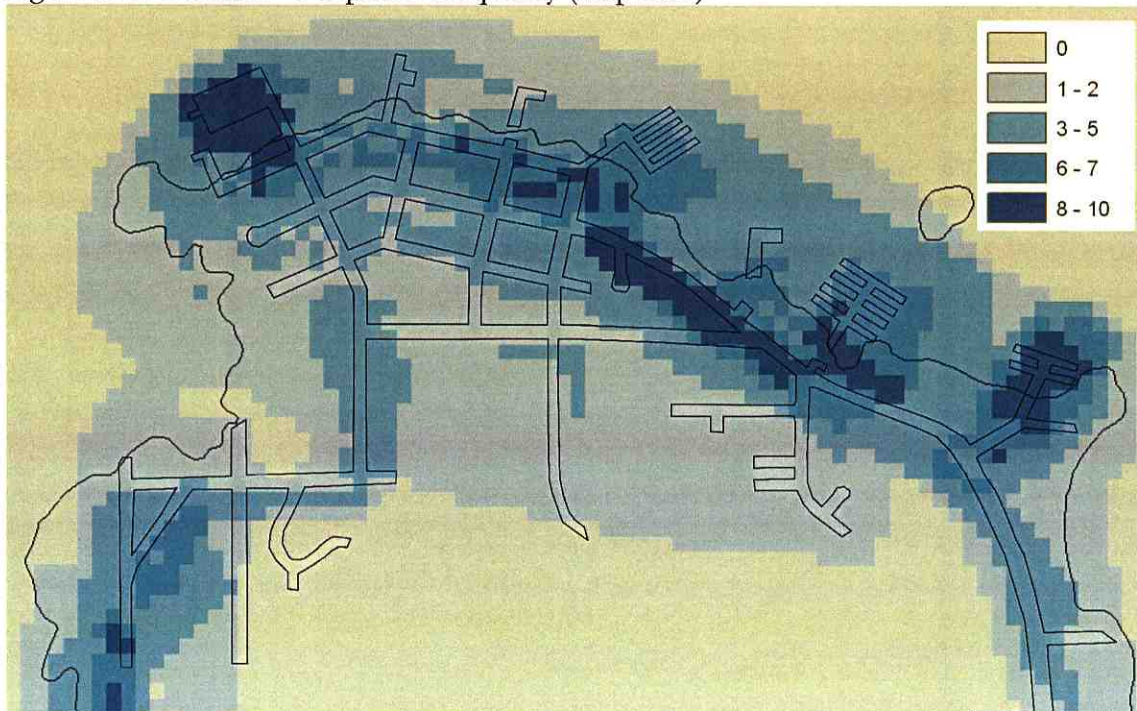


Figure 8.12 provides a more detailed view of the downtown regions specified by the business participant group, where the most frequency of high tourism concentrations is within the central downtown core and radiates out in all directions. The marina area was identified as being a high tourism use area as the marina is a one stop shop for tourists' needs including, accommodation, restaurants and an activity centre. Additionally, the access road into Tonquin Park was agreed upon as a high tourism use area by 1 to 11 participants.

Figure 8.13: Business – Peripheral Frequency (Map Two)



In Figure 8.13 the peripheral regions specified by the business participants are spread throughout the village of Tofino, which include wharves and specific road sections. All of the wharves were identified more prominently as peripheral tourism space, mainly the First Street Wharf and Crab Dock. The Crab Dock is at the end of a small road with a number of B&B tourist accommodations located throughout the street. Two prominent road sections were highlighted in the above figure, first, the areas between the marina and Fisherman's Wharf, which currently has a number of shops, restaurants and another tourism activity centre, and the section of First Street by the Common Loaf Bakery, which is a popular place for locals and tourists but the strip of road is also an area for parking resulting in a long strip of visitor vehicles in the summer months.

The four frequency maps derived from the polygons the business participant group drew presented how the stakeholder group perceived high and peripheral areas of tourism

concentrations within the district and village of Tofino. The district maps highlighted that the downtown core was the only area that fell overwhelmingly in high tourism space.

MacKenzie Beach, Chesterman Beach and Cox Bay were also identified as high areas of tourism, specifically including some of the entrances to these beaches. The peripheral map again focused on the western coast beaches but Middle Beach, central Chesterman Beach and Cox Bay were the top peripheral areas of tourism space. The village maps narrowed down the areas within the town of Tofino where it is perceived that tourists go, mainly within the downtown commercial core, the wharves, Tonquin Park access road, and road sections along the Pacific Rim Highway and First Street.

### Tourist

The tourist stakeholder group in the research study consisted of 29 participants, from the collected surveys one participant did not complete any maps and three completed only Map One; therefore 53 maps were descriptively summarized, presented in Table 8.3.

Table 8.3: Tourist GIS Descriptive Summary

1:55,000/1:14,000	<i>Min.</i>	<i>Max.</i>	<i>Range</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Skew.</i>	<i>Kurt.</i>
<i># of Polygons</i>							
Visited	1/1	4/8	3/7	2.6/3.0	0.9/2.1	0.2/1.5	-0.7/1.4
<i>% Area covered by</i>							
Visited	0.3/0.0	14.5/21.8	14.2/21.7	3.8/4.2	3.7/5.2	1.5/2.3	1.9/5.8

(Note: Map One/Map Two)

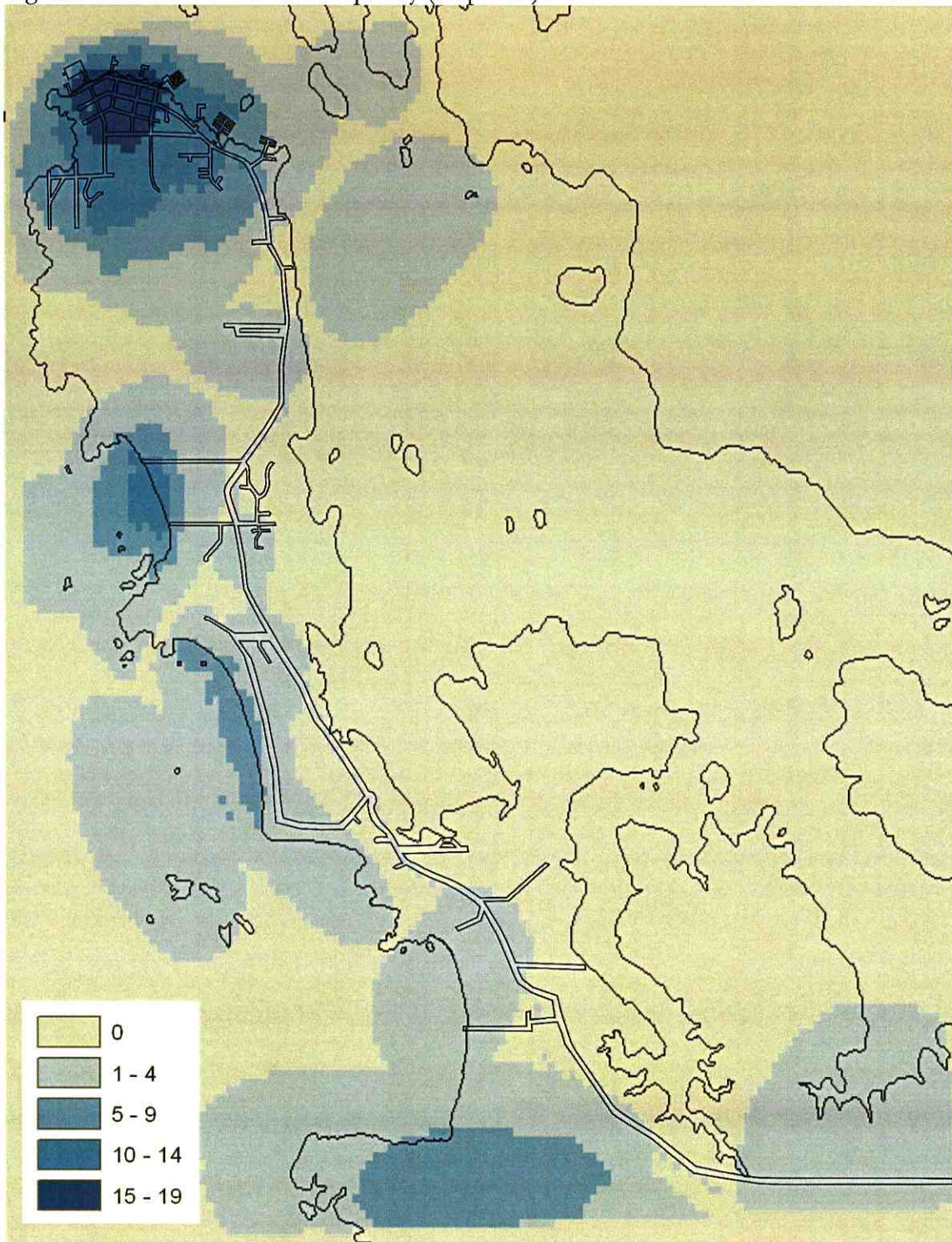
Compared to the other two stakeholder groups, the tourist participants used a relatively small number of polygons to summarize where they visited during their stay, where only a maximum of four polygons were used in Map One and eight in Map Two. This result would be expected with the local knowledge of the resident and tourism business participants. The

small number of polygons related to a smaller area identified by the tourist participant group as tourism space, where only a maximum of 14.5% was covered in Map One and 21.8% in Map Two.

In order to compare the perceptions of the resident and business participant groups, the tourist stakeholder group was asked to indicate where they went during their stay in Tofino. This is presented in Figures 8.14 and 8.15. To make it easier for the tourists to get a sense of direction, all of the beaches were labelled on the district map, which were included on all survey maps, and points of references were included on the village map of Tofino only for the tourist participants. The points of reference used for the tourists' village map included the Co-op, Bank, Post Office, Hospital, Police and School; it was believed that these points would not bias the maps as no tourism establishments were identified. The Pacific Rim National Park Reserve was additionally included to see what proportion of tourists were visiting both Tofino and the National Park.

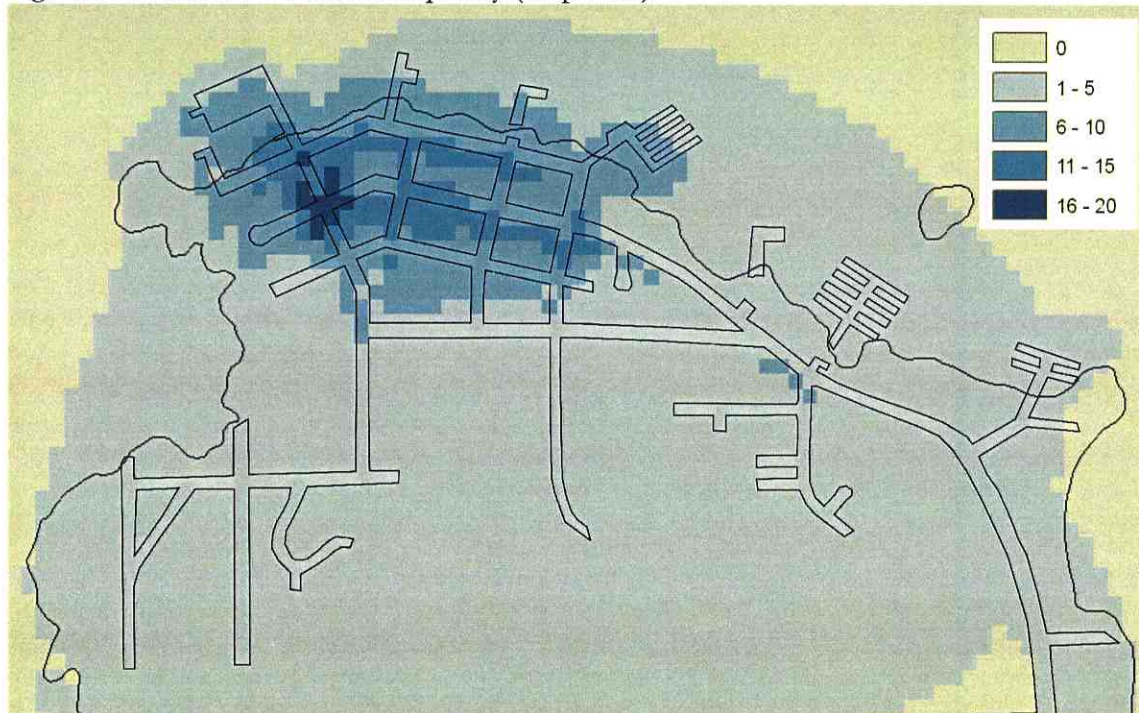
Figure 8.14 highlights the areas that were visited by the participating tourists, only four areas were included in their drawn polygons. The downtown core was the most visited area, followed by MacKenzie Beach, Chesterman Beach and the Pacific Rim National Park Reserve. The downtown core was the most frequented place probably due to all the amenities that are located in the commercial core, including tourist shops and activity centers, grocery stores, banks and restaurants.

Figure 8.14: Tourist – Visited Frequency (Map One)



MacKenzie Beach was highly frequented as a number of participants were staying at one of the many tourist accommodations that are on the beach. North Chesterman Beach was visited more than South Chesterman Beach, which could be related to the number of surf lessons that are taught on this beach and to the access to the popular Wickaninnish Inn. From the frequency map the Pacific Rim National Park Reserve was highlighted as a place that was visited during their trips, which includes the famous Long Beach and many beautiful walks in the rainforest.

Figure 8.15: Tourist – Visited Frequency (Map Two)



As the largest frequency of visits in the district of Tofino was in the village of Tofino it was important to capture where tourists were going, summarized in Figure 8.15. The most visited area in Map Two was the block starting from the Co-op and working down to the waterfront by First Street Wharf. Specific sections of Campbell Street and Main Street were identified in the highest category as well, where a number of local shops are located. The

frequencies radiate outwards to include the wharves of Tofino and additionally include roads that were traveled, identifying specific tourist accommodations.

In the maps completed by the tourist participant group a general picture of where tourists go during their stays in Tofino is depicted, which include the downtown commercial core, MacKenzie Beach, Chesterman Beach and the Pacific Rim National Park Reserve. As it was noted in previous chapters, there were disadvantages with the survey distribution to tourist participants, as many approached tourists felt they didn't know enough information to fill out the survey resulting in a relatively low participant rate. Other areas within the district of Tofino are visited by the tourist population as a number of tourist accommodations are situated throughout the district, but as previously mentioned in the methods chapter, the sample that was collected was from random selection at beaches, in the downtown core, and through randomly selected tourist accommodations.

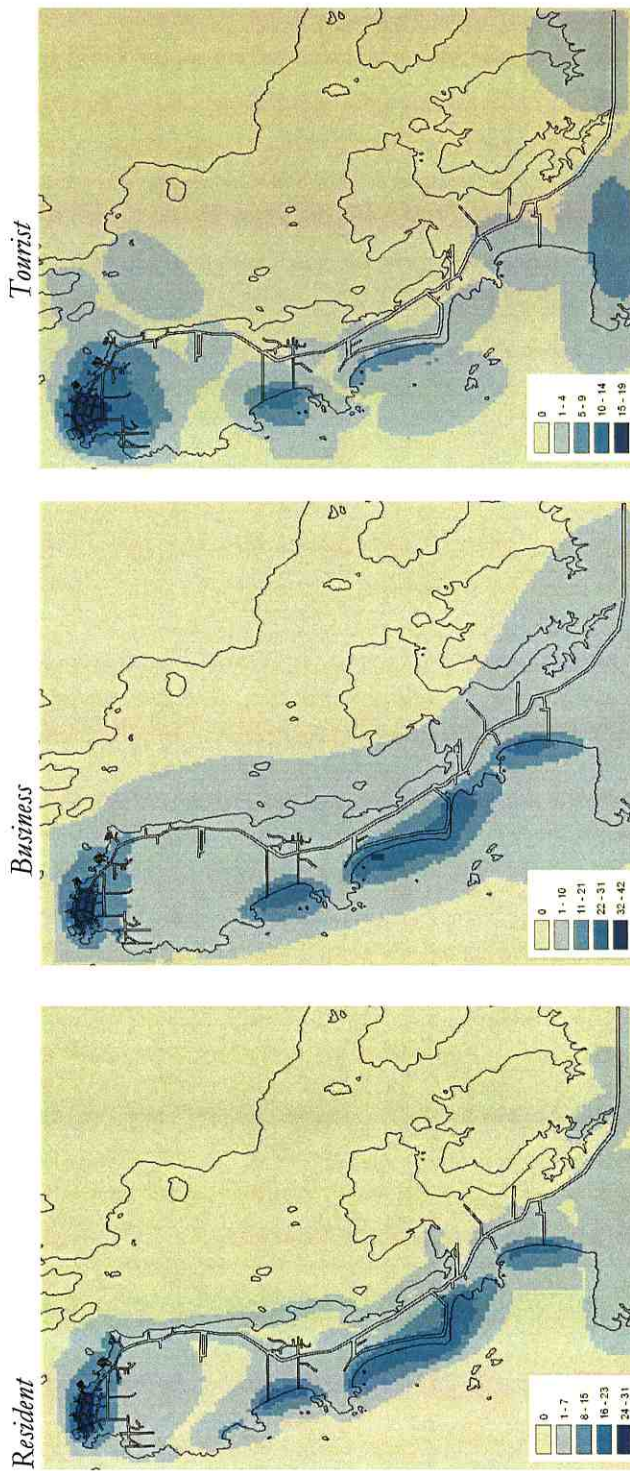
In the collected tourist surveys, visitors were asked to indicate if they had any memorable locations during their trip. This information can be used by the local community for future marketing and planning. A total of 16 tourist participants elaborated on some of the places they visited, mainly indicating where they stayed or the types of activities that they participated in, which included surfing, hiking, wave watching and beach activities. A number of restaurants were included in these memorable locations and one participant wrote that they purchased crabs for dinner one night. The majority of responses indicated that the beach settings were most memorable to them.

### 8.3.3 Stakeholder Differences and Similarities

After examining each stakeholder group's descriptive summaries and resulting frequency maps a number of patterns become apparent between high and peripheral areas of tourism space. As only a small number of participants drew regions of peripheral areas of tourism, comparisons made among stakeholder groups will only be based on the high tourism space frequency maps, including both the district (Figure 8.16) and village maps (Figure 8.17). Comparing the different stakeholder group's maps will offer insight into where the local community perceives high concentrations of tourism use versus where the tourists visited during their stays in Tofino, these differences and similarities can be implemented into planning and management schemes for the future tourism development of Tofino.

Figure 8.16 presents the three stakeholder groups' frequency maps for the district of Tofino. Comparing the maps side by side highlights that the resident and business participant groups perceptions of where tourists go are quite similar whereas the tourist map covers a smaller area than indicated by the other two participant groups. In particular, four areas are agreed upon by all participant groups, the village of Tofino, Middle Beach, Chesterman Beach and Pacific Rim National Park Reserve. As mentioned previously, tourists go to many other places within the district of Tofino, as indicated by the resident and business participants, but this information was not captured within the collected sample.

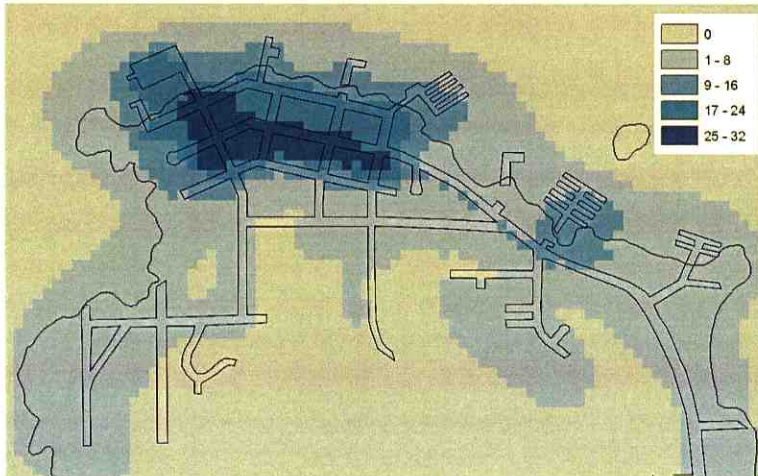
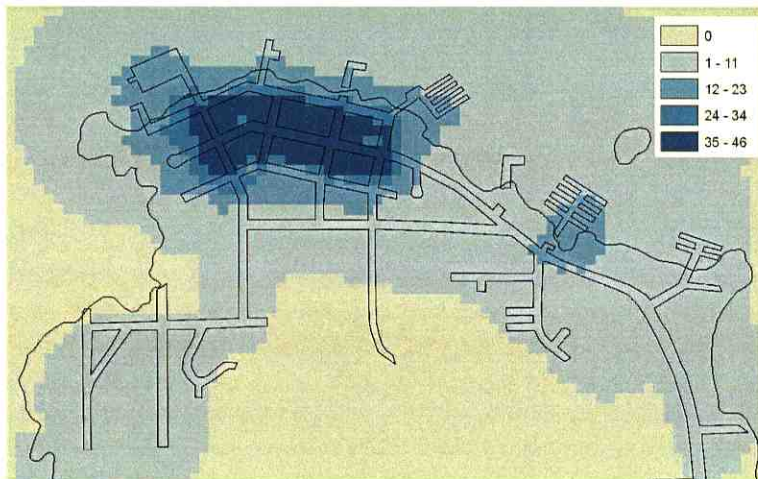
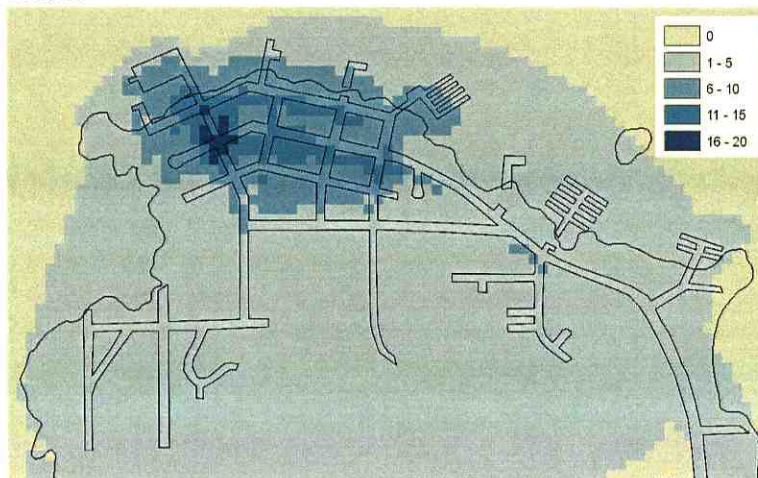
Figure 8.16: Stakeholder Map One Comparison



When comparing the resident and business frequency maps, it is interesting to note that the majority of the western coast of the peninsula was perceived as high tourism space, which includes all of the main beaches in the district of Tofino. The three main beaches identified by the local population included Chesterman Beach, MacKenzie Beach and Cox Bay, but also included Middle Beach and Tonquin Park within the lower frequency classes. All three beaches, besides the village of Tofino, contain the majority of tourist accommodations. The differences between the participant groups are that the business participants placed more area as high tourism space than the resident group, particularly around the west coast beaches.

Overall, the descriptive summaries and frequency maps indicate that residents and businesses agree on what would be classified as high tourism space, the village of Tofino (commercial core), MacKenzie Beach, Chesterman Beach and Cox Bay. The areas of high tourism identified by the local population mostly match the frequency maps produced by the tourist participant group, which did not include Cox Bay and the MacKenzie Beach commercial centre.

Figure 8.17: Stakeholder Map Two Comparison

*Resident**Business**Tourist*

In Figure 8.17 the frequency maps of the village of Tofino are presented, as previously found with the district maps, the resident and business participant groups are very similar, but the tourist map identifies more area than the other two stakeholder groups. The tourists' frequency map included all of the areas that the participants remembered visiting, which included all of the roads that were used to access accommodation, beach access and the downtown commercial core. The highest frequencies for the tourist map were found within a one block area (Co-op to First Street Wharf) and a few selected streets where local shops are located. The resident and business frequency maps are very similar, following the same pattern along the northern coastline down to the marina and traveling down the Pacific Rim Highway, but additionally including the access area to Tonquin Park. Subtle differences are seen between the local population perceptions, the business participants perceived greater frequencies in the downtown commercial core, which included all area until the coastline, and the resident participant group includes more northern coastline, which in turn included the Crab Dock.

Combining the perspectives of all stakeholder groups provides insight to where tourists are perceived to go and where they are actually going. This knowledge will help with future growth, as municipal governments and businesses have the ability to develop and promote the marketing of certain areas. As areas identified by stakeholder groups change with time, it is important to incorporate the element of time to see and plan for the future growth of a tourism destination. One such method is community mapping projects, where locals from a variety of backgrounds and within a number of age groups are asked to help map the region under question.

### **8.3.4 Comparison to Community Mapping Project**

In Appendix H, a summary of the Community Mapping Project that was performed in January 2001 is presented. The project involved various age groups of residents in Tofino, where they were asked to map important areas to them, whether it was in relation to the environment or activities that could be performed there, and regions that they believed were areas of concern. Comparing the frequency maps with the Community Mapping Project, similar perceptions are seen, where emphasis is placed upon the beaches, parks and downtown areas of Tofino. The majority of areas of concern are located on the west coast beaches, where notes of 'development' are placed. Comparing the perceptions of the space within the district of Tofino over time can involve the residents/stakeholders in important decision making processes, which can identify areas of transition into future development schemes.

### **8.4 Summary**

To determine what defines tourism space for the community of Tofino and how tourism space is perceived by the identified stakeholder groups, three types of tourism space were identified in the existing literature and examined in the research project. The concept of tourism space was incorporated into the research project to complement the findings of whether or not tourism carrying capacity has been exceeded in the tourism destination of Tofino, British Columbia; as boundaries, whether actual or perceived, dictate tourism use spatially and it is within the boundaries that tourism use can be exceeded.

The defined boundaries by the municipal government of Tofino were used to delineate which land use areas were designated as tourism use. From the existing documentation, a

number of tourism focus and tourism reserve areas were identified, which included the downtown commercial core, MacKenzie Beach, Cox Bay, and the parks spaces of Tonquin Park and the east coast mud flats. A discussion of what land was available for future development was included, as the local and provincial governments, and private owners own parcels of land within the district of Tofino that have not been developed yet; therefore the actual tourism space of Tofino may grow with time as more of the undeveloped land becomes zoned for tourism use.

Within the actual tourism spaces delineated by the District of Tofino, the activities that are common within each area were described. Each area was described in relation to the existing tourism infrastructure there, particularly in reference to the tourist accommodations and to the available options of activities for the tourists to do during their stay. A common attribute found at the majority of the tourism spaces identified were beach activities, which appears to be the major attraction of Tofino. Additionally, the listing of activities offered by Tofino businesses was included, which incorporate an eco-tourism approach where activities take place in the outdoors and the natural environment is highly respected. The activities that are performed will aid in the overall marketing of Tofino as a tourism destination.

Perceived tourism space was the last type of tourism space to be examined, which was the only type directly incorporated into the survey design. Following a procedure by Keller (in progress) and a methodology by O'Connell (2003), survey participants were asked to indicate areas of high and peripheral tourism concentrations. From the analyzed maps, four main areas were identified as high tourism space, the village of Tofino, MacKenzie Beach, Chesterman Beach and Cox Bay, peripheral areas included Tonquin Park, the MacKenzie

Beach commercial centre and Pacific Rim National Park Reserve. The areas identified by the three stakeholder groups in combination with other methodologies such as community mapping, provide local governments and communities with valuable information by identifying areas of high use and being able to plan for changes is imperative to the sustainable development of tourism at destination sites.

What defines tourism space for Tofino? Through exploring actual, functional and perceived tourism space in Tofino, it has been defined by municipal government land use zones and through the perceptions of stakeholder groups, and consists of the activities or attractions that draw tourists to tourism destinations but also includes the accommodations, restaurants, local shops, and other supporting infrastructure and facilities. The tourism industry is built around the natural surroundings of Clayoquot Sound within the small town feel of the community of Tofino. The majority of the identified tourism space regions fall on the coast, predominantly with beach access where a number of activities can be performed, drawing in multiple types of travelers.

Some inconsistencies existed amongst the different types of tourism space, the largest being Chesterman Beach, which is defined as residential space by the municipal government, but in reality the majority of housing in this neighbourhood provides some type of tourist accommodation. Directly related to the inconsistency is the heated debate about vacation rentals in Tofino, which has yet to be resolved. Therefore, actual tourism space does not always match what happens in reality, proving the need of studying multiple types of tourism space.

From the analysis of actual, functional and perceived tourism space a number of key areas are identified as high and peripheral areas of tourism use. Knowing where these regions are located can be used by all stakeholder groups, the local government can allocate more land for increasing tourism use or can direct it to less used areas, the local businesses can market to particular areas based on the activities and types of travelers that visit particular regions, local residents would know where tourists go and could carry on with their way of life and tourists would know the best places to go but could explore other areas that were not identified. It is a combined effort that will produce a holistic view of the tourism use at tourism destinations.

## CHAPTER NINE

### GROWING TOGETHER

#### 9.0 Introduction

The research objectives and questions stated in Chapter One revolved around two main concepts, tourism carrying capacity and tourism space. Both concepts were further divided into three specific types of carrying capacity and space. Tourism carrying capacity was divided into physical, social and psychological capacities and tourism space was divided into actual, functional and perceived space, which was summarized in Chapters Two, Three and Four. Chapter Five provided the background information about the tourism destination under investigation, and three stakeholder groups were identified and three methodologies were applied; quantitative, qualitative and spatial analysis, in Chapters Six, Seven and Eight.

Chapter Nine accomplishes three things; it proceeds by summarizing the results of the research in relation to the three research questions, followed by offering suggestions for future research of the tourism destination of Tofino, and concludes by summarizing what was learnt from the research experience.

#### 9.1 Summary of the Research

The research began after identifying the need and desire to have the two topics of carrying capacity and tourism space examined after attending the Clayoquot Symposium in November 2003. From identifying the needs and from reviewing the literature, a survey was designed to incorporate a number of methodologies to capture the perceptions of three

stakeholder groups; residents, businesses and tourists, surrounding the issues of tourism development in Tofino, British Columbia.

The research addressed two main issues associated with tourism development; tourism carrying capacity and tourism space, and especially examined a number of specific types of capacity and spaces in relation to Tofino. Each type of space and capacity was measured using various methodologies found in previous tourism research and were combined to provide a holistic view of the perceptions of the stakeholders regarding the tourism development in the small west coast town of Tofino.

Specifically, to address what defines carrying capacity for a tourism destination a thorough review of the literature was performed, and to address how carrying capacity is viewed by the stakeholder groups of a tourism destination, three types of carrying capacity relating to different aspects of tourism destinations were addressed. Physical capacity was examined by deriving a listing of tourism accommodations to determine how many people Tofino can accommodate per night. Social capacity was measured through a series of questions relating to the positive and negative impacts associated with tourism, and how these affected the community of Tofino and on personal quality of life. Psychological capacity was assessed through a series of manipulated photographs representing increasing levels of use and through a series of questions relating to standards of quality.

The second research question regarding carrying capacity dealt with the ability to assess and determine if tourism capacity had been exceeded in Tofino. Through a series of descriptive and multivariate statistics, and a qualitative analysis on four open-ended questions, allowing

the participants to reveal their perceptions in their own words, the three types of tourism carrying capacity were measured and summarized. Physical capacity was only found to be exceeded during a short two-week interval in August, where tourists must seek alternate arrangements for accommodation. Social capacity was not exceeded for the business stakeholder group, as the large majority believed that the impacts associated with tourism in Tofino were more positive than negative, falling within designated 'Lovers' and 'In-Betweeners' cluster groupings. The resident stakeholder group was found to be on a clear divide between all three cluster groupings including 'Haters', indicating that the delicate balance could swing either way depending on the future development of tourism in Tofino. Psychological carrying capacity was not exceeded from the perceptions of the tourist stakeholder group, where issues of crowding have not been surpassed.

The last research question dealt with tourism space of tourism destinations, where the concept was generally summarized into three types of space in previous research. To determine the tourism space of Tofino, perceived tourism space was addressed in the survey of the three stakeholder groups, where stakeholders were defined as anyone with a vested interest in the current and future outcomes of a situation, which included residents, tourism businesses and tourists. The designated boundaries and the activities performed within the boundaries delineated by the District of Tofino were investigated by incorporating The Official Community Plan of Tofino, where areas of actual and functional space were summarized.

Identified in the land use map of Tofino, actual tourism space included areas of tourism focus and reserve, parks and the downtown commercial core, which specifically included

MacKenzie Beach, Cox Bay, Tonquin Park, the mudflats on the east coast and the village of Tofino. Within the defined actual tourism space of Tofino, functional space was summarized in terms of activities and tourist accommodations. Within the beach areas of Tofino, activities include sunbathing, surfing, boogie boarding and swimming, and in the commercial core of Tofino activity centres providing whale/wildlife tours, kayak/canoe/boat tours, fishing expeditions, airplane tours and surfing lessons were identified, plus the number of locally owned shops directed at selling local wares. It was additionally noted that Tofino has an array of tourist accommodations ranging from campgrounds and hostels to five star resort hotels and spas, depending on the types of tourists arriving in Tofino. Perceived tourism space was found to be similar for the business and resident participant groups, identifying the areas of MacKenzie Beach, Chesterman Beach, Cox Bay and downtown Tofino as high areas of tourism use. For the tourist participant group, the downtown village, Mackenzie Beach, North Chesterman Beach and the Pacific Rim National Park Reserve were highlighted as perceived tourism space.

The research questions and objectives have been analyzed using combined methodologies or carrying capacity and tourism space literature. Overall, tourism is going to remain in Tofino, but the key to insuring sustainable tourism growth is to incorporate and inform the residents of Tofino of future plans and to encourage participation in the planning of the community of Tofino. The resident stakeholder group was identified as the one group that was really divided on the issues surrounding tourism development in Tofino. Incorporating Butler's (1980) model of tourism development of destinations, Tofino falls in the development stage but will quickly reach the consolidation stage without the resident stakeholder involvement.

The secret of Tofino is out and the ability of the stakeholder groups to grow together will determine the future direction of Tofino as a tourism destination.

## 9.2 Recommendations for Future Research

While performing the research in Tofino a number of additional issues that were not incorporated into the research design were identified, mainly concerning the issues of vacation rentals and infrastructure development, and of the growing shoulder season with the storm watching marketing scheme. The issues surrounding vacation rentals and infrastructure development are currently being examined through the District of Tofino, but follow-ups on the outcomes of the government's decisions may highlight changes in perceptions.

Storm watching has become a popular marketing slogan to international audiences, where people travel to Tofino during the winter to watch the surf crash up on the rocks/beaches of Tofino. Comparing the types of travellers who visit during the winter shoulder season and determining why they visit during this time of year could provide useful information to businesses that remain open during the shoulder season.

The importance of time was consistently brought forth in the research design, comparing perceptions over time is imperative to the sustainable futures of communities, by incorporating changes and being prepared for future situations. Comparing the perceptions of the local population before, during and after the tourism season may yield some differing perceptions and offer insights into what can be done before hand to address the negative issues that arise during the busy tourism season. Additionally, following up with tourists after

their visit to Tofino may yield some valuable information that could be used for marketing schemes and for future development planning and zoning.

From the survey responses, a number of issues associated with tourism were highlighted by each stakeholder group, if I could provide recommendations based on my experience as a researcher and as a member of the community I believe the main issue that needs to be resolved is Tofino's water shortage. Without the basic needs for water being met for residents, businesses and tourists, the community will not be able to support existing and future growth. The municipal government has been working on developing solutions for a number of years with the local community and with the summer season quickly approaching the subject will remain at the forefront until it is resolved.

In terms of the stakeholder groups, I believe the residents need to be more involved and informed regarding the development of their town, as this stakeholder group had divided perceptions regarding tourism. Many of the services that tourism heavily depends on relies on the local population, therefore communication between stakeholder groups and governing bodies is essential. From the tourist stakeholder group, a number of participants indicated that there was nothing to do when it rained, as many of the activities in Tofino are outdoors. The opportunity to supplement outdoor activities may allow businesses to give back to the community by supplying additional infrastructure which may be used by the residents of Tofino.

Marketing is another component which needs to be developed by the community of Tofino. Develop a campaign that emphasizes the reasons why people visit Tofino, such as the beauty

of the landscape, the environmental way of life, and the small town/personable community. I believe this type of marketing approach would encourage like-minded travellers to visit Tofino, but additionally to value and support these initiatives implemented by local businesses and residents. To further encourage the growth of a green, nature based, and community involved tourism strategy, I believe providing convenient and accessible public transportation from accommodation areas into town allows visitors (and residents) to stop and visit other areas in the district, but additionally eases parking demands downtown. As was suggested by some participants, having a pedestrian downtown may further support this image. Additionally, the mapping exercise identified areas of Tofino where stakeholder group perceptions did not match; it may be relevant to determine what attracts people to these areas and whether marketing similar areas located throughout the district could potentially ease the congestion at popular areas.

### **9.3 Lessons Learnt**

Throughout the research experience there were a number of lessons that I have taken away with me, many academic and many personal. Reflecting on what happened during the summer of 2004, there are some things I would have liked to do differently, but overall I am very pleased with the outcome and with the many new experiences that can be applied in future research projects.

From an academic stance, organization was the most important lesson to take away. I would have liked to be in Tofino from the beginning of the tourist season, sometime in mid-late June, but I didn't get there until the end of July. Two main reasons held the arrival date back; the completion of the three surveys and finding a place to live in Tofino during the summer,

luck was on my side when I arrived in July to find a great space with a lovely family. Organizing which stakeholder group to approach, the times of day and the geographic location was not easy at the beginning, but got better with time. As a result I did not collect the number of surveys I was hoping to achieve. In regards to the survey design, the themes could have been condensed better to decrease the amount of time to complete a survey, which could have resulted in completing surveys with the participant during the first introduction and not having to do repeat visits. The whole experience of creating a survey and distributing it was all new to me, so incorporating organization throughout the whole process and knowing what to expect will be advantageous in future experiences.

From a personal stance, I found that I liked dealing with people face-to-face. The door-to-door approach was the best way to deliver the surveys as it made the participant comfortable by putting a face to a name, but also for me to hear the stories of the locals and tourists. Dealing directly with people allowed me to connect to the situation, and hearing the stories from the different stakeholder groups provided more insight into the main issues that are affecting the community of Tofino. I also found that writing the qualitative section was my favourite part of the thesis, describing in the stakeholders words how they felt about tourism in Tofino. After being in Tofino for just over a month, once it started to slow down in September, people were saying hi to me on the street – I wasn't a tourist anymore.

I remember being questioned as to whether I could live in Tofino at the beginning of my field season and I responded with 'it is not busy enough for me', but after spending the month and a half in Tofino I still remember my first day back in Victoria, I got onto campus and was so overwhelmed by the number of people and by the activity that was everywhere

on the first day of school, it took me a couple of days to get into the full swing of things. Tofino taught me to slow down and to take everything in, it has something to do with the beauty of the landscape, but also of the friendliness of this small community, which let me in for a summer season.

What would my one word be to describe this experience? Wow!

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APPENDIX A

Research Description Letter



**University  
of Victoria**

Erin O'Brien  
Master of Science Candidate  
Department of Geography, University of Victoria  
**Phone:** (250) 472-4624  
**Email:** elobrien@uvic.ca

August 2004

Dear Tofino Resident:

As a requirement for the completion of my Master's degree at the University of Victoria, I invite you to participate in a study entitled **Tofino's Tourism and Tourism Space**. I am interested in learning about your outlook of tourism in Tofino; being a stakeholder of Tofino, you can provide valuable information of your perceptions and experiences of tourism. The information that is collected may be used to generate suggestions that could possibly aid in the future planning and management of tourism in the town of Tofino.

I have randomly selected your household (one of 150 in the sample) from the Tofino telephone directory. If you agree to participate in this research, you will be asked to complete a 20-30 minute survey. After you have had an opportunity to read this letter, I will phone to inquire if you are interested in participating in this research. If you agree to participate, we may then arrange a time to conduct or pick up the survey that is convenient for you. All the information that I will be collecting is both voluntary and confidential; therefore I will not record your name or address and this information will not be associated with the results of this survey.

If you have any questions or concerns about this study, please feel free to contact me at the above address, email, or telephone number. You may also contact my supervisor, Dr. C. Peter Keller at his office number (250) 721-7333 or through email at [pkeller@uvic.ca](mailto:pkeller@uvic.ca). If you wish to verify the ethical approval of this research, or have any concerns you can contact the Associate Vice President of Research at the University of Victoria at (250) 472-4545. Thank you for time, and I look forward to learning your experiences and perceptions of tourism in Tofino.

Sincerely,

Erin O'Brien

APPENDIX B

Business Introduction Email



**University  
of Victoria**

Erin O'Brien  
Master of Science Candidate  
Department of Geography, University of Victoria  
**Phone:** (250) 472-4624  
**Email:** elobrien@uvic.ca

July 29, 2004

Dear Tofino Business Owners and/or Managers:

As a requirement for the completion of my Master's degree at the University of Victoria, I invite your business to participate in a study entitled **Tofino's Tourism and Tourism Space**. Being a stakeholder of Tofino, you can provide valuable information of your perceptions and experiences of the tourism industry in Tofino. The information that is collected may be used to generate suggestions that could possibly aid in the future planning and management of tourism in the town of Tofino.

I will randomly select 150 businesses from a compiled list that will be stratified into Accommodation, Activity/Recreation, Artisans/Galleries, Restaurants, Retail, and Not for Profit Organizations. If your business is selected and you agree to participate in this research, you will be asked to complete a 20-30 minute survey. I will personally deliver these surveys in the first couple of weeks in August where we can arrange a time at your convenience to pick up the completed survey, and where I can answer any questions that you may have. I will contact all remaining businesses that were not selected in the random sample through personal conversations or through the telephone to ask a few questions in relation to daily maximum capacities and/or plans for future growth. All the information that I will be collecting is both voluntary and confidential; therefore I will not record your name or business name and this information will not be associated with the results of this survey.

If you have any questions or concerns about this study, please feel free to contact me at the above address, email, or telephone number. You may also contact my supervisor, Dr. C. Peter Keller at his office number (250) 721-7333 or through email at [pkeller@uvic.ca](mailto:pkeller@uvic.ca). If you wish to verify the ethical approval of this research, or have any concerns you can contact the Associate Vice President of Research at the University of Victoria at (250) 472-4545. Thank you for time, and I look forward to learning your experiences and perceptions of the tourism industry in Tofino.

Sincerely,

Erin O'Brien

APPENDIX C

Resident Survey

## Tofino's Tourism and Tourism Space



### Tofino Residents Survey – Summer 2004

Research Conducted by:  
Erin O'Brien, Masters Candidate  
Department of Geography,  
University of Victoria  
[clobrien@uvic.ca](mailto:clobrien@uvic.ca) / (250) 472-4624



Tourism and Tourism Space in  
Tofino, British Columbia

**The purpose of this survey is to gain knowledge of the perceptions and experiences of Tofino residents regarding tourism in their town. This survey contains 7 sections, with each section addressing different aspects of tourism. Thank you for your time and effort in the completion of this survey.**

**SECTION A: GENERAL PERCEPTIONS**

This section contains open-ended questions that focus on the general perceptions of tourism in Tofino. Please respond in your own words.

Q1. What is the first word that comes to mind when you think of tourism in Tofino?  
(Just one word please) \_\_\_\_\_

Q2. What is your main reason for living in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q3. What do you consider to be the most positive impacts of tourism in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q4. What do you consider to be the most negative impacts of tourism in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION B: IMPACT STATEMENTS**

This section asks you a set of structured questions relating to tourism. Each question consists of three parts. Take a minute to read the instructions on how to answer the questions. The questions begin on the next page.

**PART A.** In the first part you are required to indicate whether something has changed as a result of tourism (and the associated direction of change) or whether you agree or disagree with the statement. Please indicate your response in the appropriate box.

For Example:

1a Because of Tourism, the number of tourists has....	OR	1a Because of Tourism, the number of tourists has increased
1 <input checked="" type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 2a) 4 <input type="checkbox"/> Don't know (go to 2a)		Yes 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> No (go to 2a) 3 <input type="checkbox"/> Don't know (go to 2a)

Only mark the 'Don't know' box if you know nothing about the statement, if you answer 'No change', 'Don't know', or 'No' you do not need to answer the following parts for each statement.

**PART B.** The second part requires you to rate how the tourism statement affects you personally, on a scale ranging from very bad (-3) to very good (+3). Please indicate your response by circling the appropriate number.

For Example:

1b. What effect does this have on you personally?	Very Bad -3      -2      -1      0      1      2      3 Effect	Very Good 3      2      1      0      -1      -2      -3
---	--	---

**PART C.** The third part requires you to rate how the tourism statement affects the Tofino community on a scale ranging from very bad (-3) to very good (+3). Please indicate your response by circling the appropriate number.

For Example:

1c. How does this affect Tofino as a whole?	Very Bad -3      -2      -1      0      1      2      3 Effect	Very Good 3      2      1      0      -1      -2      -3
---	--	---

PART A		PART B AND PART C					Very Bad	No Effect	Very Good
						-3	-1 0 1	3	
1a.	Because of Tourism, employment opportunities in Tofino have....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 2a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 2a) $\longrightarrow$	1b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
2a.	Because of Tourism, trade for local businesses in Tofino has....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 3a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 3a) $\longrightarrow$	1c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
3a.	Because of Tourism, housing property values and rental costs in Tofino have....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 4a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 4a) $\longrightarrow$	2b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
4a.	Because of Tourism, prices of goods and services in local shops have....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 5a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 5a) $\longrightarrow$	2c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
5a.	Because of Tourism, local business opportunities have....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 6a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 6a) $\longrightarrow$	3b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
6a.	Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 7a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 7a) $\longrightarrow$	3c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
7a.	Because of Tourism, damage to the terrestrial environment around Tofino has....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 8a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 8a) $\longrightarrow$	4b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
8a.	Because of Tourism, damage to the marine environment around Tofino has....	1 <input type="checkbox"/> Increased $\longrightarrow$ 2 <input type="checkbox"/> Decreased $\longrightarrow$ 3 <input type="checkbox"/> No change (go to 9a) $\longrightarrow$ + <input type="checkbox"/> Don't know (go to 9a) $\longrightarrow$	4c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
			5b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
			5c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
			6b. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
			7b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
			7c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			
			8b. What effect does this have on you personally?	-3	-2 -1 0 1 2	3			
			8c. How does this affect Tofino as a whole?	-3	-2 -1 0 1 2	3			





PART A		PART B AND PART C				Very Bad	No Effect	Very Good		
25a.	Because of Tourism, the opportunity to meet new people has....	1 <input type="checkbox"/> Increased _____ 2 <input type="checkbox"/> Decreased _____ 3 <input type="checkbox"/> No change (go to 26a) 4 <input type="checkbox"/> Don't know (go to 26a)	25b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
26a.	Because of Tourism growth, the local community is divided over issues.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to 27a) 3 <input type="checkbox"/> Don't know (go to 27a)	25c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
27a.	Because of Tourism, the local residents' lives are disrupted.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to 28a) 3 <input type="checkbox"/> Don't know (go to 28a)	26b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
28a.	Because of Tourism, the tranquility of Tofino has been disrupted.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to 29a) 3 <input type="checkbox"/> Don't know (go to 29a)	26c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
29a.	Because of Tourism, the local economy has increased.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to 30a) 3 <input type="checkbox"/> Don't know (go to 30a)	27b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
30a.	Because of tourism, local residents' hospitality is enhanced.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to 31a) 3 <input type="checkbox"/> Don't know (go to 31a)	27c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
31a.	Because of tourism, too many people visit Tofino.	1 <input type="checkbox"/> Yes _____ 2 <input type="checkbox"/> No (go to Section C) 3 <input type="checkbox"/> Don't know (go to Section C)	28a. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			28b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			28c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			29a. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			29b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			29c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			30b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			30c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			31b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			31c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3

### SECTION C: ACTIVITIES IN TOFINO

Q1. Which of the following activities (if any) do you normally undertake in the town and district of Tofino? Please indicate your response by indicating all the appropriate boxes.

- Beach Activity (Walking/Combing)
- Bird Watching
- Camping
- Canoeing
- Day Hiking
- Guided Tours
- First Nations Cultural Activity
- Fishing
- Flight Seeing
- Motor Boating
- Mountain Biking
- Overnight Hiking
- Photography
- Restaurant Dining
- Sailboating
- Scuba Diving/Snorkeling
- Sea Kayaking
- Shopping
- Surfing
- Whale Watching
- Other Wildlife Watching
- Visit Hot Springs
- Other: \_\_\_\_\_

Q2. Which three activities do you perform most *frequently* in the town and district of Tofino?

Most Frequent Activity: \_\_\_\_\_

Second Most Frequent Activity: \_\_\_\_\_

Third Most Frequent Activity: \_\_\_\_\_

Q3. Which of the following best describes the activities you engage in during the *summer* tourism season?

- Remain in Tofino and carry on with normal activities
  - Remain in Tofino with a decrease in normal activities (please specify types of decreased activities): \_\_\_\_\_
  - Remain in Tofino with an increase in normal activities (please specify types of increased activities): \_\_\_\_\_
  - Leave Tofino for extended periods (why?): \_\_\_\_\_
- \_\_\_\_\_

**SECTION D: IMAGE COMPARISON**

This section contains two series of six photographs and sets of associated questions. Take a look at the images before answering the questions.

**Beach Setting Images:**

Photo A

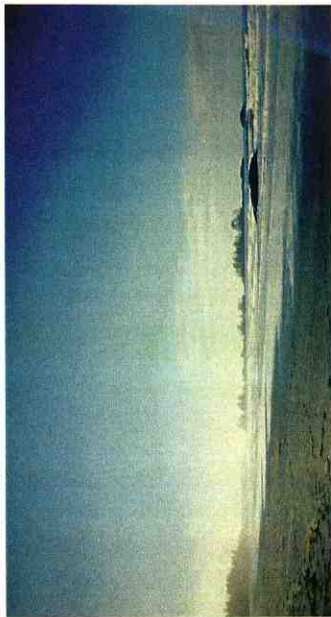


Photo B

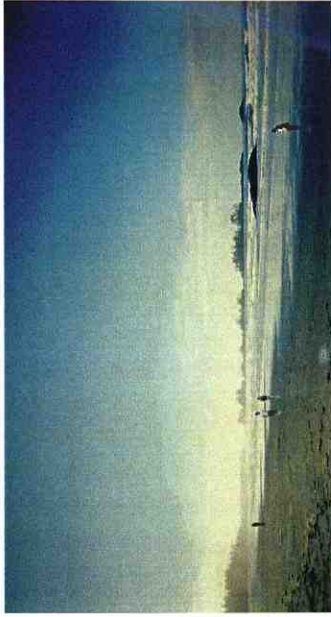


Photo C



Photo D



Photo E



Photo F



## SECTION D: IMAGE COMPARISON (continued)

### Beach Setting Questions:

- Q1. Please indicate how acceptable or unacceptable you feel about the levels of use in each of the photos, using the rating scale provided below. Please indicate your response by circling the appropriate number.

	Very Unacceptable				Acceptable/Unacceptable				Very Acceptable
	-4	-3	-2	-1	0	1	2	3	4
Photo A	-4	-3	-2	-1	0	1	2	3	4
Photo B	-4	-3	-2	-1	0	1	2	3	4
Photo C	-4	-3	-2	-1	0	1	2	3	4
Photo D	-4	-3	-2	-1	0	1	2	3	4
Photo E	-4	-3	-2	-1	0	1	2	3	4
Photo F	-4	-3	-2	-1	0	1	2	3	4

- Q2. Which of the photos shows the level of use that you would *ideally* prefer to experience in Tofino?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q3. Which of the photos looks most like what is *typically* experienced during the peak summer tourism season?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q4. Which of the photos shows the *highest* level of use you would accept before you would choose to leave the beach?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q5. Which of the photos reflects the *highest* level of use that should be promoted by the Tofino tourism associations and businesses?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F

**SECTION D: IMAGE COMPARISON (continued)**

Downtown Setting Images:

Photo A



Photo B

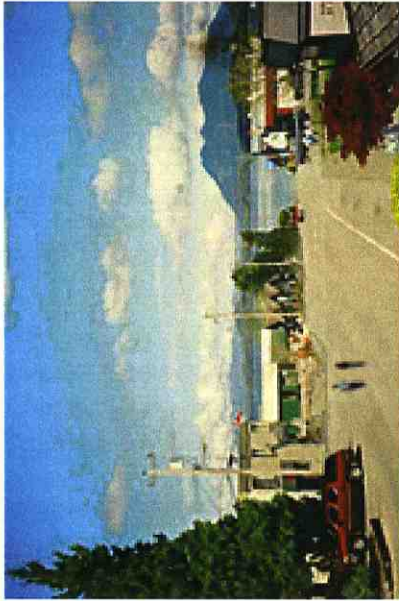


Photo C

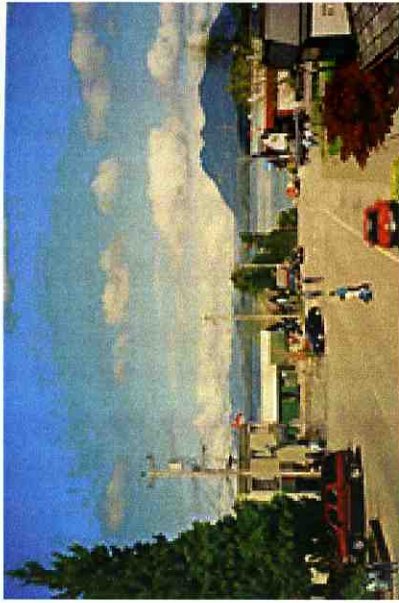


Photo D



Photo E

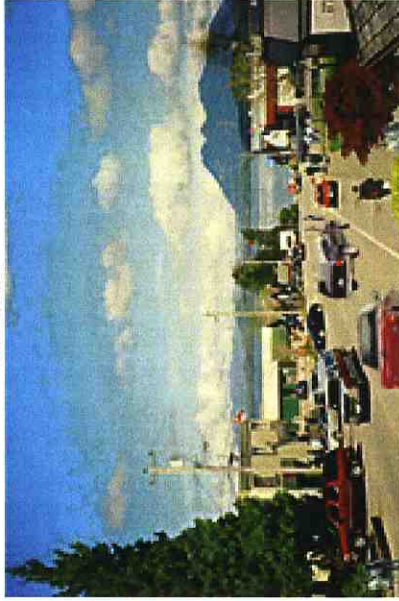
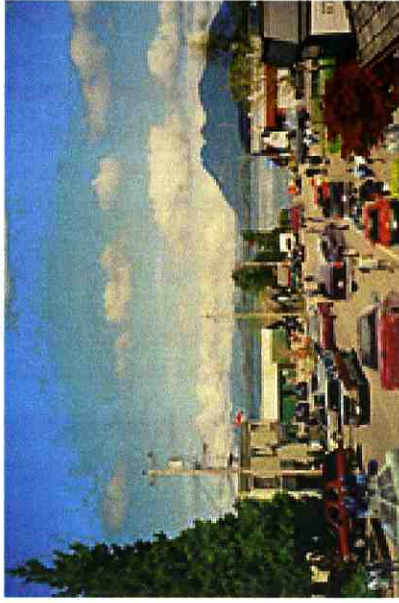


Photo F



Original photo provided by: [www.GoTofofo.com](http://www.GoTofofo.com)

**SECTION D: IMAGE COMPARISION (continued)**Downtown Setting Questions:

- Q6. Please indicate how acceptable or unacceptable you feel about the levels of use in each of the photos, using the rating scale provided below. Please indicate your response by circling the appropriate number.

	Very Unacceptable				Acceptable/ Unacceptable				Very Acceptable
	-4	-3	-2	-1	0	1	2	3	4
Photo A	-4	-3	-2	-1	0	1	2	3	4
Photo B	-4	-3	-2	-1	0	1	2	3	4
Photo C	-4	-3	-2	-1	0	1	2	3	4
Photo D	-4	-3	-2	-1	0	1	2	3	4
Photo E	-4	-3	-2	-1	0	1	2	3	4
Photo F	-4	-3	-2	-1	0	1	2	3	4

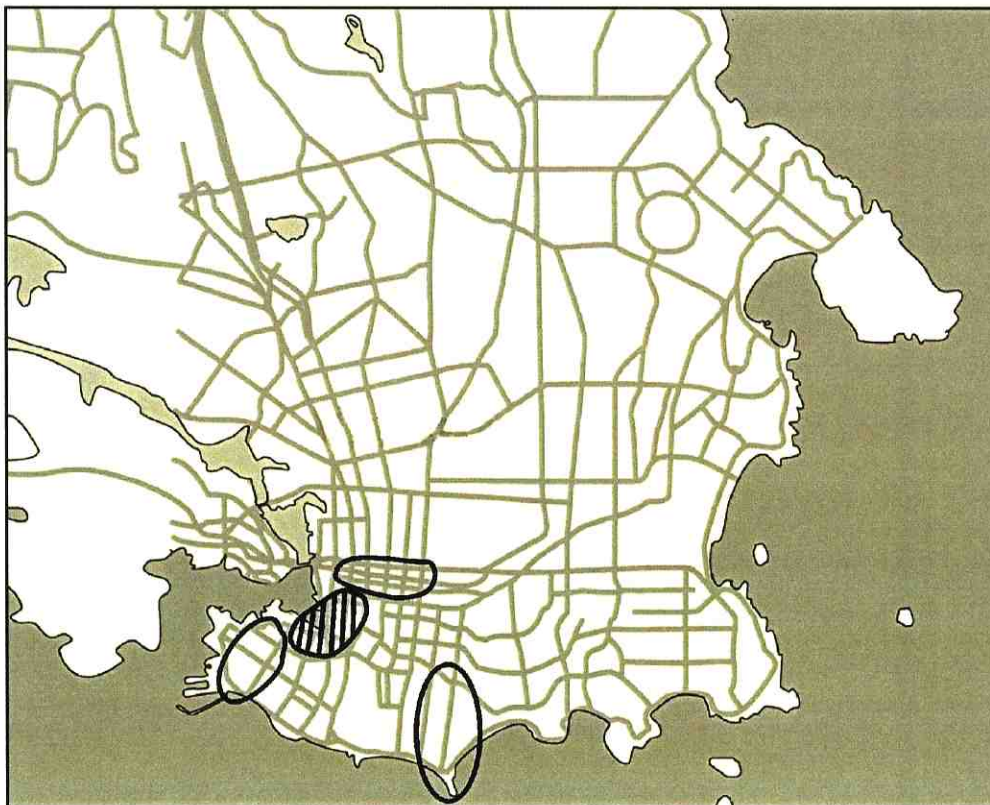
- Q7. Which of the photos shows the level of use that you would *ideally* prefer to experience in Tofino?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q8. Which of the photos looks most like what is *typically* experienced during the peak summer tourism season?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q9. Which of the photos shows the *highest* level of use you would accept before you would choose to leave downtown?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F
- Q10. Which of the photos reflects the *highest* level of use that should be promoted by the Tofino tourism associations and businesses?
- Photo A
  Photo D  
 Photo B
  Photo E  
 Photo C
  Photo F



## SECTION F: MAPPING TOURISM SPACE

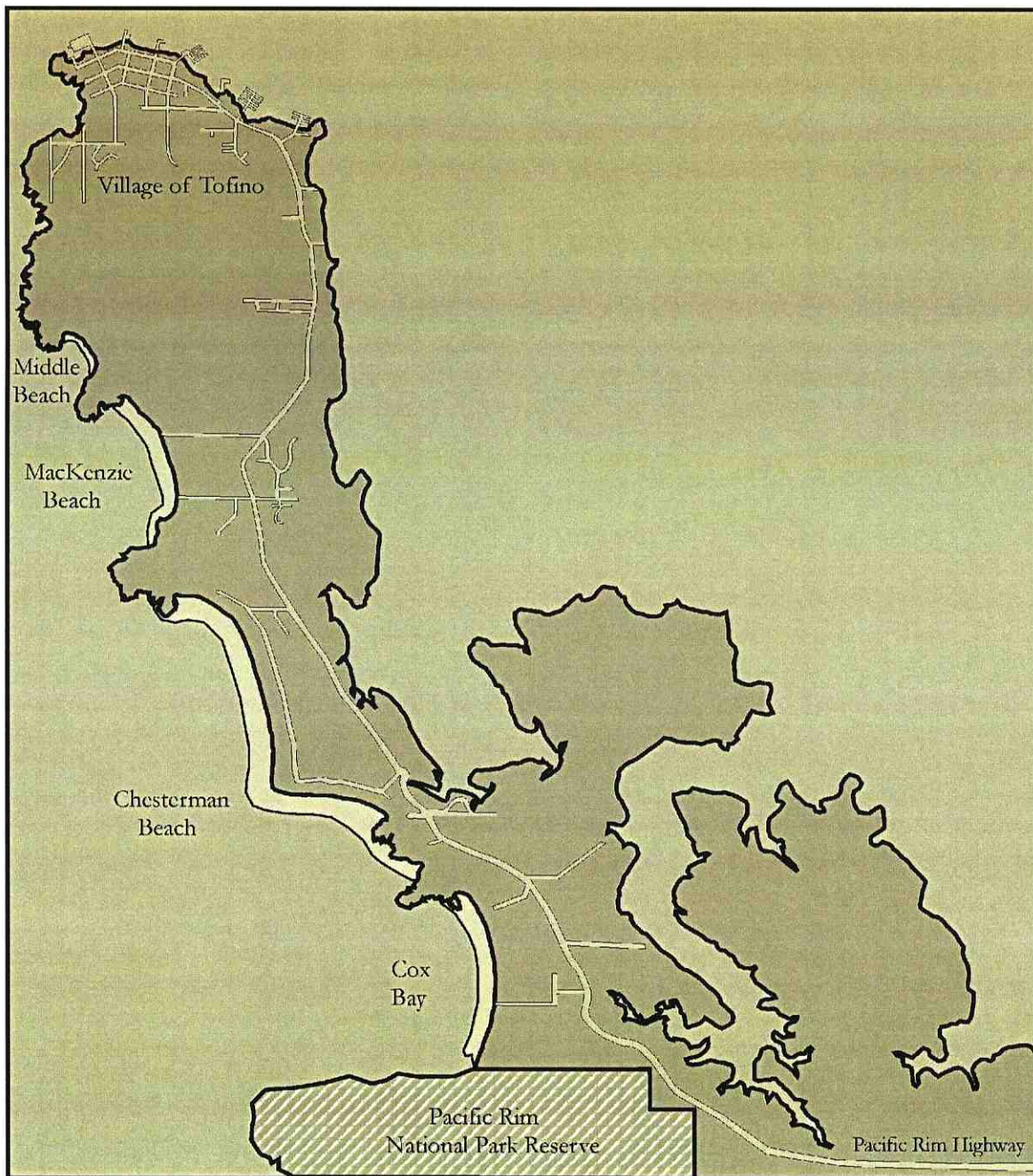
- STEP 1.** Please refer to the maps provided on the following pages. Two maps are provided, Map One - District of Tofino and Map Two - Village of Tofino.
- STEP 2.** On both maps, with a pen, please draw a line around the area(s) that you perceive to have *high* concentrations of tourists during the summer months. Please shade in these high concentration areas.
- STEP 3.** On both maps, with a pen, please draw a line around the *other* area(s) you perceive to have concentrations of tourists during the summer months, which are areas you consider to be part of Tofino's tourism space. Please do not shade in these other areas.
- STEP 4.** Please complete Section G once Section F is completed.

For Example:



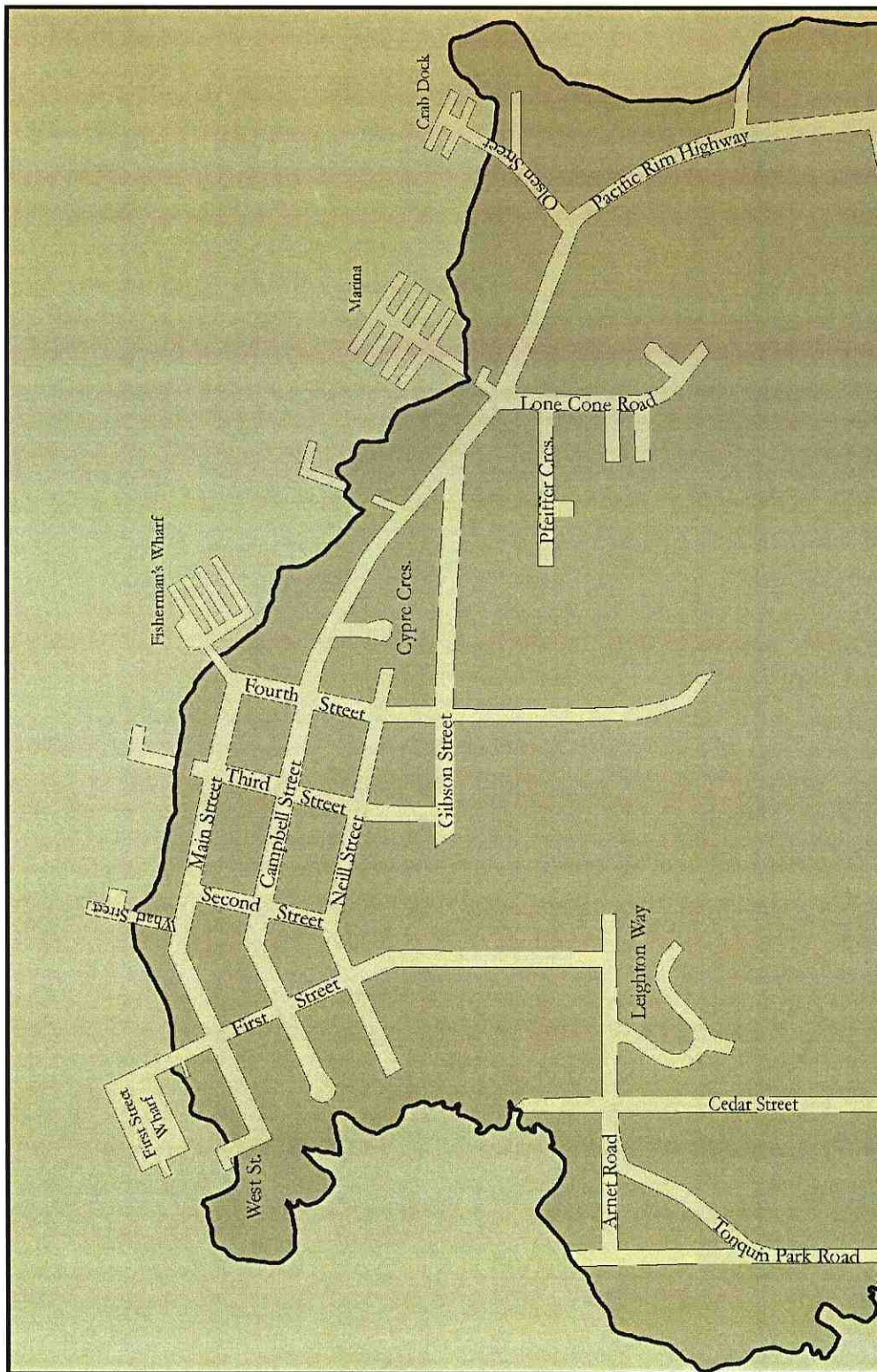
**SECTION F: MAPPING TOURISM SPACE**

MAP ONE – DISTRICT OF TOFINO



**SECTION F: MAPPING TOURISM SPACE (continued)**

MAP TWO – VILLAGE OF TOFINO



**SECTION G: DEMOGRAPHIC BACKGROUND**

Q1. How long have you resided in Tofino?

- Year(s) (how many?): \_\_\_\_\_
- Month(s) (how many?): \_\_\_\_\_
- Week(s) (how many?): \_\_\_\_\_

Q2. Are you a permanent or seasonal resident?

- Permanent
- Seasonal (what dates?): \_\_\_\_\_

Q3. Do you own or rent your residence in Tofino?

- Own
- Rent

Q4. Please specify your gender.

- Female
- Male

Q5. Please specify the age category that you fit into.

- Under 25 years old
- 26 to 35 years old
- 36 to 45 years old
- 46 to 65 years old
- Over 65 years old

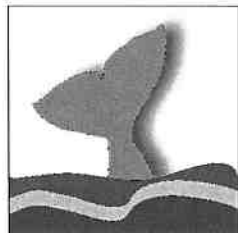
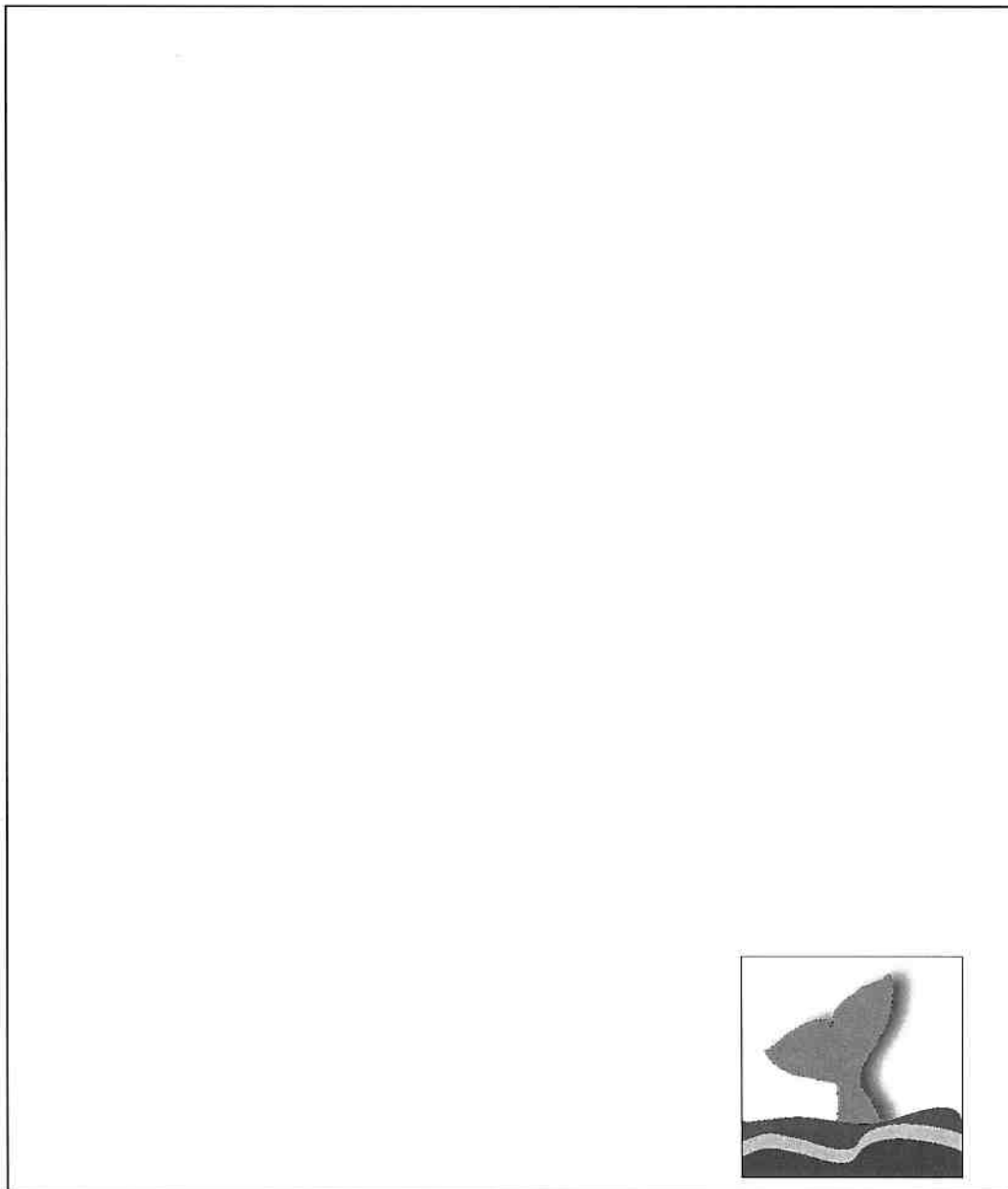
Q6. Are you involved in the tourism industry in Tofino?

- No
- Yes (how?): \_\_\_\_\_

Q7. What best describes your employment situation?

- Fishing, Logging, Aquaculture Industry
- Tourism Industry (accommodation, sales, restaurants, etc.)
- Craftsperson (carver, artist, etc.)
- Professional (health care, lawyer, teacher, accountant, engineer, architect, etc.)
- Trades Person (plumber, electrician, contractor, etc.)
- Government Employee
- Housewife/Househusband
- Retired
- Student
- Unemployed
- Other: \_\_\_\_\_

Is there anything else you would like to include about tourism in Tofino? Please use the space provided below.



Thank you for taking the time to complete this survey. The information gathered from your survey is both anonymous and confidential, and if you have any questions or concerns please feel free to contact me at [elobrien@uvic.ca](mailto:elobrien@uvic.ca).

The information that you have provided will be used in my graduate thesis work. If you are interested in receiving the findings of my research, please leave your contact information in the space provided above.

APPENDIX D

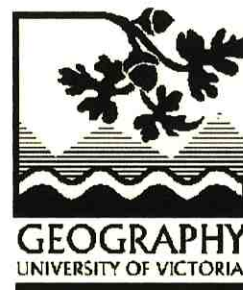
Business Survey

## Tofino's Tourism and Tourism Space



### Tofino Tourism Businesses Survey – Summer 2004

Research Conducted by:  
Erin O'Brien, Masters Candidate  
Department of Geography,  
University of Victoria  
[clobrien@uvic.ca](mailto:clobrien@uvic.ca) / (250) 472-4624



Tourism and Tourism Space in  
Tofino, British Columbia

**The purpose of this survey is to gain knowledge of the perceptions and experiences of tourism businesses in Tofino. This survey contains 6 sections, with each section addressing different aspects of tourism. Thank you for your time and effort in the completion of this survey.**

**SECTION A: GENERAL PERCEPTIONS**

This section contains open-ended questions that focus on the general perceptions of tourism in Tofino. Please respond in your own words.

Q1. What is the first word that comes to mind when you think of Tofino?  
(Just one word please) \_\_\_\_\_

Q2. What is your main reason for starting a business in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q3. What do you consider to be the most positive feature(s) of operating your business in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q4. What do you consider to be the most negative feature(s) of operating your business in Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION B: IMPACT STATEMENTS**

This section asks you a set of structured questions relating to tourism. Each question consists of three parts. Take a minute to read the instructions on how to answer the questions. The questions begin on the next page.

**PART A.** In the first part you are required to indicate whether something has changed as a result of tourism (and the associated direction of change) or whether you agree or disagree with the statement. Please indicate your response in the appropriate box.

For Example: 1a Because of Tourism, the number of tourists has...	OR	1a Because of Tourism, the number of tourists has increased
1 <input checked="" type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 2a) 4 <input type="checkbox"/> Don't know (go to 2a)		1 <input checked="" type="checkbox"/> Yes 2 <input type="checkbox"/> No (go to 2a) 3 <input type="checkbox"/> Don't know (go to 2a)

Only mark the 'Don't know' box if you know nothing about the statement, if you answer 'No change', 'Don't know', or 'No' you do not need to answer the following parts for each statement.

**PART B.** The second part requires you to rate how the tourism statement affects you personally, on a scale ranging from very bad (-3) to very good (+3). Please indicate your response by circling the appropriate number.

For Example: 1b. What effect does this have on you personally?	Very Bad -3	-2	-1	0	1	2	3 Very Good
---	----------------	----	----	---	---	---	----------------

**PART C.** The third part requires you to rate how the tourism statement affects the Tofino community on a scale ranging from very bad (-3) to very good (+3). Please indicate your response by circling the appropriate number.

For Example: 1c. How does this affect Tofino as a whole?	Very Bad -3	-2	-1	0	1	2	3 Very Good
---	----------------	----	----	---	---	---	----------------

PART A		PART B AND PART C				Very Bad	No Effect	Very Good		
1a.	Because of Tourism, employment opportunities in Tofino have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 2a) 4 <input type="checkbox"/> Don't know (go to 2a)	1b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
2a.	Because of Tourism, trade for local businesses in Tofino has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 3a) 4 <input type="checkbox"/> Don't know (go to 3a)	1c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
3a.	Because of Tourism, commercial property values and rental costs in Tofino have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 4a) 4 <input type="checkbox"/> Don't know (go to 4a)	2b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
4a.	Because of Tourism, prices of goods and services in local shops have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 5a) 4 <input type="checkbox"/> Don't know (go to 5a)	2c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
5a.	Because of Tourism, local business opportunities have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 6a) 4 <input type="checkbox"/> Don't know (go to 6a)	3b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
6a.	Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 7a) 4 <input type="checkbox"/> Don't know (go to 7a)	3c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
7a.	Because of Tourism, damage to the terrestrial environment around Tofino has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 8a) 4 <input type="checkbox"/> Don't know (go to 8a)	4b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
8a.	Because of Tourism, damage to the marine environment around Tofino has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 9a) 4 <input type="checkbox"/> Don't know (go to 9a)	4c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			5b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			5c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			6b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			6c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			7b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			7c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3
			8b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3
			8c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3

PART A		PART B AND PART C						
		Very Bad	No Effect	Very Good				
		-3	-1	1	3			
9a. Because of Tourism, litter around the town has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 10a) 4 <input type="checkbox"/> Don't know (go to 10a)	-3	-1	1	3			
10a. Because of Tourism, litter around the beach areas has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 11a) 4 <input type="checkbox"/> Don't know (go to 11a)	-3	-1	1	3			
11a. Because of Tourism, the appearance of the town is....	1 <input type="checkbox"/> Better 2 <input type="checkbox"/> Worse 3 <input type="checkbox"/> No change (go to 12a) 4 <input type="checkbox"/> Don't know (go to 12a)	-3	-1	1	3			
12a. Because of Tourism, life in Tofino is....	1 <input type="checkbox"/> More Interesting 2 <input type="checkbox"/> Less Interesting 3 <input type="checkbox"/> No change (go to 13a) 4 <input type="checkbox"/> Don't know (go to 13a)	-3	-1	1	3			
13a. Because of Tourism growth, relationships between tourists and local businesses are....	1 <input type="checkbox"/> Better 2 <input type="checkbox"/> Worse 3 <input type="checkbox"/> No change (go to 14a) 4 <input type="checkbox"/> Don't know (go to 14a)	-3	-1	1	3			
14a. Because of Tourism, the pride of local businesses of their town has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 15a) 4 <input type="checkbox"/> Don't know (go to 15a)	-3	-1	1	3			
15a. Because of Tourism, traffic congestion has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 16a) 4 <input type="checkbox"/> Don't know (go to 16a)	-3	-1	1	3			
16a. Because of Tourism, the facilities available to local businesses in Tofino have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 17a) 4 <input type="checkbox"/> Don't know (go to 17a)	-3	-1	1	3			
9b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
9c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
10b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
10c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
11b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
11c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
12b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
12c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
13b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
13c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
14b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
14c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
15b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
15c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3
16b. What effect does this have on you personally?		-3	-2	-1	0	1	2	3
16c. How does this affect Tofino as a whole?		-3	-2	-1	0	1	2	3

PART A		PART B AND PART C				Very Bad	No Effect	Very Good				
						-3	-2	-1	0	1	2	3
17a.	Because of Tourism, the ease for local residents to use local businesses has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 18a) 4 <input type="checkbox"/> Don't know (go to 18a)	17b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
18a.	Because of Tourism, the maintenance of public facilities is....	1 <input type="checkbox"/> Better 2 <input type="checkbox"/> Worse 3 <input type="checkbox"/> No change (go to 19a) 4 <input type="checkbox"/> Don't know (go to 19a)	17c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
19a.	Because of Tourism, the range of goods and services available is....	1 <input type="checkbox"/> Better 2 <input type="checkbox"/> Worse 3 <input type="checkbox"/> No change (go to 20a) 4 <input type="checkbox"/> Don't know (go to 20a)	18b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
20a.	Because of Tourism, the number of available parking spaces has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 21a) 4 <input type="checkbox"/> Don't know (go to 21a)	18c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
21a.	Because of Tourism, crime levels in Tofino have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 22a) 4 <input type="checkbox"/> Don't know (go to 22a)	19b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
22a.	Because of Tourism, entertainment opportunities in Tofino have....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 23a) 4 <input type="checkbox"/> Don't know (go to 23a)	19c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
23a.	Because of Tourism, rowdy behavior and/or excessive noise in Tofino has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 24a) 4 <input type="checkbox"/> Don't know (go to 24a)	20b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
24a.	Because of Tourism, the quality of life of local residents has....	1 <input type="checkbox"/> Increased 2 <input type="checkbox"/> Decreased 3 <input type="checkbox"/> No change (go to 25a) 4 <input type="checkbox"/> Don't know (go to 25a)	20c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
			21b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
			21c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
			22b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
			22c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
			23b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
			23c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3
			24b. What effect does this have on you personally?			-3	-2	-1	0	1	2	3
			24c. How does this affect Tofino as a whole?			-3	-2	-1	0	1	2	3

PART A		PART B AND PART C					Very Bad	No Effect	Very Good			
						-3	-2	-1	0	1	2	3
25a.	Because of Tourism, the opportunity to attract customers has....	1 <input type="checkbox"/> Increased _____ →	25b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> Decreased _____ →										
		3 <input type="checkbox"/> No change (go to 26a) _____ →	25c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
		4 <input type="checkbox"/> Don't know (go to 26a) _____ →										
26a.	Because of Tourism, there are too many competing tourism businesses.	1 <input type="checkbox"/> Yes _____ →	26b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to 27a) _____ →										
		3 <input type="checkbox"/> Don't know (go to 27a) _____ →	26c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
27a.	Because of Tourism, it is difficult to find housing for staff during the summer months.	1 <input type="checkbox"/> Yes _____ →	27b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to 28a) _____ →										
		3 <input type="checkbox"/> Don't know (go to 28a) _____ →	27c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
28a.	Because of Tourism, the tranquility of Tofino has been disrupted.	1 <input type="checkbox"/> Yes _____ →	28b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to 29a) _____ →										
		3 <input type="checkbox"/> Don't know (go to 29a) _____ →	28c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
29a.	Because of Tourism, the local economy has increased.	1 <input type="checkbox"/> Yes _____ →	29b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to 30a) _____ →										
		3 <input type="checkbox"/> Don't know (go to 30a) _____ →	29c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
30a.	Because of tourism, local businesses hospitality is enhanced.	1 <input type="checkbox"/> Yes _____ →	30b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to 31a) _____ →										
		3 <input type="checkbox"/> Don't know (go to 31a) _____ →	30c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		
31a.	Because of tourism, too many people visit Tofino.	1 <input type="checkbox"/> Yes _____ →	31b. What effect does this have on you personally?	-3	-2	-1	0	1	2	3		
		2 <input type="checkbox"/> No (go to Section C)										
		3 <input type="checkbox"/> Don't know (go to Section C)	31c. How does this affect Tofino as a whole?	-3	-2	-1	0	1	2	3		

### SECTION C: IMAGE COMPARISON

This section contains two series of six photographs and sets of associated questions. Take a look at the images before answering the questions.

#### Beach Setting Images:

Photo A



Photo B

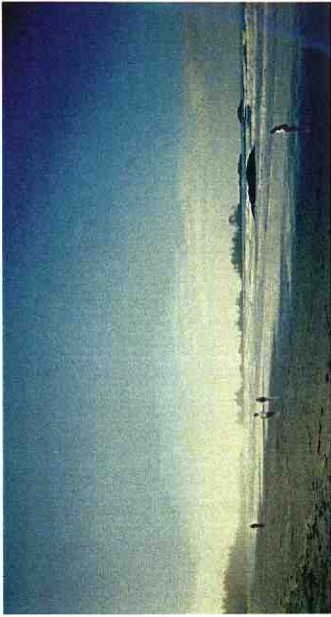


Photo C

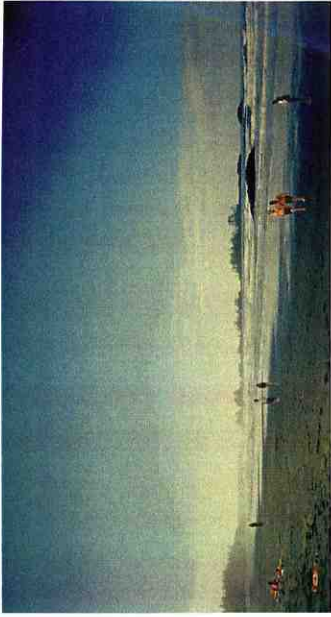


Photo D



Photo E

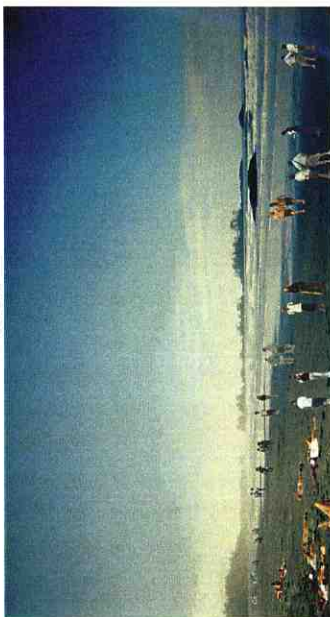


Photo F



**SECTION C: IMAGE COMPARISON (continued)**Beach Setting Questions:

- Q1. Please indicate how acceptable or unacceptable you feel about the levels of use in each of the photos, using the rating scale provided below. Please indicate your response by circling the appropriate number.

	Very Unacceptable				Acceptable/ Unacceptable				Very Acceptable
	-4	-3	-2	-1	0	1	2	3	4
Photo A	-4	-3	-2	-1	0	1	2	3	4
Photo B	-4	-3	-2	-1	0	1	2	3	4
Photo C	-4	-3	-2	-1	0	1	2	3	4
Photo D	-4	-3	-2	-1	0	1	2	3	4
Photo E	-4	-3	-2	-1	0	1	2	3	4
Photo F	-4	-3	-2	-1	0	1	2	3	4

- Q2. Which of the photos shows the level of use that you would *ideally* prefer to experience in Tofino?
- Photo A
   
  Photo D  
 Photo B
   
  Photo E  
 Photo C
   
  Photo F
- Q3. Which of the photos looks most like what is *typically* experienced during the peak summer tourism season?
- Photo A
   
  Photo D  
 Photo B
   
  Photo E  
 Photo C
   
  Photo F
- Q4. Which of the photos shows the *highest* level of use you would accept before you would choose to leave the beach?
- Photo A
   
  Photo D  
 Photo B
   
  Photo E  
 Photo C
   
  Photo F
- Q5. Which of the photos reflects the *highest* level of use that should be promoted by the Tofino tourism associations and businesses?
- Photo A
   
  Photo D  
 Photo B
   
  Photo E  
 Photo C
   
  Photo F

**SECTION C: IMAGE COMPARISON (continued)**

Downtown Setting Images:

Photo A



Photo B

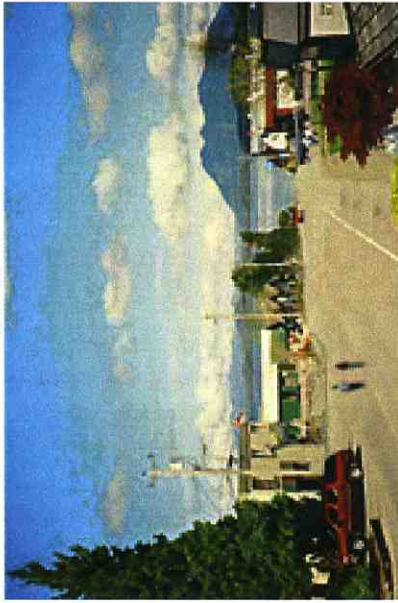


Photo C

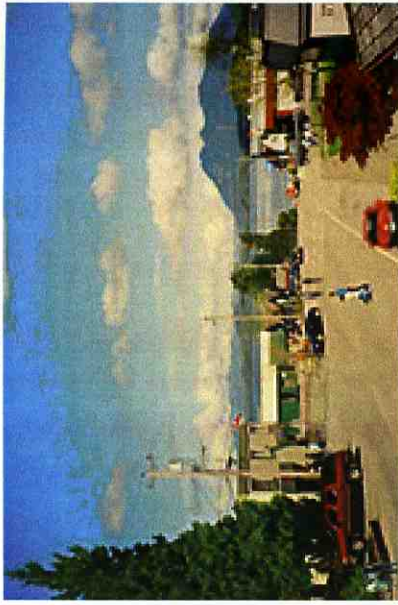


Photo D



Photo E



Photo F



Original photo provided by: [www.GoTofino.com](http://www.GoTofino.com)

**SECTION C: IMAGE COMPARISON (continued)**Downtown Setting Questions:

- Q6. Please indicate how acceptable or unacceptable you feel about the levels of use in each of the photos, using the rating scale provided below. Please indicate your response by circling the appropriate number.

	Very Unacceptable				Acceptable/ Unacceptable				Very Acceptable
	-4	-3	-2	-1	0	1	2	3	4
Photo A	-4	-3	-2	-1	0	1	2	3	4
Photo B	-4	-3	-2	-1	0	1	2	3	4
Photo C	-4	-3	-2	-1	0	1	2	3	4
Photo D	-4	-3	-2	-1	0	1	2	3	4
Photo E	-4	-3	-2	-1	0	1	2	3	4
Photo F	-4	-3	-2	-1	0	1	2	3	4

- Q7. Which of the photos shows the level of use that you would *ideally* prefer to experience in Tofino?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q8. Which of the photos looks most like what is *typically* experienced during the peak summer tourism season?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q9. Which of the photos shows the *highest* level of use you would accept before you would choose to leave downtown?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q10. Which of the photos reflects the *highest* level of use that should be promoted by the Tofino tourism associations and businesses?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F



## SECTION E: MAPPING TOURISM SPACE

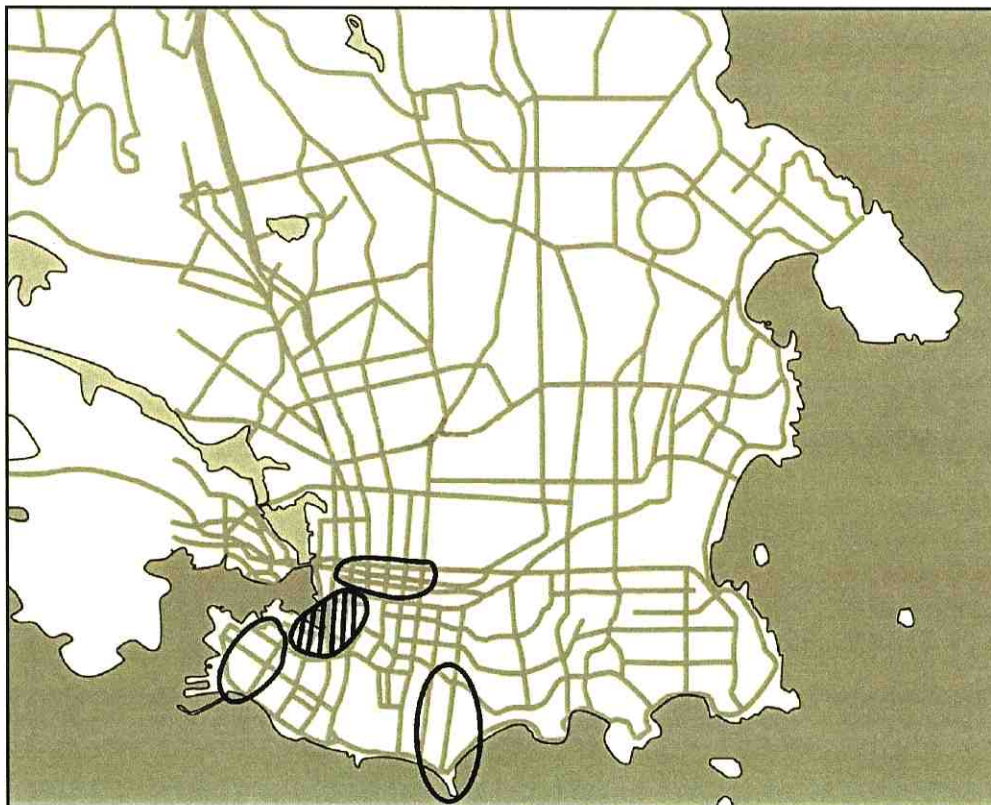
**STEP 1.** Please refer to the maps provided on the following pages. Two maps are provided, Map One - District of Tofino and Map Two - Village of Tofino.

**STEP 2.** On both maps, with a pen, please draw a line around the area(s) that you perceive to have *high* concentrations of tourists during the summer months. Please shade in these high concentration areas.

**STEP 3.** On both maps, with a pen, please draw a line around the *other* area(s) you perceive to have concentrations of tourists during the summer months, which are areas you consider to be part of Tofino's tourism space. Please do not shade in these other areas.

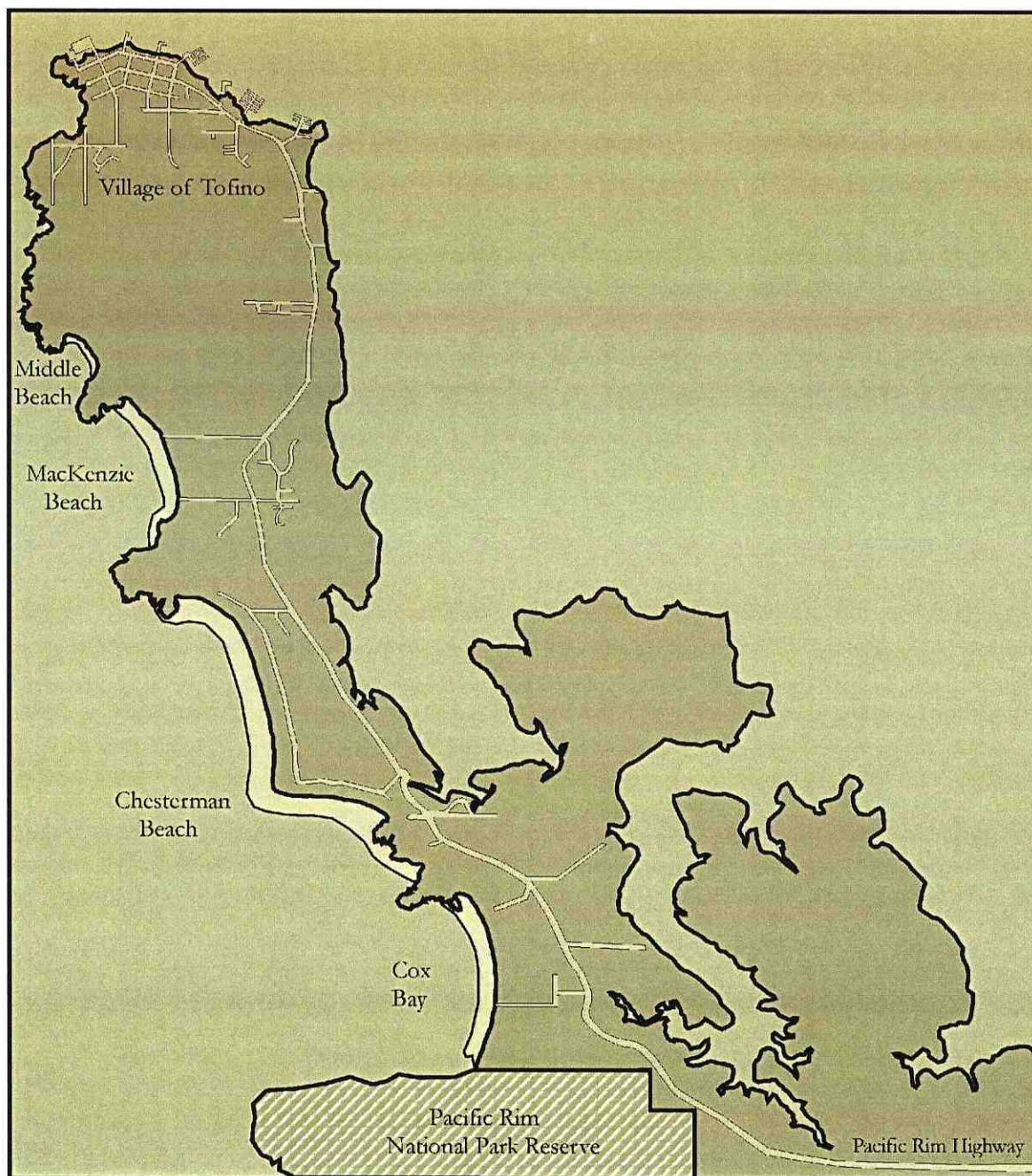
**STEP 4.** Please complete Section F once Section E is completed.

For Example:



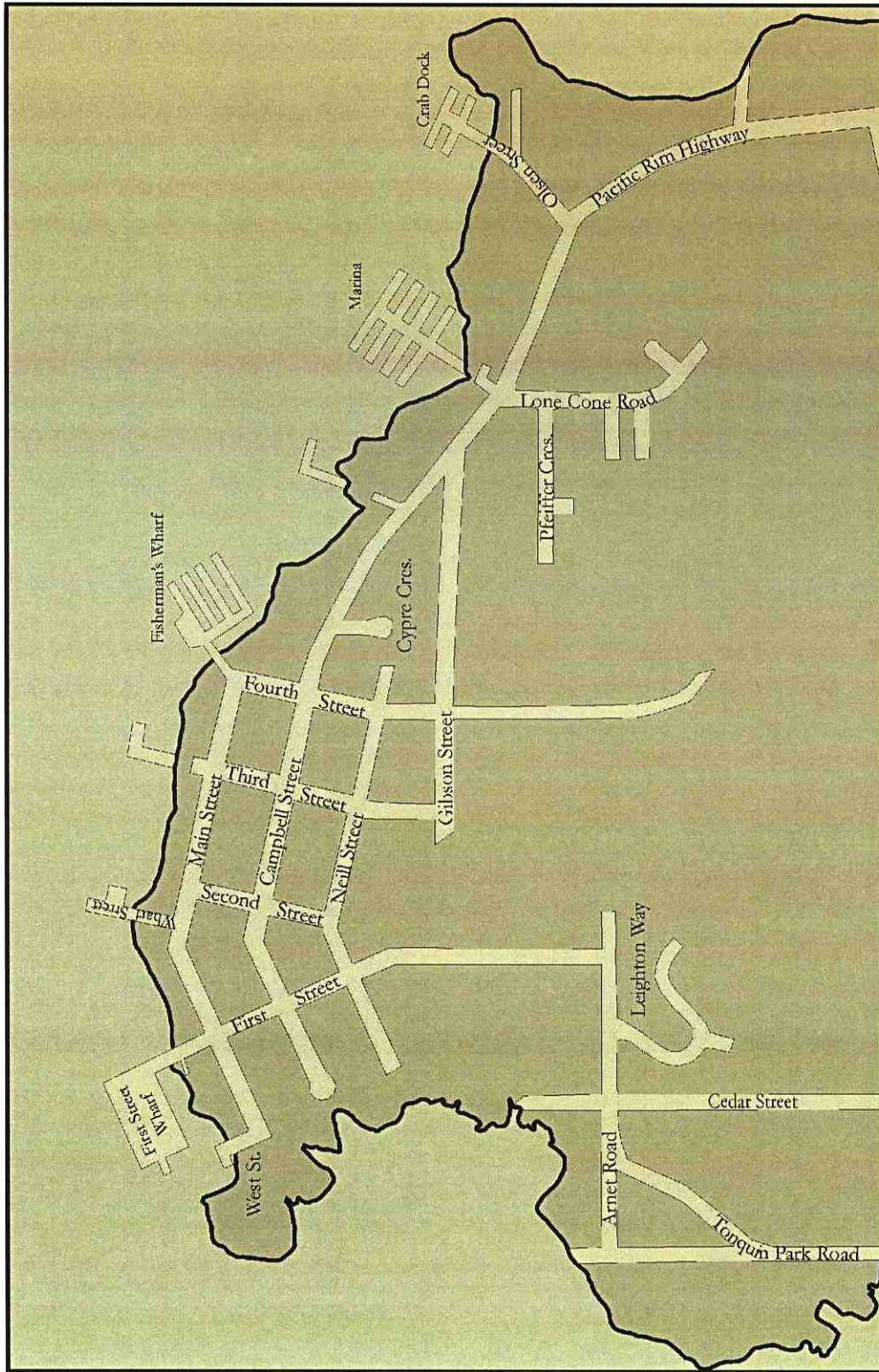
**SECTION E: MAPPING TOURISM SPACE**

MAP ONE – DISTRICT OF TOFINO



**SECTION E: MAPPING TOURISM SPACE (continued)**

MAP TWO – VILLAGE OF TOFINO



**SECTION F: TOURISM BUSINESS PROFILE**

Q1. How long have you been in operating in Tofino? \_\_\_\_\_

Q2. What type of marketing does your business use? Please indicate your response in all the appropriate boxes.

- Chamber of Commerce/Tourism Center \_\_\_\_\_
- Internet Site (web address): \_\_\_\_\_
- Newspaper/Magazine (which one?): \_\_\_\_\_
- Radio (which station?): \_\_\_\_\_
- Television (which station?): \_\_\_\_\_
- Other: \_\_\_\_\_
- None (why?): \_\_\_\_\_

Q3. Is your business a member of a Tofino business association?

- Yes: Tofino Chamber of Commerce
- Yes: Tofino Business Association
- No

Q4. How many employees does your business hire for each month (Please write down the number per month)

	Full-time	Part-time		Full-time	Part-time
January	_____	_____	July	_____	_____
February	_____	_____	August	_____	_____
March	_____	_____	September	_____	_____
April	_____	_____	October	_____	_____
May	_____	_____	November	_____	_____
June	_____	_____	December	_____	_____

Q5. Did you change careers to enter into the tourism industry? If yes, what was your previous career? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q6. Is your business planning for future growth? If yes how? \_\_\_\_\_

\_\_\_\_\_

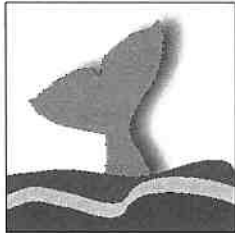
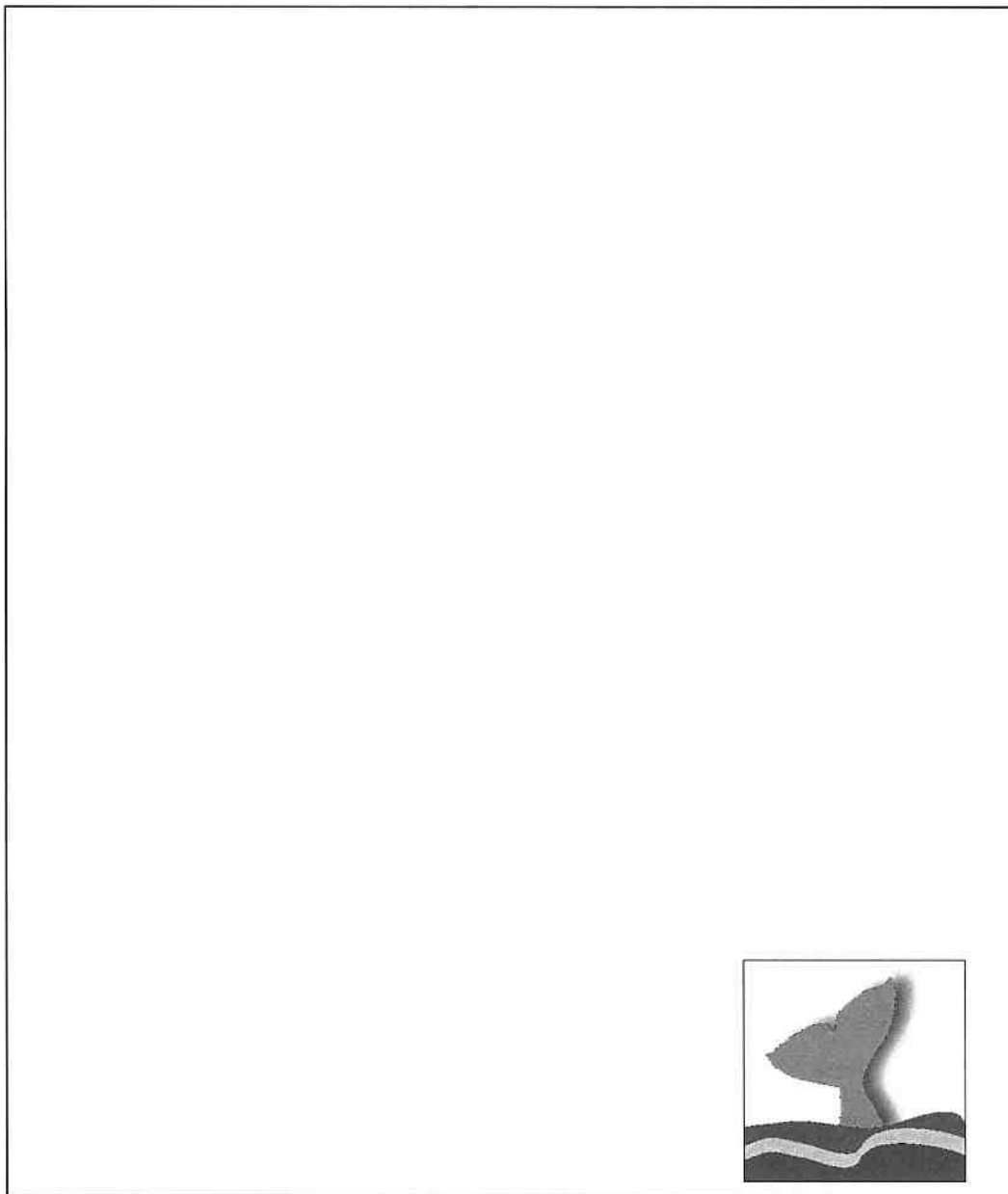
\_\_\_\_\_

Q7. What is the maximum number of people that your business can provide service to, per day?

\_\_\_\_\_

\_\_\_\_\_

Is there anything else you would like to include about tourism in Tofino? Please use the space provided below.



Thank you for taking the time to complete this survey. The information gathered from your survey is both anonymous and confidential, and if you have any questions or concerns please feel free to contact me at [elobrien@uvic.ca](mailto:elobrien@uvic.ca).

The information that you have provided will be used in my graduate thesis work. If you are interested in receiving the findings of my research, please leave your contact information in the space provided above.

APPENDIX E

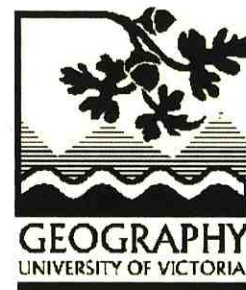
Tourist Survey

## Tofino's Tourism and Tourism Space



### Tofino Tourists Survey – Summer 2004

Research Conducted by:  
Erin O'Brien, Masters Candidate  
Department of Geography,  
University of Victoria  
[elobrien@uvic.ca](mailto:elobrien@uvic.ca) / (250) 472-4624



Tourism and Tourism Space in  
Tofino, British Columbia

**The purpose of this survey is to gain knowledge of the perceptions and experiences of tourism businesses in Tofino. This survey contains 6 sections, with each section addressing different aspects of tourism. Thank you for your time and effort in the completion of this survey.**

**SECTION A: GENERAL PERCEPTIONS**

This section contains open-ended questions that focus on the general perceptions of tourism in Tofino. Please respond in your own words.

Q1. What is the first word that comes to mind when you think of Tofino?  
(Just one word please) \_\_\_\_\_

Q2. What is your main reason for visiting Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q3. What do you consider to be the most positive feature(s) of Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q4. What do you consider to be the most negative feature(s) of Tofino?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SECTION B: PERCEPTIONS OF PROBLEMS ASSOCIATED WITH TOURISM

- Q1. A series of problems that are associated with tourism are listed below. From your experience in Tofino, please indicate how serious these problems were during your visit to Tofino. Please indicate your response by circling the appropriate number on the scale provided.

	Not a Problem	Slight Problem	Moderate Problem	Serious Problem	Not Sure
A Limited road access into Tofino	1	2	3	4	N/S
B Too much traffic congestion	1	2	3	4	N/S
C Lack of available tourist accommodation	1	2	3	4	N/S
D Lack of available low-budget tourist accommodation	1	2	3	4	N/S
E Lack of community facilities	1	2	3	4	N/S
F Lack of public facilities downtown	1	2	3	4	N/S
G Lack of public facilities on the beaches	1	2	3	4	N/S
H Waiting for public facilities	1	2	3	4	N/S
I Dirtiness of public facilities	1	2	3	4	N/S
J Garbage/litter in downtown	1	2	3	4	N/S
K Garbage/litter on the beaches	1	2	3	4	N/S
L Garbage/litter in the water	1	2	3	4	N/S
M Environmental damage	1	2	3	4	N/S
N Impolite local residents	1	2	3	4	N/S
O Crime/Vandalism	1	2	3	4	N/S
P Too much tourism development	1	2	3	4	N/S
Q Expensive pricing	1	2	3	4	N/S
R Wet weather	1	2	3	4	N/S
S Too many other people downtown	1	2	3	4	N/S
T Too many other people on the beach	1	2	3	4	N/S
U Too many other recreational boaters	1	2	3	4	N/S
V Boat noise	1	2	3	4	N/S
W Airplane noise	1	2	3	4	N/S
X Rowdy behaviour	1	2	3	4	N/S

- Q2. What do you consider to be the three most serious problems you encountered during your visit to Tofino?

Most Serious Problem: \_\_\_\_\_

Second Most Serious Problem: \_\_\_\_\_

Third Most Serious Problem: \_\_\_\_\_

**SECTION C: IMAGE COMPARISON**

This section contains two series of six photographs and sets of associated questions. Take a look at the images before answering the questions.

**Beach Setting Images:**

Photo A

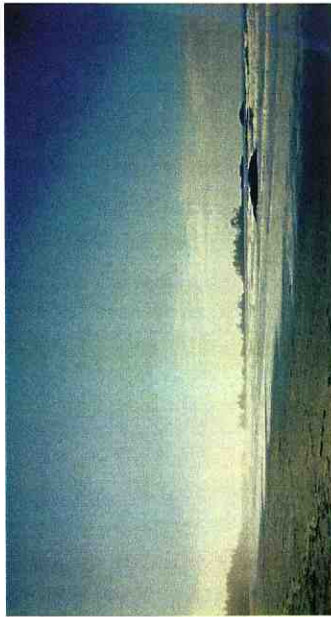


Photo B



Photo C



Photo D



Photo E



Photo F





**SECTION C: IMAGE COMPARISON (continued)**

Downtown Setting Images:

Photo A



Photo B

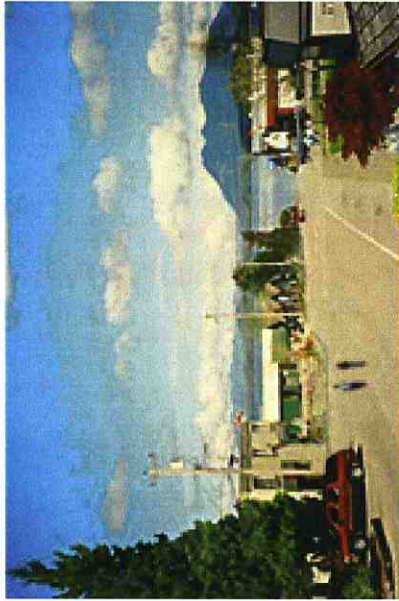


Photo C

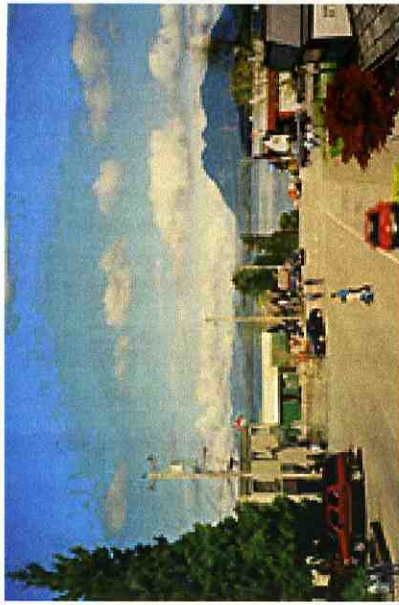


Photo D



Photo E

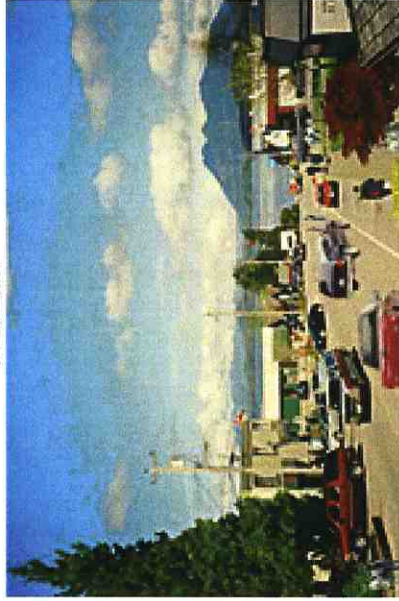
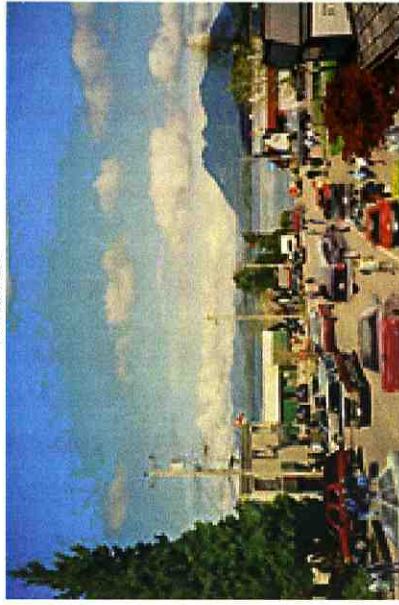


Photo F



Original photo provided by: [www.GoTofino.com](http://www.GoTofino.com)

**SECTION C: IMAGE COMPARISON (continued)**Downtown Setting Questions:

- Q6. Please indicate how acceptable or unacceptable you feel about the levels of use in each of the photos, using the rating scale provided below. Please indicate your response by circling the appropriate number.

	Very Unacceptable				Acceptable/ Unacceptable				Very Acceptable
	-4	-3	-2	-1	0	1	2	3	4
Photo A	-4	-3	-2	-1	0	1	2	3	4
Photo B	-4	-3	-2	-1	0	1	2	3	4
Photo C	-4	-3	-2	-1	0	1	2	3	4
Photo D	-4	-3	-2	-1	0	1	2	3	4
Photo E	-4	-3	-2	-1	0	1	2	3	4
Photo F	-4	-3	-2	-1	0	1	2	3	4

- Q7. Which of the photos shows the level of use that you would *ideally* prefer to experience in Tofino?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q8. Which of the photos looks most like what is *typically* experienced during the peak summer tourism season?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q9. Which of the photos shows the *highest* level of use you would accept before you would choose to leave downtown?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

- Q10. Which of the photos reflects the *highest* level of use that should be promoted by the Tofino tourism associations and businesses?

Photo A  
 Photo B  
 Photo C

Photo D  
 Photo E  
 Photo F

## SECTION D: TOURISM DEVELOPMENT AND ACTIVITIES

- Q1. What types of tourism development would you like to see in Tofino? Please indicate your response by circling the appropriate answer on the scale provided below.

Type of Tourism Development	Strongly Oppose	Somewhat Oppose	Not Sure	Somewhat Support	Strongly Support
A More hotels/motels/B&B's	-2	-1	0	1	2
B More restaurants	-2	-1	0	1	2
C More hiking trails	-2	-1	0	1	2
D More bike paths	-2	-1	0	1	2
E More general sightseeing tours	-2	-1	0	1	2
F New marina	-2	-1	0	1	2
G More whale watching tours	-2	-1	0	1	2
H Beach commercial concession stands	-2	-1	0	1	2
I Jet ski rentals	-2	-1	0	1	2
J More cultural activities	-2	-1	0	1	2
K More sport fishing charters	-2	-1	0	1	2
L More pubs	-2	-1	0	1	2
M More tourist wilderness experience activities	-2	-1	0	1	2
N More shuttle buses for tourists	-2	-1	0	1	2
O More international chain businesses	-2	-1	0	1	2
P More tourist developments initiated by locals	-2	-1	0	1	2
Q Implementation of tourist tax to cover municipal costs	-2	-1	0	1	2
R More education programs/events for tourists	-2	-1	0	1	2
S Tourism which promotes environmental awareness	-2	-1	0	1	2

- Q2. Which of the following activities (if any) did you perform during your visit to Tofino? Please indicate your response by indicating all the appropriate boxes.

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Beach Activity (Walking/Combing) | <input type="checkbox"/> Flight Seeing           | <input type="checkbox"/> Sea Kayaking            |
| <input type="checkbox"/> Bird Watching                    | <input type="checkbox"/> Motor Boating           | <input type="checkbox"/> Shopping                |
| <input type="checkbox"/> Camping                          | <input type="checkbox"/> Mountain Biking         | <input type="checkbox"/> Surfing                 |
| <input type="checkbox"/> Canoeing                         | <input type="checkbox"/> Overnight Hiking        | <input type="checkbox"/> Whale Watching          |
| <input type="checkbox"/> Day Hiking                       | <input type="checkbox"/> Photography             | <input type="checkbox"/> Other Wildlife Watching |
| <input type="checkbox"/> Guided Tours                     | <input type="checkbox"/> Restaurant Dining       | <input type="checkbox"/> Visit Hot Springs       |
| <input type="checkbox"/> First Nations Cultural Activity  | <input type="checkbox"/> Sailboating             | <input type="checkbox"/> Other: _____            |
| <input type="checkbox"/> Fishing                          | <input type="checkbox"/> Scuba Diving/Snorkeling |  |

- Q3. Which activity did you enjoy the most in Tofino? \_\_\_\_\_

- Q4. How satisfied or dissatisfied were you with the variety of options of activities in Tofino?

Very Dissatisfied	Somewhat Dissatisfied	Neither Dissatisfied or Satisfied	Somewhat Satisfied	Very Satisfied
-2	-1	0	1	2

- Q5. Overall, how satisfied or dissatisfied were you with your trip to Tofino?

Very Dissatisfied	Somewhat Dissatisfied	Neither Dissatisfied or Satisfied	Somewhat Satisfied	Very Satisfied
-2	-1	0	1	2

## SECTION E: MAPPING TOURISM SPACE

**STEP 1.** Please refer to the maps provided on the following pages. Two maps are provided, Map One - District of Tofino and Map Two - Village of Tofino.

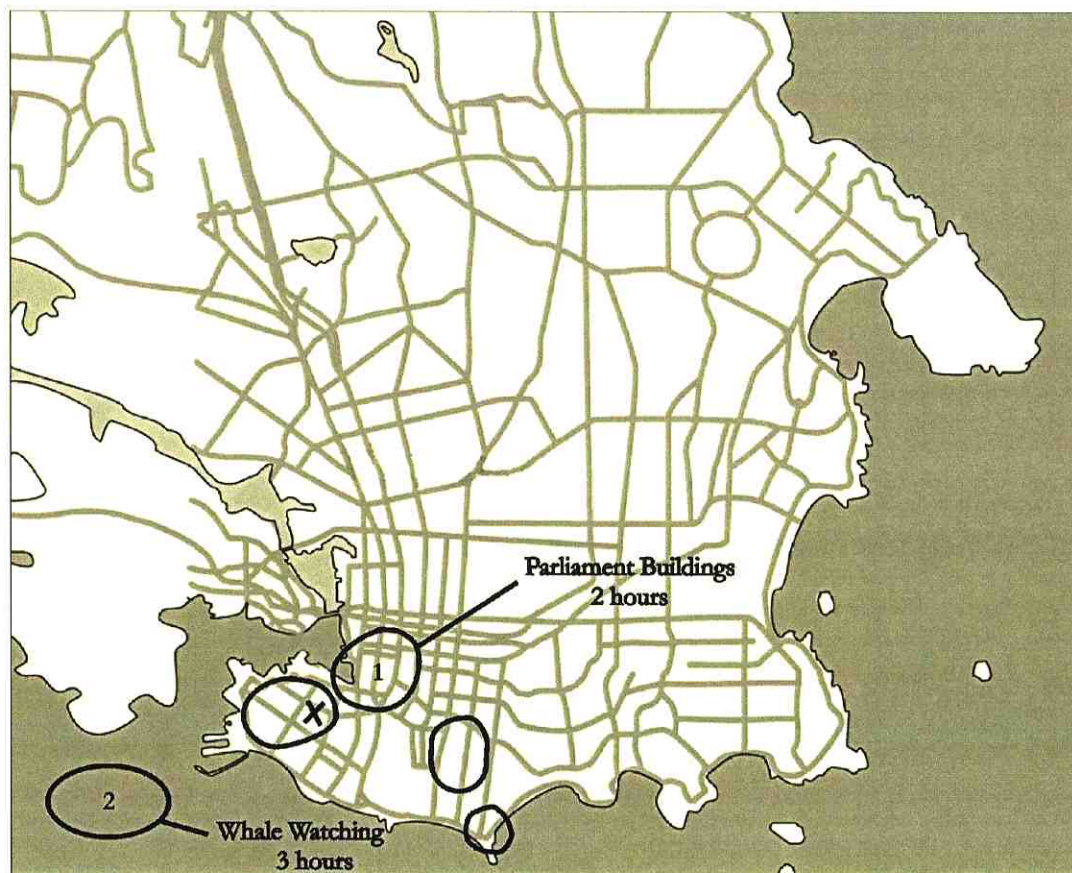
**STEP 2.** On both maps, with a pen, please draw a line around the area(s) that you visited during your stay in Tofino.

If possible, try to number the areas that were most *memorable* when visiting Tofino.

Area	Length of Visit	Reason/Feature
1.	_____	_____
2.	_____	_____
3.	_____	_____

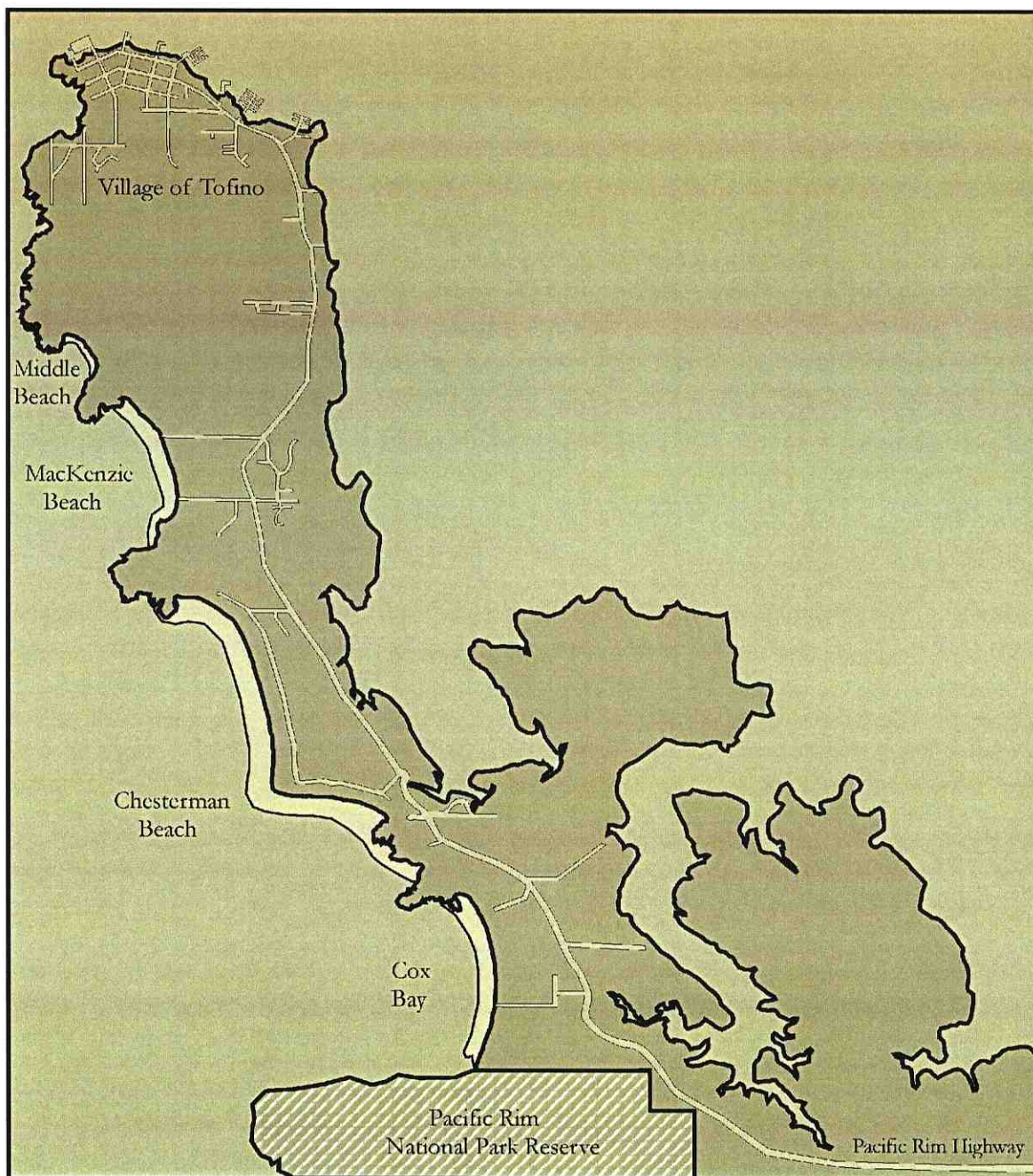
**STEP 3.** Please complete Section F once Section E is completed.

For Example:



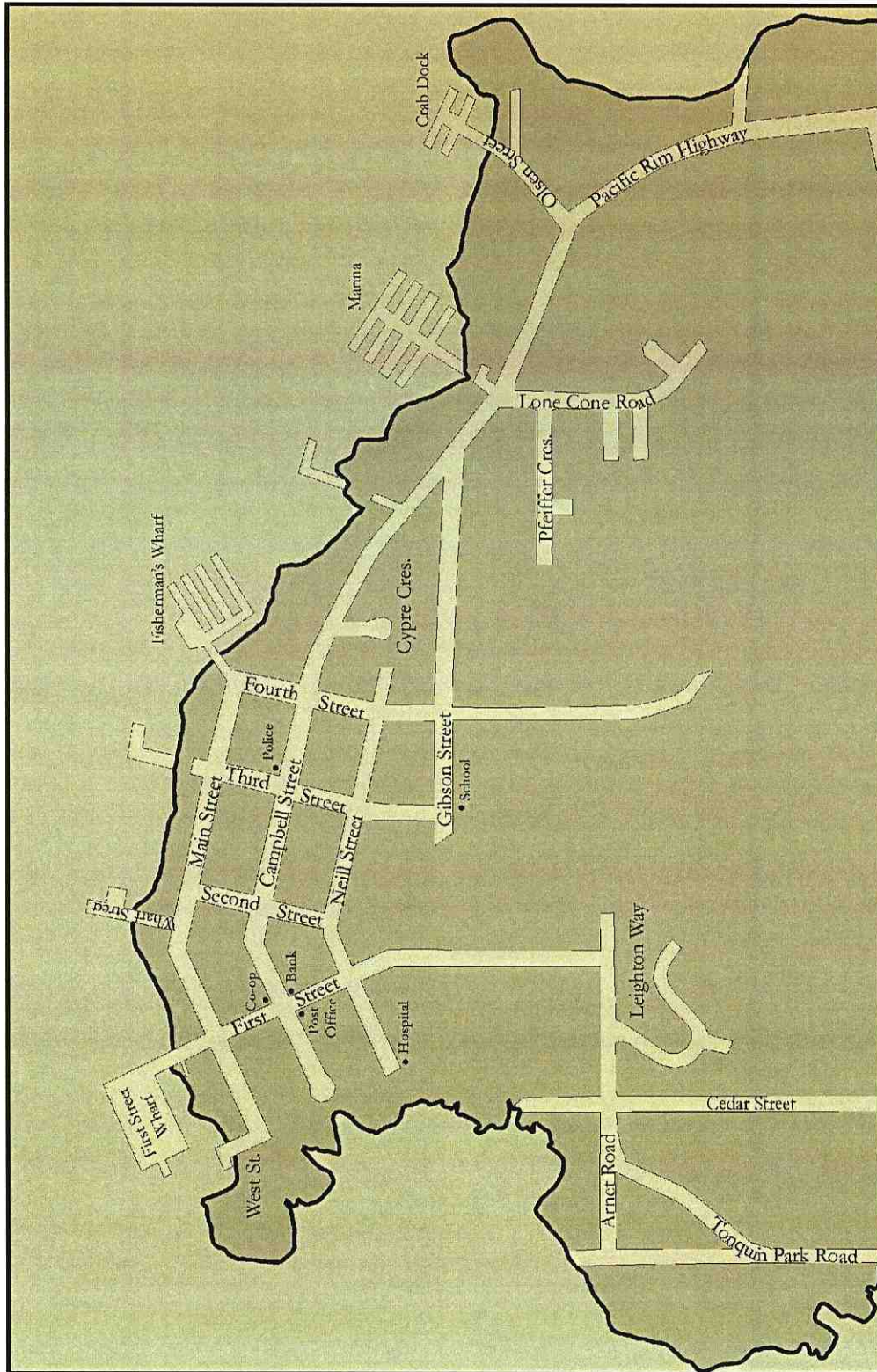
**SECTION E: MAPPING TOURISM SPACE**

MAP ONE – DISTRICT OF TOFINO



**SECTION E: MAPPING TOURISM SPACE (continued)**

MAP TWO – VILLAGE OF TOFINO



**SECTION F: TOURIST PROFILE**

Q1. Where are you from? City/Town, Country: \_\_\_\_\_

Q2. When did you arrive in Tofino? Date: \_\_\_\_\_

Q3. How long are you planning on staying? Number of Days: \_\_\_\_\_

Q4. Are you staying overnight in Tofino? If so, what is the name of the accommodation you are staying at? \_\_\_\_\_

Was this your first choice of accommodation? If not, why? \_\_\_\_\_

Q5. Is this your first time to Tofino?

Yes: Would you plan to return to Tofino in the future? \_\_\_\_\_

No: How many times have you been to Tofino? \_\_\_\_\_  
What is the biggest change since your previous visit(s)? \_\_\_\_\_

Q6. How many people (including yourself) are you traveling with? \_\_\_\_\_

Q7. Please specify your gender.

Female

Male

Q8. Please specify the age category that you fit into.

Under 25 years old

26 to 35 years old

36 to 45 years old

46 to 65 years old

Over 65 years old

Q9. Are you involved in the tourism industry where you come from?

No

Yes (how?): \_\_\_\_\_

Q10. What best describes your employment situation? (Please circle appropriate answer)

Fishing, Logging, Aquaculture Industry

Tourism Industry (accommodation, sales, restaurants, etc.)

Craftsperson (carver, artist, etc.)

Professional (health care, lawyer, teacher, accountant, engineer, architect, etc.)

Trades Person (plumber, electrician, contractor, etc.)

Government Employee

Housewife/Househusband

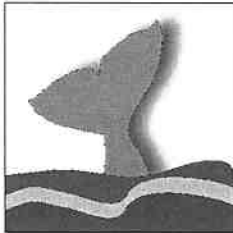
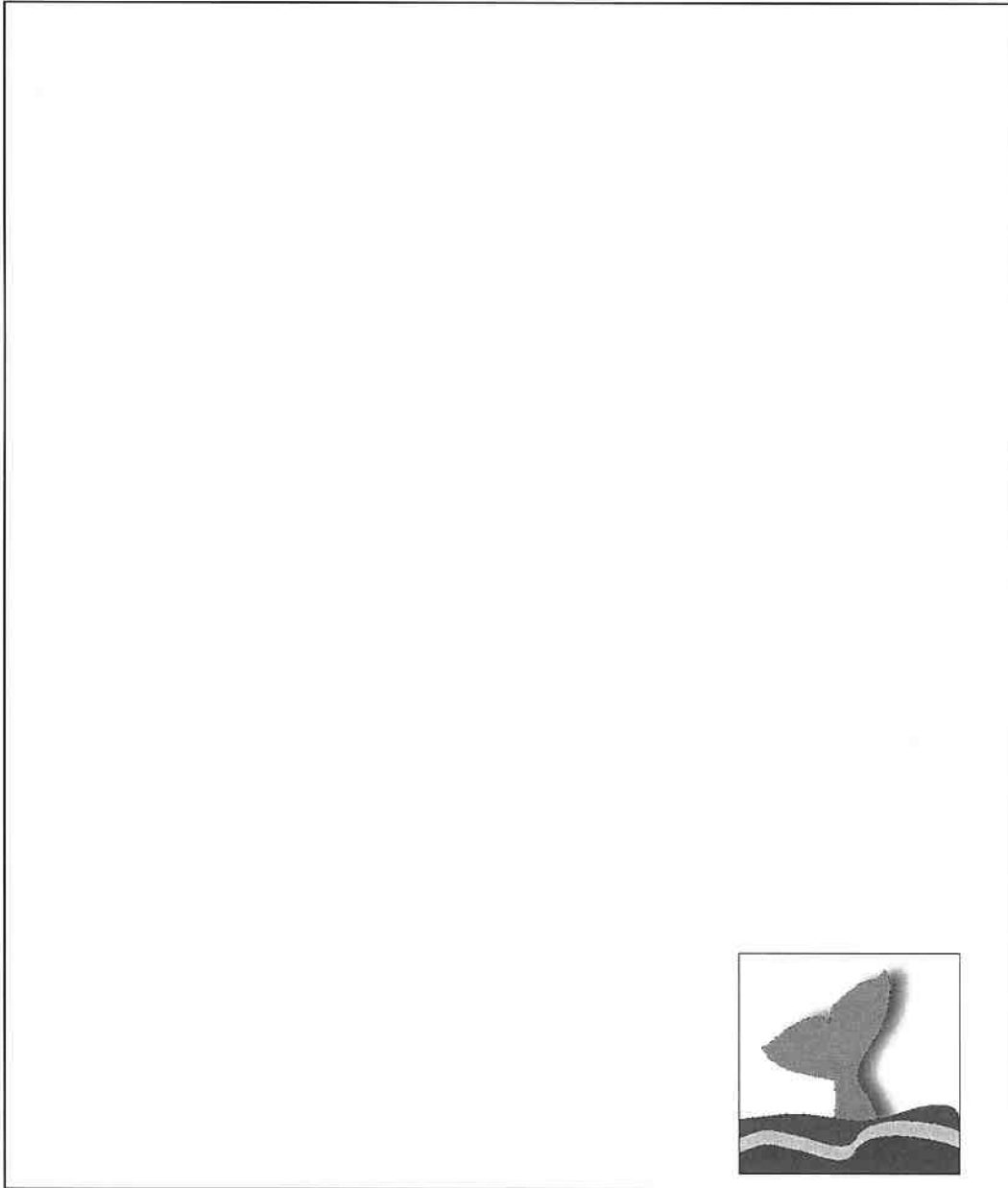
Retired

Student

Unemployed

Other: \_\_\_\_\_

Is there anything else you would like to include about tourism in Tofino? Please use the space provided below.



Thank you for taking the time to complete this survey. The information gathered from your survey is both anonymous and confidential, and if you have any questions or concerns please feel free to contact me at [elobrien@uvic.ca](mailto:elobrien@uvic.ca).

The information that you have provided will be used in my graduate thesis work. If you are interested in receiving the findings of my research, please leave your contact information in the space provided above.

APPENDIX F

Descriptive Statistics Summary

## Theme One: Impacts of Tourism

Resident:

Section B

Q1.

<i>Variable</i>	Increased /Yes	Decreased	No change/ No	Don't know	Personal Mean	Community Mean
1. Because of Tourism, employment opportunities in Tofino have...	39	1	0	0	1.58	1.49
2. Because of Tourism, trade for local businesses in Tofino has ...	34	1	0	4	1.17	1.62
3. Because of Tourism, housing property values and rental costs in Tofino have ...	40	0	0	0	-0.57	-1.10
4. Because of Tourism, prices of goods and services in local shops have ...	29	1	8	2	-0.82	-0.61
5. Because of Tourism, local business opportunities have ...	38	0	1	1	0.90	1.76
6. Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	25	0	2	13	1.07	1.58
7. Because of Tourism, damage to the terrestrial environment around Tofino has ...	24	3	9	4	-0.92	-1.23
8. Because of Tourism, damage to the marine environment around Tofino has ...	25	1	8	6	-1.12	-1.41
9. Because of Tourism, litter around the town has ...	27	1	11	0	-1.23	-1.33
10. Because of Tourism, litter around the beach areas has ...	26	0	9	4	-1.63	-1.83
11. Because of Tourism, the appearance of the town is ...	19	9	6	2	0.38	0.67
12. Because of Tourism, life in Tofino is ...	23	5	6	4	0.71	1.19
13. Because of Tourism growth, relationships between tourists and locals are ...	10	15	6	7	-0.03	-0.10
14. Because of Tourism, the pride of local residents of their town has ...	18	8	5	6	0.55	0.63
15. Because of Tourism, traffic congestion has ...	39	0	0	0	-1.95	-2.18
16. Because of Tourism, the facilities available to local residents in Tofino have ...	13	8	15	3	0.03	0.20
17. Because of Tourism, the ease for local residents to use local facilities has ...	1	23	14	2	-0.55	-0.49
18. Because of Tourism, the maintenance of public facilities is ...	18	9	9	4	0.22	0.43
19. Because of Tourism, the range of goods and services available is ...	28	0	11	1	1.03	1.24
20. Because of Tourism, the number of available parking spaces has ...	6	31	3	0	-0.90	-1.44
21. Because of Tourism, crime levels in Tofino have ...	25	0	8	7	-1.30	-1.69
22. Because of Tourism, entertainment opportunities in Tofino have ...	22	0	17	1	0.69	1.11
23. Because of Tourism, rowdy behaviour and/or excessive noise in Tofino has ...	30	0	7	3	-1.35	-1.47
24. Because of Tourism, the quality of life of local residents has ...	12	17	6	3	-0.23	0.06
25. Because of Tourism, the opportunity to meet new people has ...	34		5	1	1.56	1.45
26. Because of Tourism growth, the local community is divided over issues.	35		0	5	-1.15	-1.82
27. Because of Tourism, the local residents' lives are disrupted.	29		6	4	-1.11	-1.32
28. Because of Tourism, the tranquility of Tofino has been disrupted.	35		4	1	-1.47	-1.46
29. Because of Tourism, the local economy has increased.	38		1	1	1.37	1.97
30. Because of Tourism, local residents' hospitality is enhanced.	16		13	11	0.64	1.00
31. Because of Tourism, too many people visit Tofino.	19		18	3	-0.81	-0.72

Business:

## Section B

## Q1.

<i>Variable</i>	Increased /Yes	Decreased	No change/ No	Don't know	Personal Mean	Community Mean
1. Because of Tourism, employment opportunities in Tofino have...	58	0	0	1	1.60	1.70
2. Because of Tourism, trade for local businesses in Tofino has ...	54	0	4	1	1.67	2.15
3. Because of Tourism, commercial property values and rental costs in Tofino have ...	59	0	0	0	0.19	-0.78
4. Because of Tourism, prices of goods and services in local shops have ...	39	0	12	7	-1.04	-0.47
5. Because of Tourism, local business opportunities have ...	52	2	2	3	1.57	2.09
6. Because of Tofino's Tourism, the promotion of British Columbia as a tourism destination has ...	43	0	4	12	1.66	1.67
7. Because of Tourism, damage to the terrestrial environment around Tofino has ...	38	4	7	10	-0.82	-1.11
8. Because of Tourism, damage to the marine environment around Tofino has ...	31	3	14	11	-0.69	-0.91
9. Because of Tourism, litter around the town has ...	37	0	15	7	-1.00	-1.32
10. Because of Tourism, litter around the beach areas has ...	42	1	10	6	-1.27	-1.47
11. Because of Tourism, the appearance of the town is ...	33	8	14	3	0.64	1.02
12. Because of Tourism, life in Tofino is ...	41	5	9	4	1.25	1.56
13. Because of Tourism growth, relationships between tourists and local businesses are ...	30	4	14	10	0.96	1.00
14. Because of Tourism, the pride of local businesses of their town has ...	42	1	4	11	1.61	1.98
15. Because of Tourism, traffic congestion has ...	57	0	3	0	-1.69	-1.98
16. Because of Tourism, the facilities available to local businesses in Tofino have ...	26	9	19	5	0.48	0.58
17. Because of Tourism, the ease for local residents to use local businesses has ...	11	38	7	1	-0.61	-0.44
18. Because of Tourism, the maintenance of public facilities is ...	21	16	14	6	0.43	0.52
19. Because of Tourism, the range of goods and services available is ...	38	3	11	4	1.17	1.36
20. Because of Tourism, the number of available parking spaces has ...	6	43	6	2	-1.16	-1.51
21. Because of Tourism, crime levels in Tofino have ...	31	0	11	15	-1.05	-1.48
22. Because of Tourism, entertainment opportunities in Tofino have ...	38	1	17	1	0.93	1.28
23. Because of Tourism, rowdy behaviour and/or excessive noise in Tofino has ...	41	0	10	6	-1.04	-1.35
24. Because of Tourism, the quality of life of local residents has ...	29	17	7	3	0.57	0.53
25. Because of Tourism, the opportunity to attract customers has ...	57		1	1	2.07	2.33
26. Because of Tourism growth, there are too many competing businesses.	19		34	6	-0.23	-0.14
27. Because of Tourism, it is difficult to find housing for staff during the summer months.	58		0	1	-1.10	-2.30
28. Because of Tourism, the tranquility of Tofino has been disrupted.	48		8	3	-0.91	-1.30
29. Because of Tourism, the local economy has increased.	57		0	2	2.04	2.36
30. Because of Tourism, local businesses hospitality is enhanced.	34		14	11	1.35	1.57
31. Because of Tourism, too many people visit Tofino.	18		37	3	-0.11	-0.42

Tourist:  
Section B

Q1. A series of problems that are associated with tourism are listed below. From your experience in Tofino, please indicate how serious these problems were during your visit to Tofino.

	Problem	Not a Problem 1	Slight Problem 2	Moderate Problem 3	Serious Problem 4	Not Sure 5	Mean w/o Not Sure	Mean with Not Sure
<b>A</b>	Limited road access into Tofino	15	8	4	2	0	1.76	1.76
<b>B</b>	Too much traffic congestion	12	5	8	4	0	2.14	2.14
<b>C</b>	Lack of available tourist accommodation	13	7	3	4	2	1.93	2.14
<b>D</b>	Lack of available low-budget tourist accommodation	6	9	7	5	2	2.41	2.59
<b>E</b>	Lack of community facilities	9	4	5	0	10	1.78	2.93
<b>F</b>	Lack of public facilities downtown	11	9	2	0	7	1.59	2.41
<b>G</b>	Lack of public facilities on the beaches	8	13	2	1	4	1.83	2.29
<b>H</b>	Waiting for public facilities	16	4	1	0	8	1.29	2.31
<b>I</b>	Dirtiness of public facilities	12	3	3	1	10	1.63	2.79
<b>J</b>	Garbage/litter in downtown	19	5	3	1	1	1.5	1.62
<b>K</b>	Garbage/litter on the beaches	14	4	5	1	4	1.71	2.18
<b>L</b>	Garbage/litter in the water	17	6	2	1	3	1.5	1.86
<b>M</b>	Environmental damage	9	5	3	4	6	2.1	2.74
<b>N</b>	Impolite local residents	22	3	2	0	2	1.26	1.52
<b>O</b>	Crime/Vandalism	16	1	1	1	8	1.32	2.41
<b>P</b>	Too much tourism development	9	7	6	4	3	2.19	2.48
<b>Q</b>	Expensive pricing	2	9	13	3	2	2.63	2.79
<b>R</b>	Wet weather	11	10	8	0	0	1.9	1.9
<b>S</b>	Too many other people downtown	12	7	7	1	2	1.89	2.1
<b>T</b>	Too many other people on the beach	16	4	2	1	5	1.48	2.11
<b>U</b>	Too many other recreational boaters	14	5	2	1	7	1.55	2.38
<b>V</b>	Boat noise	18	4	2	1	4	1.44	1.93
<b>W</b>	Airplane noise	15	6	4	1	3	1.65	2
<b>X</b>	Rowdy behaviour	20	3	2	0	4	1.28	1.79

## Theme Two: Activities in Tofino

Resident:

Section C

Q1. Which of the following activities do you normally undertake in the town and district of Tofino?

Variable	Activity	Yes	No
A	Beach activity (walking/combing)	37	3
B	Bird watching	19	21
C	Camping	16	24
D	Canoeing	9	31
E	Day hiking	27	13
F	Guided tours	4	36
G	First Nations cultural activity	8	32
H	Fishing	24	16
I	Flight seeing	5	35
J	Motor boating	19	21
K	Mountain biking	9	31
L	Overnight hiking	8	32
M	Photography	16	24
N	Restaurant dining	29	11
O	Sailboating	4	36
P	Scuba diving/snorkelling	2	38
Q	Sea kayaking	11	29
R	Shopping	29	11
S	Surfing	12	28
T	Whale watching	10	30
U	Other wildlife watching	12	28
V	Visit Hot Springs	13	27
W	Gardening	2	38
X	Golfing	2	38
Y	Jogging	1	39

Q3. Which of the following best describes the activities you engage in during the summer tourism season?

N	Response
20	Remain in Tofino and carry on with normal activities
10	Remain in Tofino with a decrease in normal activities
4	Remain in Tofino with an increase in normal activities
3	Leave Tofino for extended periods
3	Other: Remain in Tofino with an increase and decrease in normal activities
0	Not ascertained

Tourist:

## Section D

Q2. Which of the following activities (if any) did you perform during your visit to Tofino?

Variable	Activity	Yes	No
A	Beach activity (walking/combing)	29	0
B	Bird watching	9	2
C	Camping	7	22
D	Canoeing	0	29
E	Day hiking	17	12
F	Guided tours	6	23
G	First Nations cultural activity	0	29
H	Fishing	2	27
I	Flight seeing	2	27
J	Motor boating	1	28
K	Mountain biking	2	27
L	Overnight hiking	0	29
M	Photography	20	9
N	Restaurant dining	20	9
O	Sailboating	0	29
P	Scuba diving/snorkeling	0	29
Q	Sea kayaking	4	25
R	Shopping	21	8
S	Surfing	6	23
T	Whale watching	7	22
U	Other wildlife watching	6	23
V	Visit Hot Springs	3	26
W	Volunteering	1	28
X	Relaxing	2	27

Q4. How satisfied or dissatisfied were you with the variety of options of activities in Tofino?

Response	Frequency
Very Dissatisfied -2	0
Somewhat Dissatisfied -1	3
Neither Dissatisfied or Satisfied 0	2
Somewhat Satisfied +1	6
Very Satisfied +2	18

\*\*Mean = 1.34\*\*

Q5. Overall, how satisfied or dissatisfied were you with your trip to Tofino?

Response	Frequency
Very Dissatisfied -2	0
Somewhat Dissatisfied -1	0
Neither Dissatisfied or Satisfied 0	0
Somewhat Satisfied +1	6
Very Satisfied +2	23

\*\*Mean = 1.79\*\*

**Theme Three: Image Comparison**Resident:

## Section D

Q1.

Photo	Very Unacceptable				Acceptable/ Unacceptable	Very Acceptable				Mean
	-4	-3	-2	-1		0	+1	+2	+3	
Photo A	0	0	0	1	1	1	0	0	35	3.68
Photo B	0	0	0	1	1	0	1	2	33	3.66
Photo C	0	0	0	0	5	0	5	12	16	2.89
Photo D	4	3	2	5	6	6	0	6	5	0.27
Photo E	13	4	6	1	4	2	1	2	5	-1.24
Photo F	21	4	1	2	3	1	2	0	4	-2.08

Q2 – 5.

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
2	Preference	16	13	5	4	0	2	2.13
	*Other	0	0	0	0	0	0	
3	Experienced	0	0	7	10	17	6	4.59
	*Other	0	0	0	0	1	2	
4	Choose to leave	0	0	10	14	7	9	4.38
	*Other	0	0	0	0	0	0	
5	Promotion	2	2	16	9	6	5	3.75
	*Other	0	0	0	0	0	0	

\*To preserve as much information as possible, if participants indicated two choices, the lower level of use was coded in the variable and the higher level of use being coded in the 'Other' category.

\*Mean calculated with average of two responses if given.

Q6.

Photo	Very Unacceptable				Acceptable/ Unacceptable	Very Acceptable				Mean
	-4	-3	-2	-1		0	+1	+2	+3	
Photo A	7	0	4	1	6	1	2	1	15	0.84
Photo B	2	3	2	2	7	2	3	1	14	1.22
Photo C	2	1	1	3	2	3	6	3	15	1.89
Photo D	1	0	0	2	6	5	5	7	10	1.94
Photo E	1	8	3	4	4	2	8	4	3	0.11
Photo F	15	7	4	2	1	2	2	0	3	-2.03

Q7 – 10.

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
7	Preference	2	3	10	20	3	2	3.65
	*Other	0	0	0	2	0	0	
8	Experienced	0	0	0	1	14	25	5.63
	*Other	0	0	0	0	0	2	
9	Choose to leave	0	0	1	3	25	10	5.14
	*Other	0	0	0	0	0	1	
10	Promotion	0	1	0	12	22	5	4.78
	*Other	0	0	0	0	0	1	

\*To preserve as much information as possible, if participants indicated two choices, the lower level of use was coded in the variable and the higher level of use being coded in the 'Other' category.

\*Mean calculated with average of two responses if given.

Business:

Section C

Q1.

Photo	Very Unacceptable				Acceptable/ Unacceptable	Very Acceptable				Mean
	-4	-3	-2	-1		0	+1	+2	+3	
Photo A	0	0	0	1	2	0	1	5	50	3.66
Photo B	0	0	0	0	3	2	2	8	44	3.49
Photo C	0	0	1	1	3	2	4	15	33	3.12
Photo D	2	3	2	4	10	7	5	10	14	1.37
Photo E	8	9	8	3	8	5	5	7	6	-0.31
Photo F	25	7	2	5	1	7	3	3	6	-1.42

Q2 - 5.

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
2	Preference	17	17	12	10	2	2	2.53
	*Other	0	1	0	1	0	0	
3	Experienced	0	0	6	22	16	16	4.74
	*Other	0	0	0	2	0	2	
4	Choose to leave	0	1	11	23	13	12	4.38
	*Other	0	0	0	2	0	0	
5	Promotion	1	2	11	27	15	4	4.07
	*Other	0	0	0	2	0	0	

\*To preserve as much information as possible, if participants indicated two choices, the lower level of use was coded in the variable and the higher level of use being coded in the 'Other' category.

\*Mean calculated with average of two responses if given.

Q6.

Photo	Very Unacceptable				Acceptable/ Unacceptable	Very Acceptable				Mean
	-4	-3	-2	-1		0	+1	+2	+3	
Photo A	7	0	4	1	6	1	2	1	15	0.84
Photo B	2	3	2	2	7	2	3	1	14	1.22
Photo C	2	1	1	3	2	3	6	3	15	1.89
Photo D	1	0	0	2	6	5	5	7	10	1.94
Photo E	1	8	3	4	4	2	8	4	3	0.11
Photo F	15	7	4	2	1	2	2	0	3	-2.03

Q7 - 10

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
7	Preference	2	3	10	20	3	2	3.65
	*Other	0	0	0	2	0	0	
8	Experienced	0	0	0	1	14	25	5.63
	*Other	0	0	0	0	0	2	
9	Choose to leave	0	0	1	3	25	10	5.14
	*Other	0	0	0	0	0	1	
10	Promotion	0	1	0	12	22	5	4.78
	*Other	0	0	0	0	0	1	

Tourist:

Section C

Q1.

Photo	Very Unacceptable				Acceptable/ Unacceptable	Very Acceptable				Mean
	-4	-3	-2	-1		0	+1	+2	+3	
Photo A	1	0	1	0	0	0	0	3	22	3.37
Photo B	1	0	0	0	0	0	1	7	18	3.37
Photo C	0	1	0	0	0	1	5	8	12	2.96
Photo D	0	0	0	4	7	3	4	3	5	1.38
Photo E	0	11	2	0	3	2	2	4	3	-0.26
Photo F	12	1	3	1	2	2	3	0	3	-1.41

Q2 – 5.

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
2	Preference	15	12	5	4	0	2	2.33
	*Other	0	0	0	0	0	0	
3	Expected	0	0	6	9	17	6	3.44
	*Other	0	0	0	0	1	2	
4	Experienced	0	0	9	13	7	9	3.46
	*Other	0	0	0	0	0	0	
5	Choose to leave	2	2	14	9	6	5	4.61
	*Other	0	0	0	0	0	0	

\*To preserve as much information as possible, if participants indicated two choices, the lower level of use was coded in the variable and the higher level of use was coded in the 'Other' category.

\*Mean calculated with average of two responses if given.

Q6.

Photo	Very Unacceptable				Acceptable/Unacceptable				Very Acceptable	Mean
	-4	-3	-2	-1	0	+1	+2	+3	+4	
Photo A	0	0	3	1	2	2	3	1	15	2.37
Photo B	0	0	0	4	0	1	2	4	16	2.85
Photo C	0	0	0	1	1	3	0	6	16	3.11
Photo D	0	0	1	1	3	2	3	5	12	2.52
Photo E	0	6	4	2	2	2	5	2	4	0.22
Photo F	10	4	1	3	4	2	0	2	1	-1.67

Q7 – 10.

Q.	Variable	Photo A	Photo B	Photo C	Photo D	Photo E	Photo F	*Mean
7	Preference	0	3	13	10	3	0	3.47
	*Other	0	0	0	0	1	0	
8	Expected	0	1	3	9	10	6	4.60
	*Other	0	0	0	0	1	0	
9	Experienced	0	0	0	11	6	12	5.03
	*Other	0	0	0	0	0	0	
10	Choose to leave	0	0	0	5	16	8	5.10
	*Other	0	0	0	0	0	0	

\*To preserve as much information as possible, if participants indicated two choices, the lower level of use was coded in the variable and the higher level of use was coded in the 'Other' category.

\*Mean calculated with average of two responses if given.

## Theme Four: Tourism Seasonality and Development

Resident:

Section E

Q1. What is your perception of the relative number of tourists for each month of the year?

Month	Very Low 1	Low 2	Medium 3	High 4	Very High 5	Mean
January	16	19	4	0	0	1.69
February	12	21	6	0	0	1.85
March	3	8	24	2	1	2.74
April	0	10	25	3	1	2.87
May	0	3	23	13	0	3.26
June	0	0	11	18	10	3.97
July	0	0	0	4	35	4.9
August	0	0	0	3	36	4.92
September	0	0	7	22	10	4.08
October	2	10	16	11	0	2.92
November	11	21	5	2	0	1.95
December	9	21	4	5	0	2.13

Q3. What types of future tourism development would you like to see in Tofino?

Variable	Type of Tourism Development	Strongly Oppose -2	Somewhat Oppose -1	Not Sure 0	Somewhat Support +1	Strongly Support +2	Mean
A	More hotels/motels/B&B's	15	10	5	6	3	-0.72
B	More restaurants	7	5	3	17	6	0.26
C	More hiking trails	3	4	3	11	18	0.95
D	More bike paths	0	3	3	12	21	1.31
E	More general sightseeing tours	5	13	12	8	0	-0.39
F	New marina	7	11	7	10	4	-0.18
G	More whale watching tours	21	6	7	3	0	-1.22
H	Beach commercial concession stands	26	7	4	2	0	-1.46
I	More cultural activities	2	0	4	23	10	1.00
J	More sport fishing charters	14	11	10	4	0	-0.90
K	More pubs	9	12	4	10	3	-0.37
L	More tourist wilderness experience activities	6	8	4	16	5	0.15
M	More shuttle buses for tourists	1	7	9	12	10	0.59
N	More international chain businesses	23	6	7	3	0	-1.26
O	More tourism developments initiated by locals	3	4	9	17	5	0.43
P	Implementation of tourist tax to cover municipal costs	4	1	3	12	18	1.03
Q	More education programs/events for tourists	0	0	6	21	12	1.15
R	Tourism which promotes environmental awareness	1	0	2	7	29	1.62

Business:

Section D

Q1. What is your perception of the relative number of tourists for each month of the year?

Month	Very Low 1	Low 2	Medium 3	High 4	Very High 5	Mean
January	38	15	4	0	0	1.40
February	24	29	5	0	0	1.67
March	7	21	28	1	1	2.45
April	2	20	34	1	1	2.64
May	0	8	36	14	0	3.10
June	0	0	27	26	4	3.60
July	0	0	1	14	44	4.73
August	0	0	0	2	57	4.97
September	0	0	8	33	17	4.16
October	1	15	27	13	1	2.96
November	23	23	11	0	0	1.79
December	23	25	9	1	0	1.79

Q3. What types of future tourism development would you like to see in Tofino?

Variable	Type of Tourism Development	Strongly Oppose -2	Somewhat Oppose -1	Not Sure 0	Somewhat Support +1	Strongly Support +2	Mean
A	More hotels/motels/B&B's	18	17	5	11	6	-0.53
B	More restaurants	7	8	14	12	16	0.39
C	More hiking trails	1	2	5	13	37	1.43
D	More bike paths	1	3	5	8	40	1.46
E	More general sightseeing tours	4	8	26	9	10	0.23
F	New marina	4	6	15	23	10	0.50
G	More whale watching tours	24	20	13	1	0	-1.16
H	Beach commercial concession stands	46	4	2	5	2	-1.47
I	Jet ski rentals	52	0	3	2	1	-1.72
J	More cultural activities	1	1	5	19	33	1.39
K	More sport fishing charters	12	16	25	4	0	-0.63
L	More pubs	14	9	9	21	6	-0.07
M	More tourist wilderness experience activities	3	7	10	25	14	0.68
N	More shuttle buses for tourists	1	4	9	22	21	1.02
O	More international chain businesses	47	7	2	1	2	-1.63
P	More tourism developments initiated by locals	3	0	11	25	19	0.98
Q	Implementation of tourist tax to cover municipal costs	10	2	10	18	18	0.55
R	More education programs/events for tourists	1	0	7	20	31	1.36
S	Tourism which promotes environmental awareness	1	0	5	4	49	1.69

Tourist

## Section D

Q1. What types of future tourism development would you like to see in Tofino?

Variable	Type of Tourism Development	Strongly Oppose -2	Somewhat Oppose -1	Not Sure 0	Somewhat Support +1	Strongly Support +2	Mean
A	More hotels/motels/B&B's	6	11	5	6	1	-0.52
B	More restaurants	2	4	8	12	3	0.34
C	More hiking trails	3	3	6	8	9	0.59
D	More bike paths	1	3	9	7	9	0.69
E	More general sightseeing tours	4	3	13	7	2	0.00
F	New marina	4	4	16	4	1	-0.21
G	More whale watching tours	9	6	13	0	1	-0.76
H	Beach commercial concession stands	13	8	5	3	0	-1.07
I	Jet ski rentals	19	1	5	1	0	-1.46
J	More cultural activities	1	1	9	12	6	0.72
K	More sport fishing charters	6	7	12	4	0	-0.52
L	More pubs	7	4	8	8	2	-0.21
M	More tourist wilderness experience activities	1	4	4	14	6	0.69
N	More shuttle buses for tourists	2	2	10	7	8	0.59
O	More international chain businesses	20	3	5	1	0	-1.45
P	More tourism developments initiated by locals	3	0	4	12	10	0.90
Q	Implementation of tourist tax to cover municipal costs	4	6	10	5	4	-0.03
R	More education programs/events for tourists	0	1	9	13	6	0.83
S	Tourism which promotes environmental awareness	0	0	1	5	23	1.76

**Theme Five: Tourism Space**Resident:

## Section F

Step - Map	Yes	No
High Concentrations - Map A	37	3
High Concentrations - Map B	35	5
Other Areas - Map A	29	11
Other Areas - Map B	26	14

\*\*no maps - 139, Map A and B: n = 39\*\*

**Business**

## Section E

Step - Map	Yes	No
High Concentrations - Map A	50	10
High Concentrations - Map B	48	12
Other Areas - Map A	39	21
Other Areas - Map B	31	29
Business Locations - Map A	40	20
Business Locations - Map B	24	36
Guided Tours - Map A	5	55
Guided Tours - Map B	4	56

\*\*no maps - 52, 60, 68, 93, 94, 116, 126, 136;

Only 1 map - 33, 74

Map A: n = 52, Map B: n = 50\*\*

## Tourist

Step – Map	Yes	No
Memorable Areas – Map A	28	1
Memorable Areas – Map B	25	4
Other Areas – Map A	16	13
Other Areas – Map B	10	19

\*\*no maps – 1, 1 map - 9, 22, 23  
Map A: n = 28, Map B: n = 25\*\*

## Theme Six: Demographics

## Resident

## Section G

Q1. How long have you resided in Tofino?

Years	N
1	2
2	5
3	2
4	4
6	4
7	1
8	1
9	1
10	1
11	1
12	1
16	1
17	2
18	1
21	1
26	1
27	2
33	1
36	2
37	2
38	1
56	1
67	1
69	1

\*\*Mean = 17.33, SD = 18.10\*\*

Q2. Are you a permanent or seasonal resident?

Permanent	Seasonal
40	0

Q3. Do you own or rent your residence in Tofino?

Own	Rent	Own and Rent
21	18	1

Q4. Please specify your gender.

Female	Male
22	18

Q5. Please specify the age category that you fit into.

Under 25	26 - 35	36 - 45	46 - 65	Over 65
3	7	11	14	5

Q6. Are you involved in the tourism industry in Tofino?

Yes	No
23	17

Q7. What best describes your employment situation?

Response	N
Fishing, Logging, Aquaculture Industry	2
Tourism Industry	13
Craftsperson	3
Professional	6
Trades Person	1
Government Employee	5
Housewife/Houshusband	1
Retired	6
Student	0
Unemployed	0
Other	3

Business:

Section F:

Q1. How long have you been operating in Tofino?

Years	N
0	1
1	3
1.2	1
2	5
3	3
4	4
5	3
6	6
7	2
8	5
10	3
11	4
12	1
14	1
15	2
17	1
18	3
20	1
22	1
25	1
28	2
33	1
40	1

\*\*Mean = 9.84, SD = 8.71\*\*

Q2. What type of marketing does your business use?

Marketing Type	Yes	No
Chamber of Commerce/ Tourism Centre	49	7
Internet Site	49	7
Newspaper/Magazine	28	28
Radio	0	56
Television	2	54
Other	28	28
None	3	53

Q3. Is your business a member of a Tofino business association?

Business Association	Yes	No
Tofino Chamber of Commerce	46	10
Tofino Business Association	9	47
None	6	50

Q4. How many employees does your business hire for each month?

Jan #	Jan FT N	Jan PT N	Feb #	Feb FT N	Feb PT N	Mar #	Mar FT N	Mar PT N	Apr #	Apr FT N	Apr PT N	May #	May FT N	May PT N					
0	35	0	34	0	34	0	41	0	32	0	38	0	29	0	37	0	27	0	33
1	5	1	5	1	5	1	9	1	7	1	10	1	7	1	11	1	5	1	14
2	2	2	3	2	3	2	2	2	2	2	2	2	3	2	3	2	5	2	3
3	2	3	2	3	2	3	1	3	3	4	3	3	4	4	1	3	4	3	1
4	1	4	1	4	1	4	1	4	1	5	2	4	1	5	3	4	2	5	4
5	1	5	1	5	1	5	1	6	2	9	5	6	2	9	5	5	1	9	5
6	1	6	1	6	1	9	5	9	5			9	5			6	1		
9	5	9	5	9	5			11	1			10	1			9	6		
11	1	11	1	11	1			15	1			12	1			10	1		
15	2	15	2	15	2			17	1			15	1			13	1		
17	1	17	1	17	1			20	2			17	1			17	1		
20	1	20	1	20	1			30	1			20	1			18	1		
30	1	30	1	30	1			35	1			30	1			20	1		
35	2	35	1	35	1			55	1			35	1			35	1		
		50	1	50	1							40	1			40	1		
												55	1			50	1		
																65	1		

Jun #	Jun FT N	Jun PT N	Jul #	Jul FT N	Jul PT N	Aug #	Aug FT N	Aug PT N	Sep #	Sep FT N	Sep PT N	Oct #	Oct FT N	Oct PT N					
0	26	0	30	0	27	0	26	0	27	0	26	0	27	0	30	0	34		
1	5	1	13	1	3	1	11	1	3	1	11	1	4	1	13	1	7	1	12
2	2	2	6	2	3	2	8	2	3	2	8	2	6	2	6	2	3	2	4
3	5	3	1	3	3	3	2	3	3	3	2	3	2	3	2	3	3	3	1
4	3	4	2	4	2	4	3	4	2	4	3	4	4	4	3	6	1	4	1
6	4	5	2	5	1	5	1	5	1	5	1	4.5	1	5	2	8	1	5	1
9	5	9	6	6	2	8	1	6	2	8	1	6	1	9	5	9	7	9	6
12	1			7	1	9	6	7	1	9	6	8	1	10	1	16	2	10	1
15	2			8	3	10	1	8	3	20	1	9	5	15	1	19	1		
18	1			9	6	20	1	9	6	25	1	12	1			30	2		
19	1			18	2			18	2			16	1			35	1		
30	1			19	1			19	1			18	1			40	1		
55	1			20	1			20	1			19	1			65	1		
60	2			45	1			45	1			40	1						
75	1			55	1			55	1			45	1						
				60	1			60	1			55	1						
				70	1			75	1			60	1						
				75	1							70	1						

Continued: Q4. How many employees does your business hire for each month?

Nov	FT	Nov	PT	Dec	FT	Dec	PT
#	N	#	N	#	N	#	N
0	34	0	38	0	33	0	39
1	5	1	10	1	5	1	11
2	3	2	3	2	3	2	2
3	2	3	1	3	2	3	1
4	1	4	2	4	2	4	1
5	1	5	1	5	1	5	1
6	1	9	5	6	1	9	5
9	5			9	5		
11	1			11	1		
15	1			15	2		
18	1			18	1		
20	1			20	1		
25	1			30	1		
30	1			35	1		
35	1			65	1		
65	1						

Month	Mean	Month	Mean
Full Time	Full Time	Part Time	Part Time
January	4.22	January	1.18
February	4.50	February	1.17
March	4.73	March	1.35
April	5.33	April	1.35
May	6.13	May	1.47
June	7.73	June	1.67
July	8.47	July	2.37
August	8.63	August	2.62
September	7.28	September	2.05
October	5.83	October	1.60
November	4.93	November	1.28
December	4.83	December	1.20

Q5. Did you change your career to enter into the tourism industry?

Yes	No
31	20

Q6. Is your business planning for future growth?

Yes	No
31	21

Q7. What is the maximum number of people that your business can provide service to, per day?

Capacity	N
4	2
6	8
7	1
8	3
9	1
10	3
12	2
14	1
16	1
18	1
24	1
45	1
50	2
60	1
65	1
70	1
80	1
100	1
140	1
150	1
190	1
200	2
210	1
250	1
300	1
340	1
350	1
400	2
500	2
600	1
700	2
1000	2

\*\* Mean = 173.96, SD = 254.88\*\*

Tourist:

Section F

Q1. Where are you from?

Origin	N
Vancouver Island	3
Mainland British Columbia	7
Alberta	9
Rest of Canada (MB and ON)	5
United States (CAL)	2
Europe (ENG, IRE and GER)	3

Q2. When did you arrive in Tofino?

Date	N
July 12 – 15, 2004	3
July 16 – 18, 2004	0
July 19 – 22, 2004	0
July 23 – 25, 2004	0
July 26 – 29, 2004	0
July 30 – August 2, 2004	3
August 3 – 5, 2004	0
August 6 – 8, 2004	2
August 9 – 12, 2004	0
August 13 – 15, 2004	2
August 16 – 19, 2004	0
August 20 – 22, 2004	2
August 23 – 26, 2004	10
August 27 – 29, 2004	1
August 30 – September 2, 2004	1
September 3 – 6, 2004	1
September 7 – 9, 2004	4

Q3. How long are you planning on staying?

Capacity	N
1	3
2	5
3	8
4	3
5	3
6	3
7	2
11	1
21	1

\*\*Mean = 4.41 days, SD = 3.88\*\*

Q4a. Are you staying overnight in Tofino?

Yes	No
25	4

Q4b. Was this your first choice of accommodation?

Yes	No
18	8

Q5a. Is this your first time to Tofino?

Yes	No
12	17

Q5b. Would you plan to return to Tofino in the future?

Yes	Maybe
11	1

Q5c. How many times have you been to Tofino?

Capacity	N
1	2
2	3
3	6
4	1
8	1
10	2
20	2

\*\*Mean = 5.76, SD = 6.03\*\*

Q6. How many people (including yourself) are you traveling with?

Capacity	N
1	7
2	5
3	3
4	8
5	3
6	2
7	1

\*\*Mean = 3.17\*\*

Q7. Please specify your gender.

Female	Male
15	14

Q8. Please specify the age category that you fit into.

Under 25	26 - 35	36 - 45	46 - 65	Over 65
3	6	5	12	2

Q9. Are you involved in the tourism industry where you are from?

Yes	No
1	28

Q10. What best describes your employment situation?

Response	N
Fishing, Logging, Aquaculture Industry	0
Tourism Industry	1
Craftsperson	0
Professional	16
Trades Person	2
Government Employee	0
Housewife/Househusband	1
Retired	0
Student	3
Unemployed	0
Other	6

APPENDIX G

Multivariate Statistics Summary

**Resident Cluster Analysis****Hierarchical Clustering – Ward Method****Case Processing Summary (a)**

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
32	100.0	0	.0	32	100.0

a Ward Linkage

**Agglomeration Schedule**

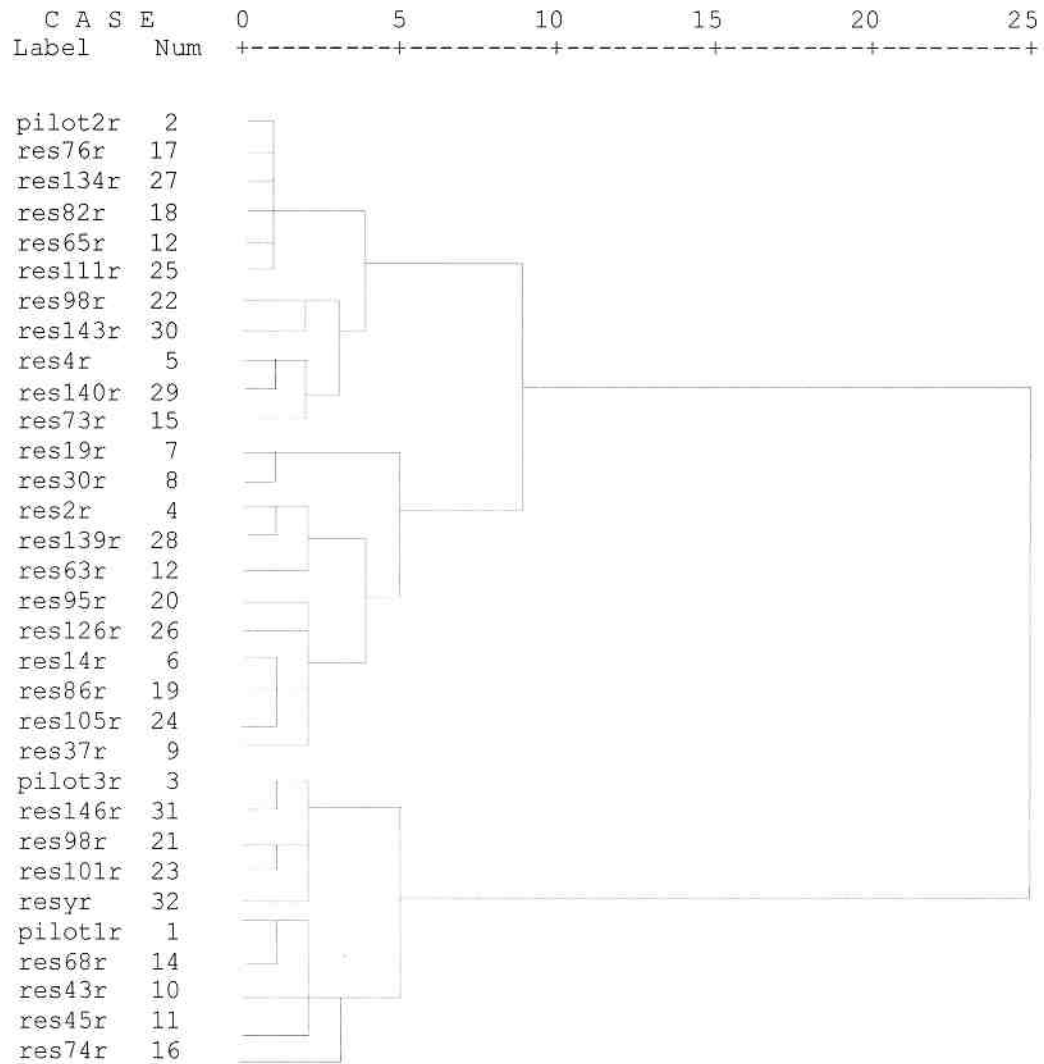
Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	2	17	9.500	0	0	2
2	2	27	22.000	1	0	3
3	2	18	38.500	2	0	13
4	6	19	56.000	0	0	6
5	5	29	75.500	0	0	15
6	6	24	97.333	4	0	18
7	21	23	120.833	0	0	17
8	4	28	146.333	0	0	22
9	13	25	171.833	0	0	13
10	7	8	197.833	0	0	29
11	1	14	224.833	0	0	20
12	3	31	252.333	0	0	19
13	2	13	280.833	3	9	27
14	22	30	311.333	0	0	24
15	5	15	341.833	5	0	24
16	20	26	376.833	0	0	23
17	21	32	413.333	7	0	19
18	6	9	451.250	6	0	23
19	3	21	490.150	12	17	28
20	1	10	529.817	11	0	21
21	1	11	571.650	20	0	25
22	4	12	615.483	8	0	26
23	6	20	661.067	18	16	26
24	5	22	714.167	15	14	27
25	1	16	774.067	21	0	28
26	4	6	843.567	22	23	29
27	2	5	922.739	13	24	30
28	1	3	1018.839	25	19	31
29	4	7	1117.082	26	10	30
30	2	4	1286.127	27	29	31
31	1	2	1786.000	28	30	0

## Cluster Membership

Case	5 Clusters	4 Clusters	3 Clusters	2 Clusters
1:pilot1r	1	1	1	1
2:pilot2r	2	2	2	2
3:pilot3r	3	1	1	1
4:res2r	4	3	3	2
5:res4r	2	2	2	2
6:res14r	4	3	3	2
7:res19r	5	4	3	2
8:res30r	5	4	3	2
9:res37r	4	3	3	2
10:res43r	1	1	1	1
11:res45r	1	1	1	1
12:res63r	4	3	3	2
13:res65r	2	2	2	2
14:res68r	1	1	1	1
15:res73r	2	2	2	2
16:res74r	1	1	1	1
17:res76r	2	2	2	2
18:res82r	2	2	2	2
19:res86r	4	3	3	2
20:res95r	4	3	3	2
21:res96r	3	1	1	1
22:res98r	2	2	2	2
23:res101r	3	1	1	1
24:res105r	4	3	3	2
25:res111r	2	2	2	2
26:res126r	4	3	3	2
27:res134r	2	2	2	2
28:res139r	4	3	3	2
29:res140r	2	2	2	2
30:res143r	2	2	2	2
31:res146r	3	1	1	1
32:resyr	3	1	1	1

**Dendrogram**

Rescaled Distance Cluster Combine



### Non-Hierarchical Clustering – K-Means

	Initial Cluster Centers		
	Cluster		
	1	2	3
B_1B	3	1	1
B_2B	3	1	0
B_3B	1	-1	-2
B_4B	0	-1	-2
B_5B	2	0	0
B_6B	2	0	0
B_7B	0	0	-2
B_8B	0	0	-2
B_9B	-1	-1	-2
B_10B	-2	-1	-2
B_11B	2	0	-1
B_12B	2	0	-1
B_13B	2	-1	-1
B_14B	2	0	-1
B_15B	-2	-2	-2
B_16B	1	0	0
B_17B	0	-1	-1
B_18B	1	0	0
B_19B	2	1	1
B_20B	-1	-1	-1
B_21B	-1	-1	-2
B_22B	1	0	0
B_23B	-1	-1	-2
B_24B	1	0	-2
B_25B	2	1	1
B_26B	-1	-1	-1
B_27B	0	-1	-2
B_28B	0	-2	-2
B_29B	3	1	0
B_30B	2	0	0
B_31B	0	0	-2

Input from FILE Subcommand

#### Iteration History (a)

Iteration	Change in Cluster Centers		
	1	2	3
1	.761	.653	.815
2	.000	.000	.000

a Convergence achieved due to no or small distance change. The maximum distance by which any center has changed is .000. The current iteration is 2. The minimum distance between initial centers is 5.544.

## Cluster Membership

Case Number	survey_res	Cluster	Distance
1	pilot1r	1	5.219
2	pilot2r	2	3.793
3	pilot3r	1	6.050
4	res2r	3	6.193
5	res4r	2	5.370
6	res14r	3	4.725
7	res19r	3	5.825
8	res30r	3	7.992
9	res37r	3	6.421
10	res43r	1	6.545
11	res45r	1	6.523
12	res63r	3	6.572
13	res65r	2	5.141
14	res68r	1	4.981
15	res73r	2	6.710
16	res74r	1	7.716
17	res76r	2	4.224
18	res82r	2	4.472
19	res86r	3	4.652
20	res95r	3	5.860
21	res96r	1	6.145
22	res98r	3	5.846
23	res101r	1	4.749
24	res105r	3	4.640
25	res111r	2	5.134
26	res126r	3	6.794
27	res134r	2	3.595
28	res139r	3	5.647
29	res140r	2	4.580
30	res143r	2	6.415
31	res146r	1	5.283
32	resyr	1	6.476

## Final Cluster Centers

	Cluster		
	1	2	3
B_1B	3	1	1
B_2B	3	1	0
B_3B	1	-1	-2
B_4B	0	-1	-1
B_5B	2	0	1
B_6B	2	0	0
B_7B	0	-1	-2
B_8B	0	-1	-2
B_9B	-1	-1	-2
B_10B	-2	-1	-3
B_11B	2	1	-1
B_12B	2	0	-1
B_13B	2	-1	-1
B_14B	2	0	-2
B_15B	-2	-2	-2
B_16B	1	0	0
B_17B	0	-1	-1
B_18B	1	0	0
B_19B	2	1	1
B_20B	-1	-1	-1
B_21B	-1	-1	-2
B_22B	1	0	0
B_23B	-1	-1	-2
B_24B	1	-1	-2
B_25B	2	1	1
B_26B	-1	-1	-2
B_27B	0	-1	-2
B_28B	0	-1	-2
B_29B	3	1	0
B_30B	2	0	0
B_31B	0	0	-2

## Distances between Final Cluster Centers

Cluster	1	2	3
1		7.153	10.888
2	7.153		5.917
3	10.888	5.917	

## ANOVA

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
B_1B	11.567	2	1.409	29	8.208	.001
B_2B	12.929	2	1.496	26	8.642	.001
B_3B	32.484	2	2.284	29	14.220	.000
B_4B	6.067	2	1.882	28	3.223	.055
B_5B	3.976	2	.880	29	4.519	.020
B_6B	8.182	2	.758	18	10.799	.001
B_7B	16.521	2	1.505	25	10.974	.000
B_8B	11.063	2	1.298	26	8.526	.001
B_9B	6.738	2	.876	29	7.692	.002
B_10B	9.633	2	1.015	27	9.493	.001
B_11B	26.233	2	1.144	27	22.922	.000
B_12B	27.582	2	.668	27	41.289	.000
B_13B	20.978	2	1.122	25	18.700	.000
B_14B	28.809	2	1.463	24	19.686	.000
B_15B	1.401	2	1.032	29	1.358	.273
B_16B	3.961	2	1.752	28	2.261	.123
B_17B	3.820	2	1.568	28	2.436	.106
B_18B	5.373	2	1.695	26	3.169	.059
B_19B	5.610	2	.952	28	5.895	.007
B_20B	1.050	2	1.083	29	.970	.391
B_21B	2.020	2	1.712	26	1.180	.323
B_22B	2.641	2	.931	28	2.837	.076
B_23B	4.100	2	2.041	28	2.008	.153
B_24B	24.825	2	1.771	27	14.018	.000
B_25B	4.207	2	1.381	28	3.046	.064
B_26B	2.089	2	1.140	25	1.833	.181
B_27B	5.796	2	.888	26	6.525	.005
B_28B	11.213	2	.690	28	16.253	.000
B_29B	13.814	2	1.419	28	9.736	.001
B_30B	9.789	2	.343	20	28.551	.000
B_31B	16.687	2	.719	27	23.195	.000

The *F* tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

## Number of Cases in each Cluster

Cluster	1	10.000
	2	10.000
	3	12.000
Valid		32.000
Missing		.000

**Business Cluster Analysis****Hierarchical Clustering – Ward Method****Case Processing Summary (a)**

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
47	100.0	0	.0	47	100.0

a Ward Linkage

**Agglomeration Schedule**

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	9	30	11.500	0	0	3
2	13	17	23.000	0	0	26
3	9	11	36.833	1	0	14
4	40	47	51.833	0	0	24
5	14	32	67.333	0	0	23
6	15	16	82.833	0	0	17
7	29	37	98.833	0	0	29
8	20	27	117.333	0	0	25
9	10	23	135.833	0	0	11
10	4	8	154.333	0	0	15
11	10	18	173.167	9	0	16
12	22	33	193.667	0	0	22
13	38	43	214.667	0	0	23
14	9	12	236.833	3	0	37
15	4	28	259.000	10	0	24
16	2	10	284.417	0	11	26
17	15	35	310.250	6	0	21
18	44	46	337.750	0	0	34
19	31	36	366.250	0	0	25
20	21	24	397.250	0	0	31
21	15	41	428.417	17	0	33
22	6	22	463.250	0	12	30
23	14	38	498.500	5	13	29
24	4	40	534.433	15	4	33
25	20	31	570.433	8	19	32
26	2	13	610.850	16	2	31
27	39	45	653.350	0	0	38
28	7	34	696.350	0	0	36
29	14	29	740.433	23	7	40
30	3	6	784.600	0	22	37
31	2	21	830.933	26	20	39
32	20	25	879.933	25	0	40
33	4	15	931.611	24	21	38

34	1	44	987.444	0	18	39
35	26	42	1045.444	0	0	42
36	5	7	1104.444	0	28	45
37	3	9	1167.944	30	14	43
38	4	39	1233.485	33	27	41
39	1	2	1309.242	34	31	41
40	14	20	1390.318	29	32	44
41	1	4	1473.000	39	38	42
42	1	26	1568.617	41	35	45
43	3	19	1665.451	37	0	44
44	3	14	1833.158	43	40	46
45	1	5	2026.543	42	36	46
46	1	3	2464.766	45	44	0

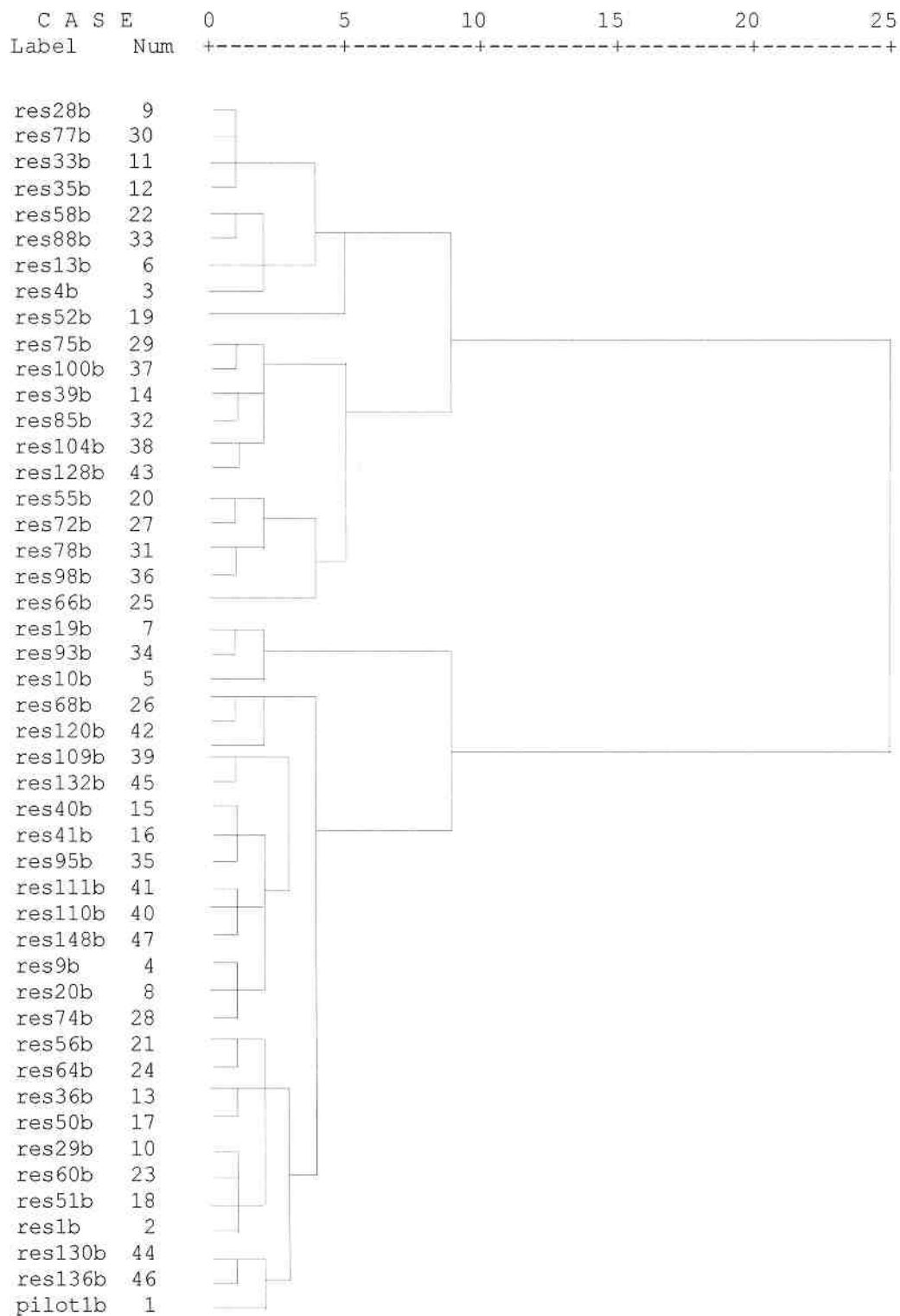
### Cluster Membership

Case	5 Clusters	4 Clusters	3 Clusters	2 Clusters
1:pilot1b	1	1	1	1
2:res1b	1	1	1	1
3:res4b	2	2	2	2
4:res9b	1	1	1	1
5:res10b	3	3	3	1
6:res13b	2	2	2	2
7:res19b	3	3	3	1
8:res20b	1	1	1	1
9:res28b	2	2	2	2
10:res29b	1	1	1	1
11:res33b	2	2	2	2
12:res35b	2	2	2	2
13:res36b	1	1	1	1
14:res39b	4	4	2	2
15:res40b	1	1	1	1
16:res41b	1	1	1	1
17:res50b	1	1	1	1
18:res51b	1	1	1	1
19:res52b	5	2	2	2
20:res55b	4	4	2	2
21:res56b	1	1	1	1
22:res58b	2	2	2	2
23:res60b	1	1	1	1
24:res64b	1	1	1	1
25:res66b	4	4	2	2
26:res68b	1	1	1	1
27:res72b	4	4	2	2
28:res74b	1	1	1	1
29:res75b	4	4	2	2
30:res77b	2	2	2	2
31:res78b	4	4	2	2

32:res85b	4	4	2	2
33:res88b	2	2	2	2
34:res93b	3	3	3	1
35:res95b	1	1	1	1
36:res98b	4	4	2	2
37:res100b	4	4	2	2
38:res104b	4	4	2	2
39:res109b	1	1	1	1
40:res110b	1	1	1	1
41:res111b	1	1	1	1
42:res120b	1	1	1	1
43:res128b	4	4	2	2
44:res130b	1	1	1	1
45:res132b	1	1	1	1
46:res136b	1	1	1	1
47:res148b	1	1	1	1

**Dendrogram**

Rescaled Distance Cluster Combine



### Non-Hierarchical Clustering – K-Means

Initial Cluster Centers

	Cluster		
	1	2	3
B_1B	2	2	1
B_2B	2	2	0
B_3B	-1	2	-2
B_4B	-2	0	-3
B_5B	2	2	-1
B_6B	1	2	0
B_7B	0	-1	-3
B_8B	0	-1	-1
B_9B	-1	0	-2
B_10B	-1	-1	-2
B_11B	0	2	-2
B_12B	1	2	-1
B_13B	0	1	-1
B_14B	1	2	0
B_15B	-2	-1	-3
B_16B	0	1	-1
B_17B	-1	0	-2
B_18B	0	1	-2
B_19B	1	2	0
B_20B	-1	-1	-2
B_21B	-1	-1	-2
B_22B	1	1	1
B_23B	-1	-1	-2
B_24B	0	2	-3
B_25B	2	3	1
B_26B	0	0	0
B_27B	-2	-1	0
B_28B	-1	0	-3
B_29B	2	3	1
B_30B	1	2	1
B_31B	0	0	-2

Input from FILE Subcommand

Iteration History (a)

Iteration	Change in Cluster Centers		
	1	2	3
1	.817	1.384	1.908
2	.000	.000	.000

a Convergence achieved due to no or small distance change. The maximum distance by which any center has changed is .000. The current iteration is 2. The minimum distance between initial centers is 5.564.

## Cluster Membership

Case Number	survey_res	Cluster	Distance
1	pilot1b	1	8.021
2	res1b	1	5.095
3	res4b	2	6.930
4	res9b	1	3.736
5	res10b	3	5.855
6	res13b	2	5.707
7	res19b	3	5.434
8	res20b	1	4.333
9	res28b	2	3.060
10	res29b	1	4.695
11	res33b	2	3.947
12	res35b	2	4.931
13	res36b	1	5.356
14	res39b	2	3.911
15	res40b	1	5.280
16	res41b	1	4.129
17	res50b	1	5.159
18	res51b	1	5.240
19	res52b	1	9.429
20	res55b	2	5.673
21	res56b	2	5.516
22	res58b	2	5.709
23	res60b	1	4.398
24	res64b	1	5.474
25	res66b	2	7.900
26	res68b	1	7.820
27	res72b	2	6.068
28	res74b	1	4.793
29	res75b	2	5.926
30	res77b	2	4.852
31	res78b	2	6.065
32	res85b	2	5.017
33	res88b	2	5.271
34	res93b	3	4.936
35	res95b	1	6.196
36	res98b	2	6.733
37	res100b	2	5.182
38	res104b	2	4.807
39	res109b	1	7.358
40	res110b	1	5.707
41	res111b	1	7.287
42	res120b	1	8.505
43	res128b	2	5.579
44	res130b	1	6.624
45	res132b	1	6.827

46	res136b	1	7.220
47	res148b	1	5.191

### Final Cluster Centers

	Cluster		
	1	2	3
B_1B	2	2	1
B_2B	2	2	0
B_3B	-1	2	-2
B_4B	-2	0	-3
B_5B	2	2	-1
B_6B	1	2	0
B_7B	-1	0	-3
B_8B	0	-1	-2
B_9B	-1	-1	-2
B_10B	-1	-1	-2
B_11B	0	2	-2
B_12B	1	2	-1
B_13B	1	2	-2
B_14B	1	3	-1
B_15B	-2	-1	-3
B_16B	0	1	-1
B_17B	-1	0	-2
B_18B	0	1	-2
B_19B	1	2	1
B_20B	-1	-1	-2
B_21B	-1	-1	-2
B_22B	1	1	2
B_23B	-1	-1	-2
B_24B	0	2	-3
B_25B	2	3	1
B_26B	0	0	0
B_27B	-2	-1	0
B_28B	-1	0	-3
B_29B	2	3	1
B_30B	1	2	1
B_31B	0	0	-3

### Distances between Final Cluster Centers

Cluster	1	2	3
1		6.252	9.142
2	6.252		13.993
3	9.142	13.993	

## ANOVA

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
B_1B	1.817	2	1.249	43	1.455	.245
B_2B	4.807	2	1.203	43	3.997	.026
B_3B	51.120	2	2.492	44	20.516	.000
B_4B	20.274	2	1.303	37	15.555	.000
B_5B	12.568	2	1.320	42	9.521	.000
B_6B	10.507	2	1.512	34	6.948	.003
B_7B	7.119	2	2.704	35	2.633	.086
B_8B	2.415	2	1.893	34	1.276	.292
B_9B	3.462	2	.829	37	4.176	.023
B_10B	2.294	2	1.411	39	1.626	.210
B_11B	33.406	2	.852	41	39.227	.000
B_12B	15.390	2	1.199	40	12.835	.000
B_13B	13.111	2	1.669	34	7.855	.002
B_14B	15.631	2	.605	33	25.844	.000
B_15B	10.664	2	1.281	44	8.323	.001
B_16B	16.075	2	1.355	39	11.867	.000
B_17B	15.110	2	1.692	43	8.933	.001
B_18B	17.196	2	2.094	38	8.214	.001
B_19B	5.667	2	1.553	40	3.650	.035
B_20B	3.000	2	1.106	42	2.713	.078
B_21B	2.553	2	1.028	31	2.484	.100
B_22B	.627	2	1.457	43	.431	.653
B_23B	2.110	2	.971	38	2.173	.128
B_24B	32.710	2	1.402	42	23.328	.000
B_25B	6.787	2	1.294	43	5.245	.009
B_26B	.104	2	.533	42	.196	.823
B_27B	6.521	2	1.911	43	3.412	.042
B_28B	7.834	2	.758	41	10.342	.000
B_29B	8.812	2	.488	43	18.057	.000
B_30B	10.076	2	1.245	36	8.093	.001
B_31B	8.869	2	.617	42	14.378	.000

The  $F$  tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

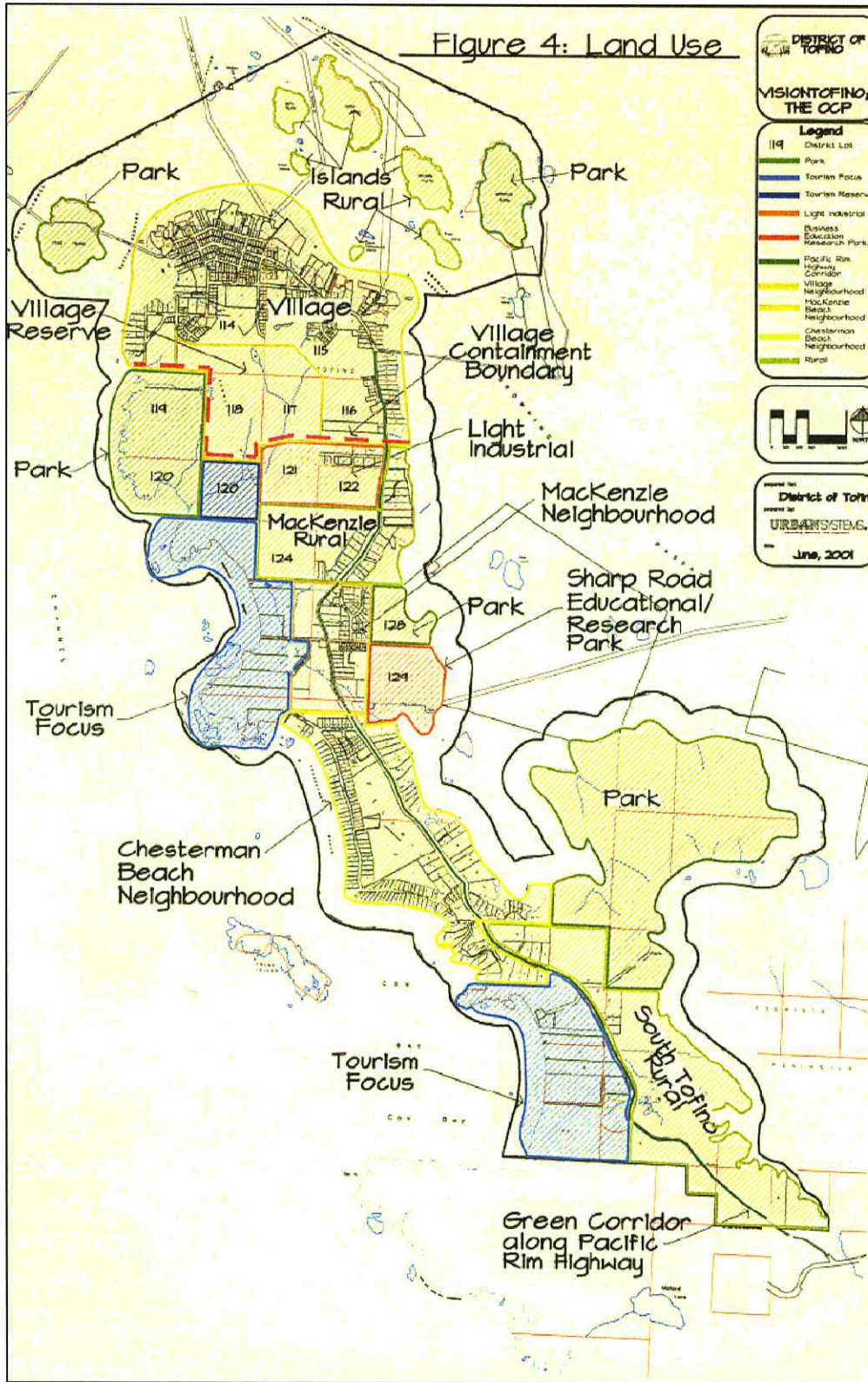
## Number of Cases in each Cluster

Cluster	1	24.000
	2	20.000
	3	3.000
Valid		47.000
Missing		.000

APPENDIX H

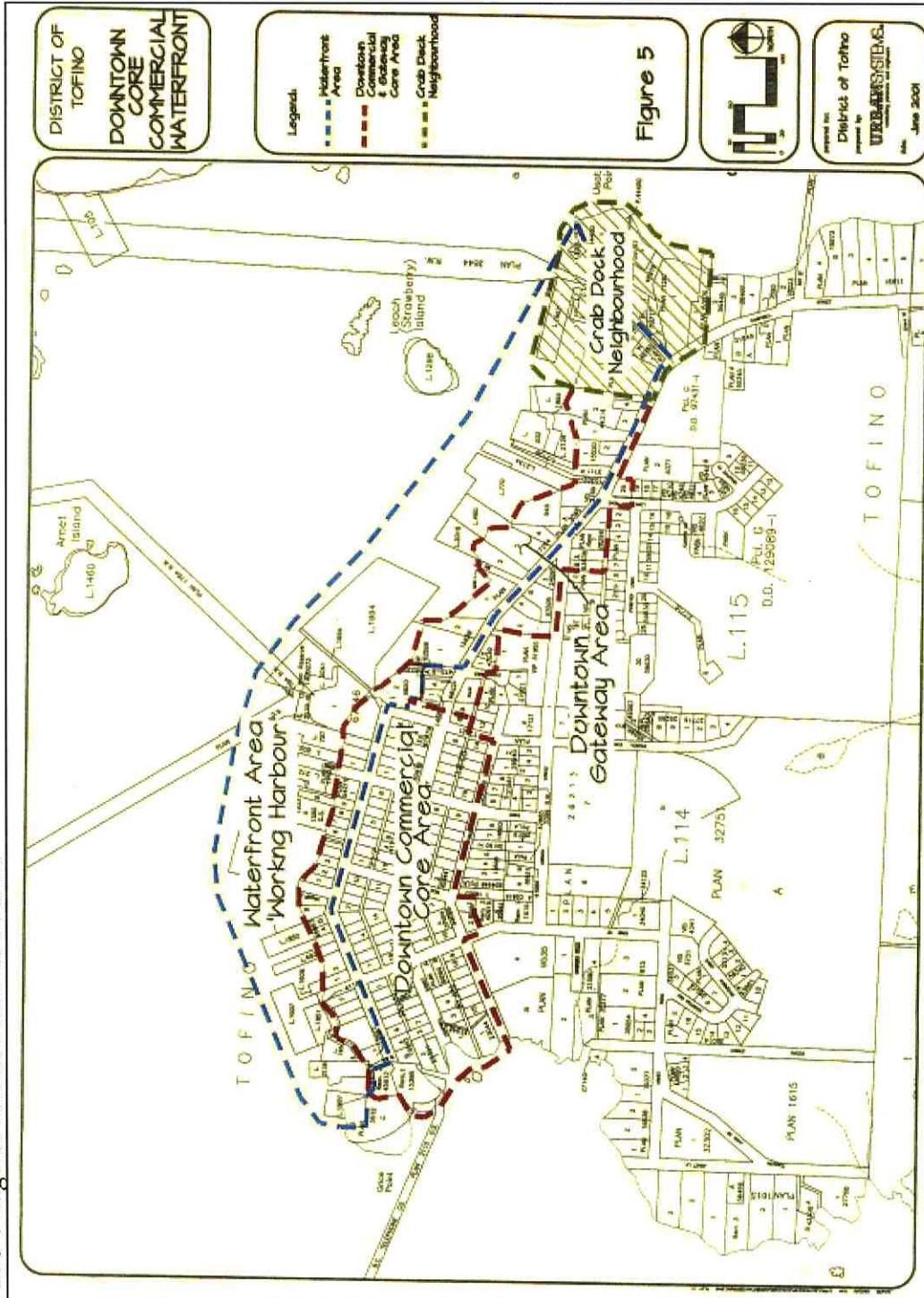
Tourism Space Analysis Summary

The District of Tofino Land Use Zones



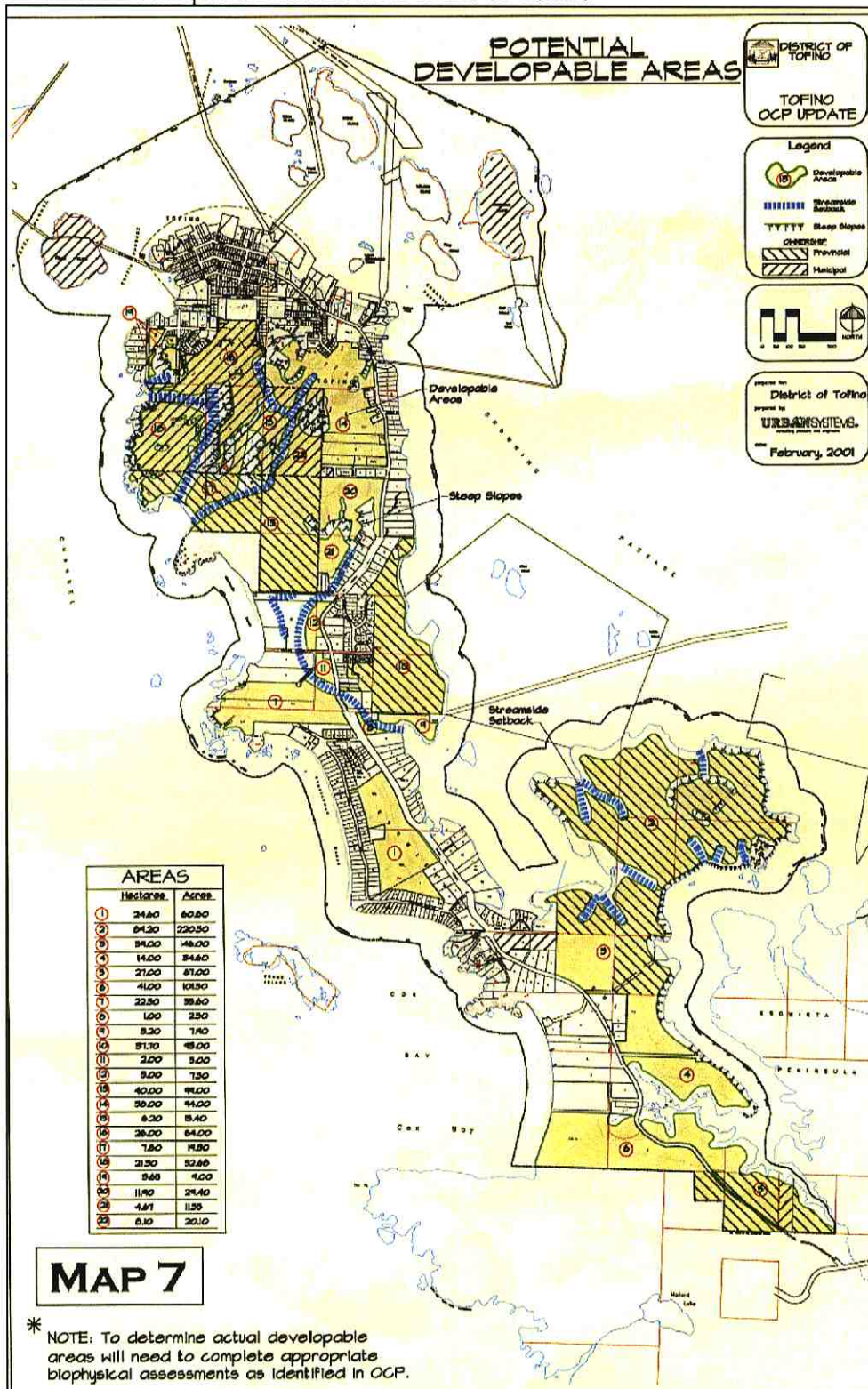
(From Land Use Maps on [www.tofino.ca](http://www.tofino.ca), performed by Urban Systems for the District of Tofino)

The Village of Tofino Land Use Zones



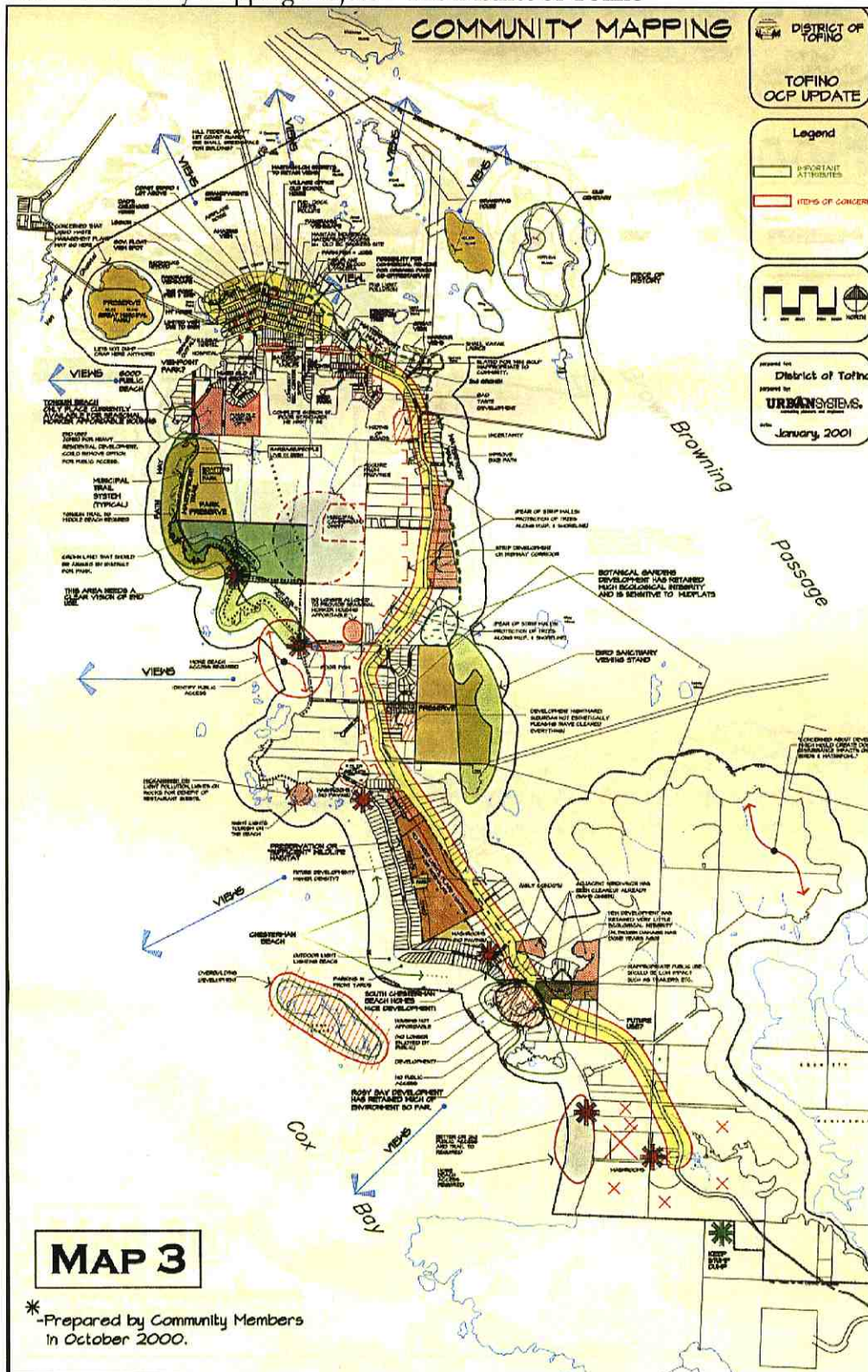
(From Land Use Maps on [www.tofino.ca](http://www.tofino.ca), performed by Urban Systems for the District of Tofino)

Potential Developable Areas in the District of Tofino



(From VISIONTOFINO: October 2004, performed by Urban Systems for the District of Tofino)

2004 Community Mapping Project – The District of Tofino



(From VISIONTOFINO: October 2004, performed by Urban Systems for the District of Tofino)