

Toward a Sustainable Tourism and Recreation Industry in Montana:

An Examination of Concepts And Industry Perceptions

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Preface

The study of sustainability and tourism is an intrinsically social and integrative task. This report was developed primarily because the first Montana tourism industry strategic plan stated sustainability as a goal, and identified proposed actions, yet did not provide a meaningful definition. The second industry strategic plan also identified sustainability as a major goal, suggested specific actions, and has yet to address fundamental questions about sustainability. The sustainable tourism literature has evolved significantly over the past few years, indicating suggested directions and issues for research and marketing organizations. Our contribution here is to reveal what Montana's tourism and recreation industry leadership feel what tourism should sustain. As such, the study could not have been completed without the cooperation of the industry's regional tourism associations boards of directors. Those individual contributions both help us understand the why of tourism development, but also suggest that more work needs to be done based on this foundation.

Our goal in this study, as scientists, was to first identify the relevant scientific and technical literature since we understood that the industry already was interested in sustainability as a concept, and then integrate this literature with what members of the tourism industry feel. In reviewing the literature, we did not attempt to be comprehensive; our goal was to examine and briefly summarize the relevant tourism literature that deals with the concept of sustainability. We also wanted to provide a scientifically valid summary that would raise awareness of important issues and questions associated with sustainable tourism, without a lot of the jargon that normally accompanies technical reports. Hopefully, we have achieved these goals.

The study was funded in part by the University Travel Research program administered by the Institute for Tourism and Recreation Research at The University of Montana. The study could not have been completed without the generous cooperation of Montana's tourism and recreation industry representatives.

Executive Summary

The tourism and recreation industry has been increasingly concerned about its sustainability. In Montana, where the industry has grown dramatically over the last decade, such concerns are expanding in importance, because of the contributions the industry makes to the state's economy as a whole. The industry relies extensively on Montana's natural and cultural heritage, and there is growing interest in protecting and managing this product base to ensure that tourism is indeed sustainable.

Other countries have been quick to adopt the idea of sustainable tourism, but there are many questions about what the concept means. Three major questions are: (1) how do we make tourism sustainable? (2) what is sustainable tourism? (3) what should tourism sustain? Each of these questions is important in the pursuit of sustainability.

In this report, the literature on these questions is addressed. Following this, research on how the industry perceives the last question is summarized. That research suggests that Montana's natural and cultural heritage, community economic stability, and quality of life are the three most important things for the tourism and recreation industry to sustain.

Participants in the research were asked to rank the usefulness of various potential indicators of the above items. The ranking was done for state, regional and local levels of tourism development. The results suggest that while there is a good understanding of the fundamental purposes of tourism development, the connection to quantitative indicators is not so clear.

The results of this research on sustainability, among the first to broach the topic in Montana, suggests that further discussion within the tourism and recreation industry is needed to develop not only a better understanding of sustainable tourism concepts, but also to gain more knowledge about how well we are achieving a goal of sustainability. The results also suggest needs for continuing research on this question.

Why Should We Study Tourism and Sustainability?

The development of sustainable tourism in the 1990s represents a major paradigm shift in how the industry perceives its role in economic and community development. With nearly 600 million international arrivals and an uncountable number of shorter recreation oriented trips, the travel, tourism and recreation industry has become a major power in the global economy. The rapidly growing size and significance of the industry has also given rise to increased critical review of its social and environmental consequences. Montana has not escaped these concerns; with increasing frequency, the objectives of tourism development are debated. With so much at stake, the long-term survival of the travel and tourism industry should be most fundamental question confronting it today.

Increasingly, tourism industry officials, community development specialists and conservationists have questioned the appropriateness of large-scale tourism development and have suggested that tourism engage the concept of sustainability. Undoubtedly, the popularization of sustainable development by the World Commission on the Environment¹ (1987) has encouraged this discussion. This Commission defined sustainable development as a process that meets the needs of the present without foreclosing options for future generations. Since then, many industries and communities have embraced the concepts of sustainability and sustainable development. This study specifically examines the application of these concepts to Montana's tourism and recreation industry.

How can Montana build a tourism and recreation industry that is sustainable?

Tourism is Important to Montana's Economy

Tourism's direct and indirect contribution to Montana's economy has grown dramatically since implementation of the lodging facility use tax² in 1987. That law devoted nearly all revenues from the tax to marketing tourism to nonresidents. Since 1987, the expenditures, jobs, income

¹ This Commission is often referred to as the Brundtland Commission after its chair.

² This tax is commonly referred to as the "bed tax".

and tax revenues accruing from tourism have grown (Figure 1), and since traditional natural resource commodity production has declined, tourism has become a more integral component of the state's economy. Thus, maintaining a tourism and recreation industry that endures is important in maintaining a viable and diverse economy.

Small rural communities are increasingly turning to tourism as a means of complementing their economic base. These communities are not only confronting major social change (for example, relatively high rates of in-migration), but

Tourism Economic Indicators

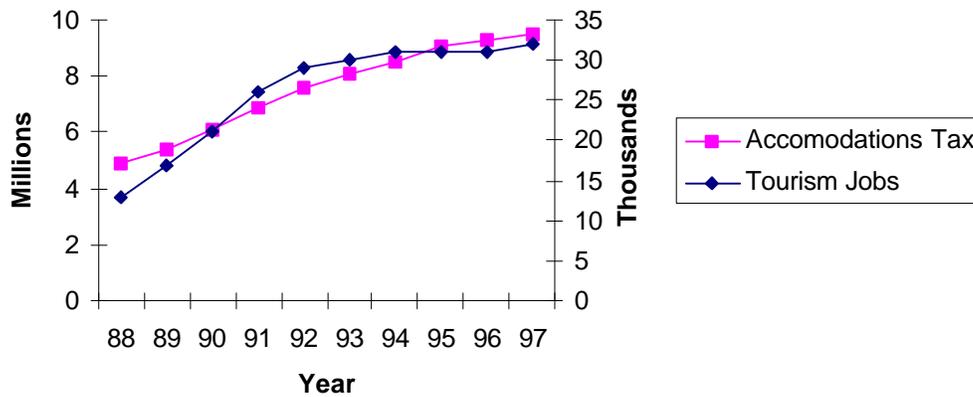


Figure 1. Tourism accommodations tax revenues and jobs have increased substantially over the last decade, although the growth rate has declined somewhat recently (Source: Institute for Tourism and Recreation Research).

many have lost their traditional resource commodity economic base as well. Tourism has often been proposed as one way of replacing the economic losses endured by these communities. Many of these communities are located in relatively isolated, but resource rich settings, that provide outstanding amenity backdrops, much of which is public land managed by the federal government. For these communities, goals of stability and predictability in their social, political, cultural and economic character are often pursued by residents.

Practicing sustainable tourism is often complicated by the fragmented and functionally separate character of the tourism industry (Nickerson 1996). The private sector component of the industry—services, retail outlets,

restaurants, resorts, outfitting, transportation—are generally characterized as small and competing businesses.

Destination marketing organizations attempt to provide coordinated promotion activities, while land management agencies which have traditionally focused on providing supplies of resource commodities are thrust into positions of managing often nationally significant amenities for local economic development. This situation is particularly problematic in destinations like Montana where 40% or more of the economic benefit from tourism is based on participation in recreation activities occurring on wildlands managed principally by the federal government.

Tourism, Like Other Industries, Leads to Social and Environmental Consequences

As with any economic development tool, tourism carries a number of social and environmental consequences, many of which, while not necessarily large scale, may be particularly challenging to address. Facilities developed to service the needs of visitors may impact air and water quality; visitors themselves may be the source of traffic congestion.

Nonresidents may compete with residents for popular recreation destinations and areas. Recreationists may disturb wildlife. The cost of public services needed to provide the needs of visitors, such as sewer and water treatment, police and fire services, roads and trails, must be paid for by someone. Visitors may be perceived by residents as intruding into the resident's quality of life. Butler (1990) concludes “... if developed beyond the capacity of the environment, the resource base and the local population to sustain it, it ceases to be a renewable industry.”

Tourism development must be sensitive to the cultural and natural heritage upon which it is based.

Thinking about sustainability allows tourism planners and the public to consider these types of impacts, the tradeoffs with the possibility of enhanced economic opportunity, and means to mitigate negative consequences. If sustainability can be envisioned as a condition where communities (and the environments they depend upon for sustenance, shelter, food and leisure) are resilient, then tourism can be viewed as a tool to accomplish this goal. Pursuing sustainability also helps ensure that the product base upon which Montana's tourism and recreation industry is built is secured for the future.

Development of a Sustainable Tourism and Recreation Industry is a Component of the Industry's Strategic Plan

The questions of sustainability and tourism have not escaped attention in Montana. Both recent tourism industry strategic plans have enthusiastically embraced the concept of sustainable tourism (Nickerson 1997; Travel Montana 1992). The 1998-2002 Strategic Plan for travel and tourism in Montana states in part that

“Tourism is a leading year-round industry in Montana based upon preservation and enhancement of the state’s natural, cultural and historic resources. Growth and development of tourism is balanced with environmental and cultural sensitivity...”

This plan identified a major theme as encouraging the development of sustainable tourism. However, the definition of sustainable tourism has remained elusive, but tends to be focused on integration of social and economic opportunity with environmental protection and enhancement of quality of life. Implementing this theme and implementing the specific actions identified for it require a better, and common understanding, of what should be sustained by Montana’s tourism and recreation industry. Thus, this report has three major goals:

1. Review the relevant scientific literature concerning sustainable tourism
2. Identify what the tourism and recreation industry should sustain
3. Identify appropriate indicators to understand the performance of the industry with respect to sustainable tourism.

A fundamental purpose of this report is to increase awareness of the concept of sustainability and how it applies to Montana’s tourism and recreation industry.

What Does the Scientific and Technical Literature Say about Tourism and Sustainability?

The concept of sustainability as it relates to tourism is still in its infancy. The varied and sometimes contradictory statements written about tourism evidence this, and often not only reflect particular philosophical perspectives, but bring with them significant, and sometimes unanticipated consequences. For example, Jensen and Bonnevie (1995) state that *“On a global scale, the only fully sustainable tourism is to make the tourists stay at home.”* It would seem that if the tourists stayed at home, then tourism would *not* be sustainable.

Other authors (e.g. McKercher, 1993) have stated that the concept of sustainability is itself a threat to the longevity of the tourism industry because, he argues, moving toward an ecological definition of sustainability may reduce access to the natural resources upon which the industry depends. In this section, we briefly review the important dimensions and issues associated with sustainable tourism that have been raised in the scientific and technical literature. However, moving toward sustainability does not necessarily lead to a “no-growth” situation. The motivation underlying discussion of sustainable development is clearly directed toward enhancing quality of life while protecting the natural and cultural resource base of Montana’s tourism industry. Growth can occur if it accounts for these factors.

To begin this discussion, an examination of the many conceptions of what is meant by “tourism sustainability” will be offered.

Definitions, While Important, Remain Elusive

Definitions help communicate ideas and concepts by clearly specifying the underlying meaning of terms. Good definitions lead to both readers and writers agreeing to what was stated, and provide interpretation as to meanings in problematic situations. While definitions of tourism (such as travel away from home of more than 100 miles in one direction) can meet these criteria, many writers discussing

Sustainability is not equivalent to a no-growth situation.

sustainable tourism leave readers wondering about what they mean.

Sustainability suggests that there may be limits to how much tourism—or other industries—are appropriate.

That the concept of sustainable tourism remains somewhat elusive is a conclusion to which most writers would agree. McKercher (1993) for example, criticizes sustainability as being “ill-defined”, even within the context of the Brundtland Commission report. He argues that the definition may encompass both developmental and conservation perspectives, perspectives that conflict and lead little guidance to resolving complex resource allocation decisions. However, Aronsson (1994) suggests that it is important to recognize limits in tourism development as a key component of sustainability: development beyond these limits leads to overexploitation. He appears to favor the conservation or ecological definition of sustainability that McKercher fears: “*sustainable tourism development entails protecting the resource base*”. These perspectives reinforce two major views about sustainable development—with one view emphasizing the existing “expansionist” worldview while the other supporting a newer “ecological” worldview (Taylor 1991; Rees 1993).

What limits may occur are informed by science but not determined by it, as this is a social and political decision.

Such views are important in generating informed discussion about sustainable tourism. While science may play an important role in identifying impacts and consequences of tourism development, how much tourism is acceptable, and under what conditions remains a social and political decision. In general, tourism development organizations and academics have avoided the debate concerning integrating environmental, social and economic objectives, relying primarily on the economic benefits of tourism to justify its presence. However, a number of presentations in two recent symposia demonstrate increased concern about the social, political and environmental meanings of sustainable tourism (McCool and Watson 1995; Reid 1991). Many authors implicitly, if not directly, emphasize the relationship between tourism and the natural environment as the basis for many questions about sustainability. For example, Slater (1991) states that economy and the environment are but two sides of the “same coin”. Lankford and Lankford (1995) indicate that sustainability is often defined as the preservation of *natural* capital.

The emphasis on environmental aspects is not total: Globe '90, Canada's sustainable tourism strategy, defines sustainable tourism development "as meeting the needs of present tourists and host regions while protecting and enhancing opportunities for the future" (Tourism Stream Action Strategy Committee 1990) Implicit in the idea of "host regions" is a concern for the welfare of the hosts and their communities in addition to environmental quality. Many authors (e.g., Campbell and Heck 1997) have suggested that sustainability is the condition where actions are socially desirable, economically feasible and ecologically viable (Figure 2).

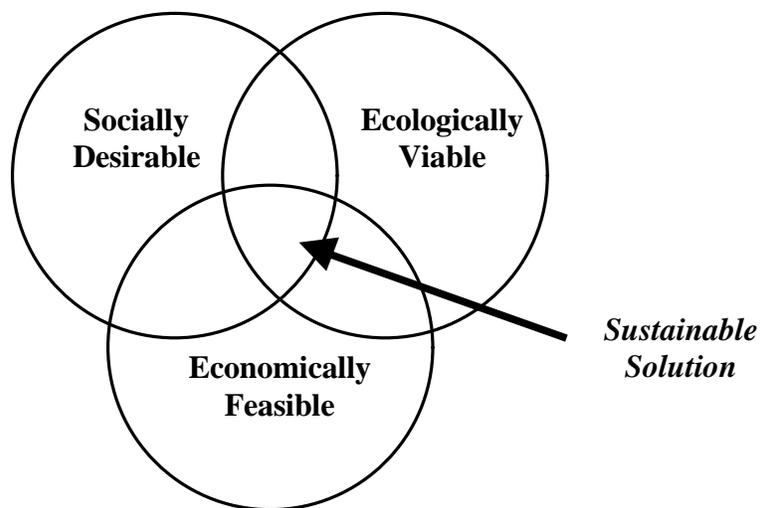


Figure 2. A sustainable solution occurs at the intersection of what is socially desirable, ecologically viable and economically feasible according to some authors. Others would state that ecological viability serves as the ultimate constraint.

Tourism and Sustainability Integrate Several Major Principles

Many authors have offered definitions of sustainable tourism. While these definitions provide little direct utility to tourism planners, a number of principles appear as a foundation. We've included them here, along with a brief statement or example to help clarify their meaning. The following is a partial list of some of the conditions and principles that define sustainable tourism. (1-4: Aronsson, 1994; 5-7: Wight, 1993; 8: Pigram, 1990):

Public participation and community involvement are important components of sustainability

- 1) Entails a long-term perspective for the use of resources in tourism production.
In a sense, short-term profits are traded for long-term social equity and environmental protection concerns. Thinking long-term about profits may permit greater concern about impacts to the environment of development activity.
- 2) Contributes to creating equality and economic and social welfare for the local community.
There tends to be greater local retention of income, thus, keeping tourist expenditures in the community longer, benefiting a wider variety of people.
- 3) Careful use must be made of the natural and cultural conditions, including the built environment.
Impacts of tourism development on our natural and cultural heritage are carefully considered and mitigated.
- 4) No burden shall be given to other people or subsequent generations as a result of tourism development.
We ensure that options for development, economic opportunity and environmental quality are built into tourism decisions.
- 5) It should not degrade the resource and should be developed in an environmentally sound manner.
Careful consideration is given to impacts on the environment; planners consider the acceptability of these impacts.
- 6) It should involve participation among all parties-- local communities, government, nongovernmental

organizations, industry, and tourists (before, during, and after the trip).

Tourism development involves all components of our society; each person and group can offer knowledge and expertise for planning decisions. Individuals can help tourists understand the special character of Montana.

- 7) Preservation, protection and enhancement of the quality of resources which are the basis of tourism. *The tourism and recreation industry should understand its dependency on natural resources and work with managers and land owners to protect those resources.*

Sustainability Must Consider Temporal, Spatial and Functional Scales

Scale is an important part of the sustainability discussion; and there are three important aspects to it: time, space and function. A fundamental question concerns over what period do we measure the sustainability of tourism: five years, a decade, a generation? This is an important question for Montana because of the boom and bust history of many components of the state's economy. For purposes of stability and predictability, people would like to have some security in knowing what will happen. And, in terms of publicly provided services, it makes no sense to build new schools if they are abandoned a short time later. So, over what time frame should we judge the sustainability of Montana's tourism and recreation industry?

Scale also has a spatial dimension. Do we judge sustainability at the community, county or state scale? If we measure sustainability at too low of a level, we may neglect important linkages to other areas. If we measure sustainability at too large a scale, we will miss the variation among communities or regions. The answer is important because one community's attempt to develop a sustainable tourism industry may come at the expense of a nearby community's effort.

Another scale issue relevant to tourism sustainability is one of function. A functional scale mismatch occurs because many systems are complex but human actions and guiding institutions (laws, agencies, etc.) are necessarily specialized.

It is important for communities to take cooperative rather than competitive stances in tourism sustainability

The achievement of specialized goals may conflict functionally with the sustainability of larger systems. Colin Hunter (1995) points out a functional scale mismatch in how tourism sustainability has been conceived by both researchers and policy makers. He criticizes much of the tourism literature for its lack of concern with how tourism sustainability fits within the larger umbrella of sustainable development. For example, how does the goal of sustainable tourism relate to sustainable forestry or sustainable agriculture? Sustainable development is a broader goal than sustainable tourism. How do the two relate?

Hunter states that the concerns of sustainable tourism development fit within the bounds of sustainable development in general. He calls this view “Total Immersion” (see Figure 3) which means that sustainable tourism development fits within a broader economic development package. The tourism-centric paradigm (Partial Immersion), he states, considers only sustainable tourism development, and thus may encourage inappropriate and inconsistent consideration of the scope

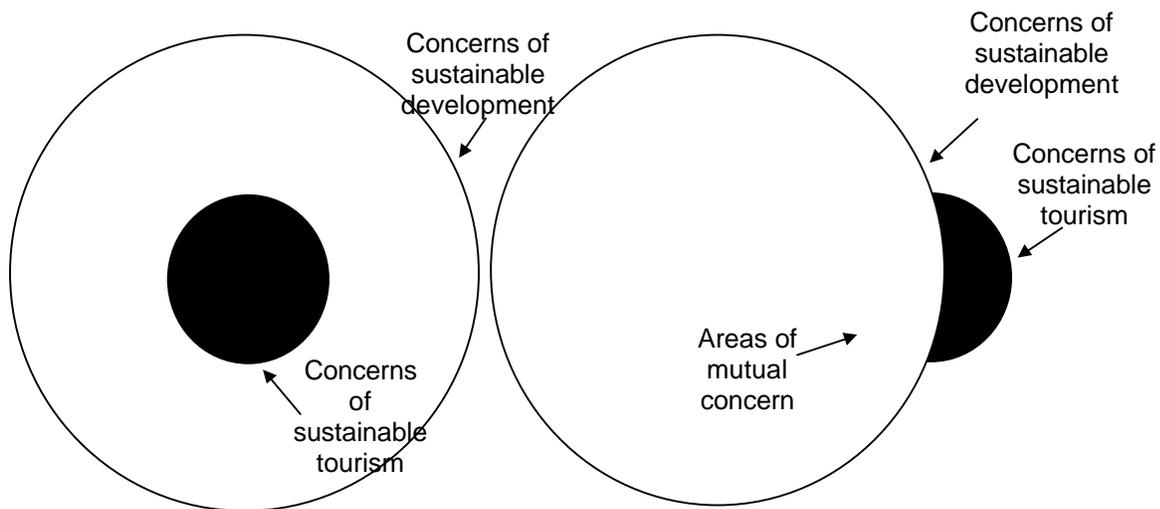


Figure 3.. Sustainable tourism may be viewed as totally immersed within a larger social and economic context, as on the left, or somewhat independent, as on the right. Such perceptions will influence how tourism officials perceive linkages to broader social goals (after Hunter 1995).

and geographical scale of tourism's resource base, while also failing to adequately account for the intersectoral context of tourism development. Failing to properly interpret the relationship between tourism sustainability and sustainable development can lead to a tourism industry that eludes the fundamental goals of economic development because it may not consider either the purposes of development nor how tourism meets these purposes.

Tourism is economically and socially specialized; as such its effectiveness with respect to broad economic development goals may be limited. McKercher (1993) argues that the debate concerning tourism sustainability must be broadened to recognize the role that non-tourism entities, such as agriculture, manufacturing, wood products and mining, play in determining the future of sustainable tourism. Identifying these broader social goals would help tourism planners and marketing agencies not only understand the consequences of programs on achieving these goals, but also help in developing programs that would strengthen these goals. Goals may deal with quality of life, protection of natural and cultural heritage, and enhancing economic opportunity.

Discussions of sustainable tourism, to be effective, can only occur within the larger social and economic context.

Sustainability Deals with the Concept of Equity

The concept of *intragenerational* equity deals with creating or strengthening opportunity, equalizing income or redistributing power within the host population where tourism is occurring. A condition necessary for sustainable tourism development provided by Aronson (1994) states that "...*tourism should be developed that contributes to creating equality and economic and social welfare for the local community.*" Cater (1993) states that in order for tourism development to be truly sustainable it must "*meet the needs of the host population in terms of improved living standards both in the short and long term.*" Christensen (1995) states that tourism development should include monitoring, evaluating, and improving host community quality of life as a condition for sustainability. While concern for the host population must be an important consideration, impacts to surrounding communities, regions and countries need to be addressed as well.

Another aspect of sustainability is the concept of *intergenerational* equity. Americans have historically been

Equity, or fairness, is an essential component of sustainability. But, what is equitable?

concerned about the quality of life for their children and grandchildren. However, concerns about intergenerational equity do not typify much of the tourism sustainability literature. With the exception of a few authors (e.g.; Aronsson, 1994), the literature tends to focus more on the need to preserve natural resources for future generations rather than considering how tourism development may affect those living in the future. What opportunities, resources, income and options do we bequeath to future generations? What choices and sources of income will we leave those to come?

The tourism sustainability literature focuses on access to *natural* capital as an intergenerational equity issue. Natural capital in Montana is represented primarily in its wildlands, such as national parks and forests, wilderness and wild rivers, and undeveloped prairies. This makes sense as Montana tourism is directly dependent upon high quality natural resources to attract visitors. While natural capital is important, it has little practical use for tourism without the social capital needed to add value. Social capital deals with the skills, knowledge, leadership and abilities of people and provides the foundation needed not only for visitors to understand and appreciate what they see, but to develop planning skills needed to protect natural assets and to develop a tourism industry that is sensitive to those assets.

A major challenge for sustainability is integrating intra- and intergenerational equity concerns. In some cases, trade-offs may be required. Tourism development that has as goal, for example, an increase in income for lower income groups may decrease options for the future, because development may favor present generations over future ones. Since no one living now can claim to represent the interests of those living in the future, their interests may be neglected or discounted.

Achieving Sustainability Leads to Social, Economic and Ecological Systems that are More Resilient

Resiliency is a term frequently used by ecologists to describe the ability of an ecosystem to return to a state of equilibrium following some type of disturbance, such as a forest fire, or a human-induced perturbation such as large-

scale timber harvesting. For human communities, resiliency may be viewed as the ability of a community to respond or adapt to change. Thus, a large tourism related event such as a concert or festival could be viewed as a disturbance to the ongoing social interaction within a community. Resilient communities can adapt to such events and return to a normal situation following them. Likewise, communities with diverse economies are resilient in the sense that downturns in one industry do not significantly adverse the entire community's economy.

The notion of resiliency is discussed in the tourism literature primarily as it relates to bio-physical aspects of recreational carrying capacity. Some authors believe that there is a maximum tourism or recreation use level intrinsic to an area (such as a national park, wilderness or other tourism destination), beyond which unsustainability is the result. Manning (1996) in his discussion of indicators of sustainable tourism discusses resiliency as one of the factors that, when combined with other factors (e.g., physical characteristics of the area, the type of use, etc.) creates the composite indicator called "carrying capacity." Butler's (1991) model of the tourist-area cycle of evolution describes the "*capability to withstand disturbance*" as one of the factors that helps to mitigate against exceeding the environmental carrying capacity of the land. If we accept the notion offered by Pigram (1990) that "*sustainable tourism is essentially an exercise in sustainable resource management,*" and that the "*fragility*" of an area is an indicator of this, then resiliency becomes an important factor in determining tourism development policies.

Building resilient social and ecological systems helps communities adapt to externally induced changes.

It has been argued by many (see Dill, 1991; Stankey and McCool, 1984; McCool and Stankey, 1992; Lindberg and others 1997) that using carrying capacity in planning situations has limited ability to help solve problems. Too many requirements must be satisfied in order for it to be useful. Instead of concentrating on defining absolute levels of use, it has been suggested that identifying desired conditions and the means to attain them is a more useful approach. (Lindberg and others 1997).

Resiliency, however, has broader uses than natural resources. We propose that sustainability, in an era of chaos and change, deals with resilient systems, that is social,

economic and environmental systems contain the capacity to deal with change. In this sense, then, tourism may be viewed as an industry (like other sectors) that enhances a community's ability to cope with change. Thus, tourism is a tool to enhance resiliency. In this sense then, tourism development increases or decreases and takes different roles depending on what is needed to enhance community resiliency.

Making Tourism Sustainable, Sustainable Tourism, and What Should Tourism Sustain: Different Questions, Different Answers

Within the context of this paper, Montana's tourism and recreation is confronted with three questions: (1) What is the sustainability of the tourism industry?; (2) Developing sustainable tourism; and (3) What should tourism sustain? In our own minds, as we began this study, we had little differentiation among these questions ourselves. However, as we have examined the literature, conducted data collection, and tested ideas in various public and academic meetings, it has become clear that these are different questions and require different answers.

What is the Sustainability of the Tourism Industry?

This question concerns itself with the long-term presence of the tourism and recreation industry. As such, it is narrowly focused on the industry itself—including the product or supply side. This question would entail responses dealing primarily with promotional strategies, product quality development and protection, and private sector business practices. In addition, since much of Montana's tourism industry is based upon natural environments and cultural heritage, the sustainability of the industry is linked directly to actions that protect and maintain the quality of those products. While this question is important, it is not the focus of this report.

What is Sustainable Tourism?

The literature suggests that sustainable tourism is a different type of tourism than so-called "mass" tourism, a "kinder and gentler" form of tourism that is generally smaller in scale, more environmentally sensitive and socially aware than the former. Sometimes sustainable tourism is also termed "green" tourism or eco-tourism. To some, sustainable tourism means the behaviors individual tourists practice; to others, sustainable tourism concerns itself with infrastructure and social policy questions. A fundamental

question that we ask is “Why wouldn’t we expect all forms of business and economic activity to address these questions?”

What Should Tourism Sustain?

Shouldn’t all tourism development consider a goal of sustainability?

This question places tourism in an human and community development context. It addresses the purposes of tourism development and views tourism as a tool, not as an end. In this sense, public agencies engage in tourism development because they feel it will lead to socially desirable goals, such as increased employment, higher labor income, reduced crime, greater protection of the natural or cultural heritage, or an enhanced quality of life. Of the three questions, this is the most fundamental, because it requires us to address the reasons for economic development. By so doing, it sets the stage for addressing the previous two questions.

What are Useful Indicators of Sustainable Tourism?

Given the concerns and issues identified above, how would we know if we are making progress in addressing concepts of sustainability in our tourism development strategy? One important way is to identify a key set of quantitative measures that we can monitor over time. These measures, or indicators will inform us if we are making progress and if our actions—such as promotion or protection program—are effective.

Vast quantities of tourism information exist, even in Montana, and are readily obtainable to address many sustainability concerns (Meyboom, 1993). But only a limited amount of information is truly useful to decision-makers. Indicators are pieces of information which measure things that are important to real decisions. Identifying indicators allows for monitoring to determine if policies are leading to community development goals. Indicators are useful in that they measure one or a few aspects of a situation, but allow a decision-maker to assess the health or condition of the entire system. For example, when a physician conducts an examination on someone, one aspect of health might be heart condition. Although a great deal of information could be obtained through various tests, physicians will usually begin to assess heart condition conducting an electrocardiogram. The electrocardiogram can provide a glimpse of the overall condition of the heart. Thus, an important criterion for a good indicator is that it can be used to assess more than one aspect of the overall condition.

One example of an indicator of the tourism industry in Montana is how residents feel about tourism. Figure 4 shows attitudes of adult Montana residents between 1992 and 1997 in terms of how their perceptions of the effect of tourism on their quality of life. The data demonstrate seasonal variation, with data collected at the end of summer showing the most negative attitudes, and over time shows a tendency toward a more negative attitude. This information is useful to tourism promotion agencies because this indicator suggests an opportunity to reevaluate the goals of tourism promotion.

An indicator is a kind of measure that we monitor periodically to help us understand what is happening.

Attitudes of Montana Adults toward Tourism's Affect on their Quality of Life

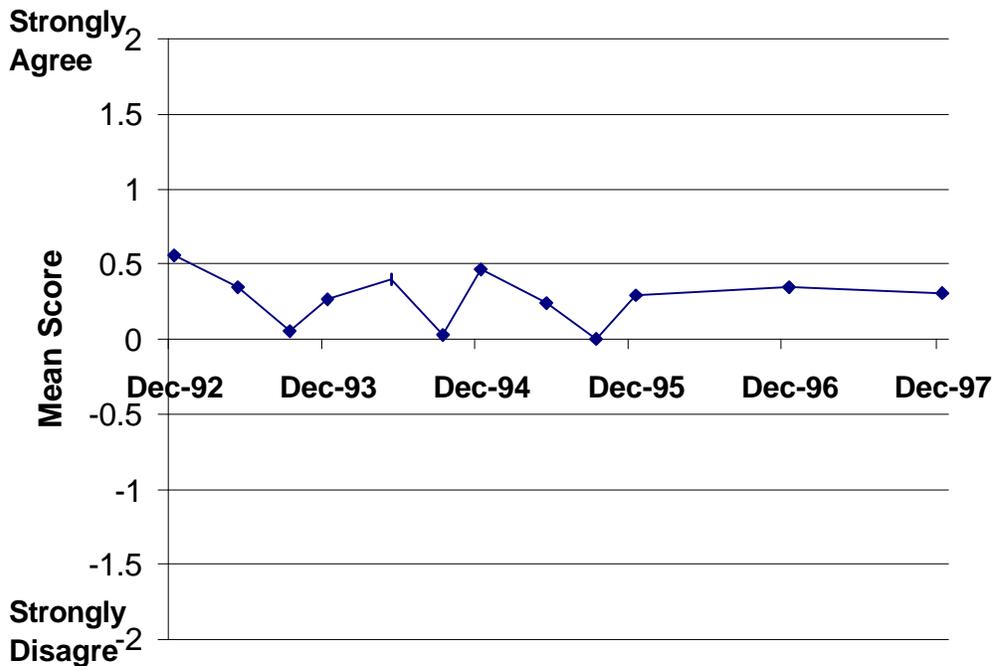


Figure 4. Extent to which adult Montanans agree that tourism increases the quality of life in their community. Question was asked three times per year until December 1995, then once per year after. The data shows less variability in responses the last several years.

What characteristics make indicators useful for tourism policy and decision-making? Linda Merigliano (1989) in her discussion of impacts from recreationists on the environment, provides us with several criteria for good indicators. For example, indicators should be reliable, easy to measure, quantifiable, relevant to important conditions and sensitive to change. Liverman and others (1988) mention additional criteria; indicators must 1) be sensitive to change over time, 2) have predictive ability, 3) have reference or threshold values associated with the indicator, 5) be able to measure reversibility or controllability, 6) have integrative ability, and 7) be relatively easy to collect and use. Indicators must also measure conditions over which

people have some degree of control (Flathead Gauges, 1995).

Different conceptions of indicators exist among different authors. For example, Meyboom (1993) conceives of three types of indicators for sustainable tourism; *leading indicators* relate to future events (consumer confidence), *current indicators* signal what is happening now (visits, labor income), *trailing indicators* measure the effects of past action (attitudes of residents, satisfaction of visitors). Manning (1992) believes there are six different types of indicators (see Table 1).

Table 1. Types of sustainable tourism indicators and examples of each (excerpted from Manning, 1992).

<i>Indicator Type</i>	<i>Examples</i>
1. Warning indicators	Water quality, air quality
2. Measures of pressures or stresses	Fish caught, deer harvested
3. Measures of the state of the natural resource base and use levels.	Current use levels of facilities.
4. Measures of impacts/consequences	Loss of old-growth forest, tourism jobs lost
5. Measures of management effort/action	Regulations on visitor use and numbers
6. Measures of management impact	These indicators measure an item to evaluate if the intervention is achieving the desired result.

Developing Indicators of Tourism Sustainability in Montana

The former Five-Year Strategic Plan for the Travel and Tourism Industry in Montana called in its vision statement for a tourism industry that “*fosters an enhanced quality of life for its residents...*” (Travel Montana, 1992). To this end, the plan included as one of its four major goal areas, “*Maintaining and Measuring Quality of life and Resource Sustainability.*” The specifics of how this was to be achieved were not explicitly stated, although review of proposed tourism developments from the perspective of environmental sustainability was suggested. In addition, monitoring of Montanans’ attitudes toward tourism was

indicated as a specific action to be undertaken by the Institute for Tourism and Recreation Research, a task that was initiated in December 1992 and continues today. The more recent strategic plan (Nickerson 1997) also states that sustainability is the most important of the five goals identified.

Several recent efforts within Montana have grappled with identifying indicators of sustainability. The idea of sustainable communities as described by the Sunrift Center (Flathead Gauges, 1995) includes the presence of a healthy environment, an environmentally sound and viable economy, and an equitable society. The so-called “gauges” are indicators of progress toward this goal in the Flathead valley of northwest Montana. Examples of social equity indicators include; percent of people living in poverty by county, housing affordability, and crime rates for major offenses. Economic viability measures include unemployment rates, per capita personal income, and number of farms among others. Environmental sustainability indicators include solid waste disposal trends, highly impaired creeks, and acres of management indicator species.

The Missoula Measures (1997) project is an attempt to gauge the health of Missoula County, Montana. The report is in four parts with the following content areas: 1) people, 2) environment, 3) community and 4) economy. The data collected is used as a baseline to judge the relative health of Missoula County over time. Currently, only the environment and people reports have been published. Indicators of a healthy environment include acres of forested private land, acres of occupied grizzly bear habitat, and presence of perchloroethylene in drinking water. The people report includes such indicators as percent of adolescents who have engaged in sexual intercourse by age 15, number of child abuse incidents, and health care coverage.

Unfortunately, there are no studies of tourism in Montana that specifically identify and report indicators of sustainability as presented above. However, studies of economic impact (Nickerson 1996) of tourism and monitoring of tourism attitudes could form the basis of some indicators.

How was Our Research on Tourism Sustainability Indicators Conducted?

Our study was conducted from the Spring, 1996 to Winter 1997. This study had, as its primary objective, the response to the question “what should the tourism and recreation industry sustain?” Agreement on sustainability is a prerequisite to both developing policies leading to sustainability. A secondary goal is identification of indicators that can be monitored to determine if policies are leading to sustainability.

The research was conducted in the state of Montana. The research involved 108 members of Montana’s tourism and recreation industry. These individuals sit on the boards of directors of each of the state’s six tourism promotion regions. The researchers visited a meeting of each of the boards, explained the study and lead the participants through a questionnaire concerning y sustainable tourism. Each participant ranked the importance of 20 items that could be sustained by tourism. Each of the 20 items had been identified through a review of the sustainability, tourism and economic development literature. Respondents were also asked to evaluate the usefulness of 26 indicators of sustainability, also proposed in the literature, to three levels of destination marketing: the state, tourism region, and local community. The initial list of 26 items was identified from the sustainable tourism literature and discussions with individuals in the tourism and recreation industry. Many of the items were chosen to represent indicators of the 20 things that could be sustained.

What Should Montana’s Tourism and Recreation Industry Sustain?

Respondents reported a relatively broad range of answers to the question of what the industry should sustain. The items ranked highest (see Table 2) were Montana’s natural and cultural heritage, community economic stability, quality of life, and unique natural environment. These four items accounted for 44.1% of the total responses. Tourism-specific items such as nonresident visitation, promotional activity and lodging occupancy rates—three variables

Members of Montana’s tourism and recreation industry helped identify indicators of tourism sustainability.

What should tourism sustain? In Montana, study participants suggested natural and cultural heritage, community economic stability, quality of life, and Montana’s unique natural environment as most important.

frequently discussed as objectives of tourism marketing organizations--were ranked significantly lower in importance. Items such as low taxes, biological integrity, and family cohesiveness tended to be ranked the lowest of the items presented to study participants.

What are Useful Indicators of Tourism Sustainability?

When asked to rate the usefulness of a variety of indicators of sustainability, respondents rated indicator variables differently for all three levels of marketing effort. At the state level, indicators receiving the highest level of utility were those that had the greatest relevance to state-level marketing and promotion. These included visits to parks, recreation areas and historic sites; number of non-resident visitors; and tourism promotion budget; and are indicative of a traditional state-level promotional emphasis (Table 3). Indicator variables that focus more on the outputs of tourism development, such as labor income or crime rates, were generally ranked lower.

Ratings for regional efforts (Table 4) were somewhat ambiguous reflecting the differences between the state and community levels, suggesting that sustainability definitions and policy at this level may not be clear.

At the local level, the most useful indicators were hotel occupancy rate, visits to parks, recreation areas, and historic sites, and number of non-resident visitors (see Table 5). These variables illustrate a similar emphasis as the state level but also reflect local business concerns. Interestingly, it was at this geographic level that resident attitudes toward tourism were ranked higher than at either the state or regional level. This possibly reflects an understanding that the tourism industry must operate within the social context of the local community.

The overall results suggest that tourism industry representatives view sustainability from a very broad perspective, suggesting that tourism development is more of a means to an end than an end in itself. Within the context of change, our data imply that fundamental purposes of tourism development are being re-examined, even in the

U.S. where sustainability concepts applied to tourism have generally been ignored.

While study respondents reported relatively broad definitions, the failure to rank specific indicators dealing with these broad definitions highly (e.g., affordable housing, etc.) may have been a result of failure to see connections between tourism and these potential indicators, a lack of understanding of how the industry could have an impact, or a question about the industry's responsibility to deal with these items. Ranking indicators such as number of nonresident visitors highly could have reflected traditional methods of measuring tourism industry outputs, may suggest that respondents recognized that numbers of visitors impact such items as quality of life, may reflect a willingness to accept crude indicators. Finally, ranking indicators may have been a task requiring understanding of a complex set of relationships between a variety of factors, thus making the ranking process itself difficult.

Defining sustainability in relatively broad terms—as a goal rather than a means—provides the recreation and tourism industry with a strategic framework from which to respond to change and uncertainty. If the goal is economic opportunity, for example, then tourism may be viewed more as a tool to help a community attain it. By viewing sustainability in this manner, actions to enhance economic opportunity can maintain some flexibility in light of changing conditions.

What Major Conclusions Does this Research Suggest?

We have learned that the concept of sustainability, as it applies to Montana's tourism and recreation industry, is an important concept for the industry to address, but is very complex. Simplifying this concept would be a disservice and dishonest. We need to recognize and appreciate all the various complicating factors. However, because the concept is complex does not mean we should ignore it. To the contrary, it is clear the industry feels this is a socially important goal and certainly needs attention. A major challenge is to develop processes that will address the various components of sustainability.

Issues of sustainability are included within the existing five year strategic tourism plan, so our research includes a context of at least some discussion about this concept, and therefore may represent a more optimistic context than in other places where similar discussions have not occurred. The industry could build upon this interest by specifically addressing sustainability issues at a variety of venues. Too, understanding how tourism helps Montanans protect their heritage, provide economic opportunity and preserve a specific lifestyle is an important first step toward discussions of sustainability.

Our data suggests somewhat of a "disconnect" between preferences for what should be sustained by tourism and indicators that might measure progress toward this goal. For example, maintaining the "Montana" quality of life was the third highest ranked item to be sustained, yet the indicator "resident perceptions of quality of life" was ranked eleventh in usefulness at the community level. While community economic stability was also rated high, indicators that might be useful in measuring this such as employment did not receive a very high rating.

Second, the lack of consistent results may reflect confusion among three important questions: the concept of sustainability, the question of what should tourism sustain, and the idea of sustainable tourism. Each of these concepts includes a variation on the term "sustain", but represents

significantly different notions. Sustainability may represent a general goal that a variety of economic, social and political processes seek to achieve. What tourism should sustain may be a more narrowly oriented question that is limited to the direct economic or cultural effects of tourism development. Sustainable tourism may represent a particular type of tourism—small scale, community oriented, environmentally benign, for example. This confusion exists not only in the minds of tourism business operators, but most likely in academia as well.

Third, we note that many of the top-ranked indicators of sustainability identified here represent inputs: they really do not measure the results of tourism development policy, but only the level of tourist activity or tourism promotion activity. For example, the number of nonresident visitors as an indicator does not necessarily measure important economic outputs—such as labor income, nor does it assess the effects of resident-visitor interactions. While there is a statistical association between visitation levels and expenditures, a large variety of factors intervene to make this relationship more difficult to understand. For example, if visitors don't find many Montana made products to purchase, their expenditures will have smaller indirect and induced effects.

The findings above have several implications for tourism as development strategy in an era of change. We note that the view that tourism is a developmental strategy may not be one for which there is uniform agreement. Some may feel that tourism exists for tourism, while others feel it is a tool for achieving socially desirable goals. Never the less there are important implications. First, if tourism is viewed as a tool of development to achieve sustainability there must be both agreement on what is to be sustained as well as the appropriate routes to that goal. In a dynamic social context, determining what is to be sustained involves significant, meaningful and authentic interactions among all segments of the tourism and recreation industry, but particularly with managers of the publicly owned resources upon which the industry is based. While some interactions are beginning to occur (e.g., The Western Summit on Tourism and Public Lands), interaction at both the local level—where tourism development happens—and the national level—where institutional frameworks and cultures originate that form the

context for local efforts—are needed. In Montana, the Tourism and Recreation Initiative (MTRI) is another step that helps establish the dialogue important to sustainability goals. This dialogue must extend to residents in communities where tourism happens so that not only tourism maintains its social acceptability, but the industry learns from residents their concerns and worries.

Second, more specific ideas about what is to be sustained are needed. Our research, for example, identified “Montana quality of life” as an important item to be sustained. But what does this mean? Which Montanans? Over what time frame? What indicators would be most suitable? And, most importantly, what is meant by quality of life? Economic development activities, such as tourism, thus are viewed more as a tool than as an end: “there are important qualitative dimensions to development that distinguish it from economic growth” (Barbier 1987). This suggests a continuing role for research to support the industry in attaining sustainability.

Third, the sustainable tourism literature, while in the developmental stage, needs to address the question of indicators. Some literature exists (see Hawkes and Williams 1993; Manning 1992), but many proposed indicators do not meet the criteria for indicators identified in other fields. For example, indicators should be reliable, easy to measure, quantifiable, relevant to important conditions and sensitive to change (Merigliano 1989). One proposed indicator we used in this study—number of state parks—that has been proposed in the literature doesn’t meet all these requirements. While this indicator is easy to measure and is quantifiable, it doesn’t fluctuate in response to policy initiation or implementation, and may not be closely related to significant issues such as quality of life.

The sustainability issue confronts researchers, tourism promoters, destination marketing organizations and resource managers on a daily basis. Our initial inquiry into the question of what should be sustained indicates that, at least in Montana, the tourism and recreation industry deeply cares about socially important values and the special character of the state. While we found interesting results, further research and interaction on this topic may help lead the industry into a new perspective on its role in community development in an evolving era of change.

Table 2. Rankings of potential items that could be sustained by tourism by Montana tourism and recreation industry officials

	Rank										Total N
	1		2		3		4		5		
	N	%	N	%	N	%	N	%	N	%	
Montana natural and cultural heritage	13	12.5%	19	18.1%	12	11.5%	18	17.3%	7	6.9%	69
Community economic stability	22	21.2%	13	12.4%	6	5.8%	6	5.8%	9	8.8%	56
Montana quality of life	27	26%	8	7.6%	8	7.7%	7	6.7%	6	5.9%	56
Unique Montana natural environment	7	6.7%	13	12.4%	9	8.7%	12	11.5%	7	6.9%	48
Tourism promotion activity	6	5.8%	6	5.7%	9	8.7%	9	8.7%	8	7.8%	38
Recreation opportunities	1	1%	7	6.7%	7	6.7%	12	11.5%	9	8.8%	36
Tourism employment opportunities	4	3.8%	4	3.8%	7	6.7%	8	7.7%	7	6.9%	30
Safe and secure community environment	7	6.7%	5	4.8%	7	6.7%	5	4.8%	6	.0%	30
Employment opportunities in general	1	1%	6	5.7%	7	6.7%	7	6.7%	6	5.9%	27
Level of tourism activity	4	3.8%	5	4.8%	6	5.8%	4	3.8%	7	6.9%	26
High quality natural resources	3	2.9%	3	2.9%	13	12.5%	5	4.8%	1	1%	25
Clean air and pure water	3	2.9%	6	5.7%	3	2.9%	4	3.8%	6	5.9%	22
Number of non-resident visitors	3	2.9%	3	2.9%	5	4.8%	2	1.9%	5	4.9%	18
Lodging occupancy rates	2	1.9%	1	1%	1	1%	0	.0%	5	4.9%	9
Access to higher education	0	.0%	1	1%	0	.0%	3	2.9%	3	2.9%	7
Access to affordable housing	0	.0%	1	1%	0	.0%	0	.0%	5	4.9%	6
Biological diversity	1	1%	2	1.9%	0	.0%	0	.0%	2	2%	5
Low taxes	0	.0%	0	.0%	1	1%	1	1%	2	2%	4
Biological integrity	0	.0%	0	.0%	3	2.9%	1	1%	0	.0%	4
Family cohesiveness	0	.0%	2	1.9%	0	.0%	0	.0%	1	1%	3

Table 3. Ratings of the usefulness of indicators of sustainability at the state level

	Very useful		Moderately useful		Not useful	
	N	%	N	%	N	%
Visits to parks, recreation areas, and historic sites	90	87.4%	12	11.7%	1	1%
Number of non-resident visitors	82	79.6%	20	19.4%	1	1%
Tourism promotion budget	76	74.5%	23	22.5%	2	2%
Hotel occupancy rate	75	73.5%	23	22.5%	4	3.9%
Per capita tourist expenditures	74	71.8%	26	25.2%	3	2.9%
Presence of a sustainable tourism plan	70	69.3%	27	26.7%	4	4%
Lodging revenues	63	62.4%	34	33.7%	3	3%
Inquiries from promotions	61	59.2%	38	36.9%	4	3.9%
Highway traffic count	56	54.4%	41	39.8%	6	5.8%
Resident attitudes toward tourism	55	53.9%	39	38.2%	8	7.8%
Number of non-resident fishing and hunting licenses	55	53.4%	45	43.7%	3	2.9%
Number of tourism employees	54	54.5%	40	40.4%	5	5.1%
Percent of labor force in tourism	54	52.9%	46	45.1%	2	2%
Annual number of new tourism businesses	49	48.5%	52	51.5%	0	.0%
Labor income from tourism	47	46.5%	49	48.5%	5	5%
Airline deplanements	43	42.2%	47	46.1%	12	11.8%
Resident perceptions of quality of life	41	40.2%	51	5%	10	9.8%
Number of State Parks	33	32.7%	43	42.6%	25	24.8%
Gasoline tax revenue	30	30.3%	55	55.6%	14	14.1%
State Park management budget	28	27.7%	60	59.4%	13	12.9%
Crime rate	24	24%	41	41%	35	35%
Water pollution from sewage	24	24%	41	41%	35	35%
Per capita water consumption	14	13.9%	33	32.7%	54	53.5%
Building permits	9	8.9%	46	45.5%	46	45.5%
Per capita energy consumption	7	6.9%	38	37.3%	57	55.9%
Real estate sales	4	4%	57	57%	39	39%

Table 4. Ratings of the usefulness of indicators of sustainability at the regional level

	Very useful		Moderately useful		Not useful	
	N	%	N	%	N	%
Hotel occupancy rate	84	81.6%	16	15.5%	3	2.9%
Visits to parks, recreation areas, and historic sites	84	81.6%	19	18.4%	0	.0%
Number of non-resident visitors	79	76.7%	23	22.3%	1	1%
Tourism promotion budget	74	71.8%	27	26.2%	2	1.9%
Per capita tourist expenditures	73	70.2%	27	26%	4	3.8%
Lodging revenues	66	65.3%	31	30.7%	4	4%
Inquiries from promotions	62	60.2%	36	35%	5	4.9%
Presence of a sustainable tourism plan	57	56.4%	39	38.6%	5	5%
Resident attitudes toward tourism	56	54.9%	42	41.2%	4	3.9%
Annual number of new tourism businesses	50	49.5%	49	48.5%	2	2%
Number of non-resident fishing and hunting licenses	47	45.6%	51	49.5%	5	4.9%
Percent of labor force in tourism	46	46%	52	52%	2	2%
Number of tourism employees	44	44.4%	52	52.5%	3	3%
Highway traffic count	42	40.8%	55	53.4%	6	5.8%
Resident perceptions of quality of life	42	40.8%	53	51.5%	8	7.8%
Labor income from tourism	41	40.6%	54	53.5%	6	5.9%
Airline deplanements	35	35%	53	53%	12	12%
Number of State Parks	21	20.6%	51	50%	30	29.4%
Crime rate	21	20.8%	42	41.6%	38	37.6%
Water pollution from sewage	20	2%	44	44%	36	36%
Gasoline tax revenue	18	18.4%	53	54.1%	27	27.6%
State Park management budget	15	14.9%	62	61.4%	24	23.8%
Per capita water consumption	8	8%	38	38%	54	54%
Real estate sales	6	6%	57	57%	37	37%
Building permits	5	5%	50	49.5%	46	45.5%
Per capita energy consumption	2	2%	36	35.6%	63	62.4%

Table 5. Ratings of the usefulness of indicators of sustainability at the community level

	Very useful		Moderately useful		Not useful	
	N	%	N	%	N	%
Hotel occupancy rate	86	81.9%	16	15.2%	3	2.9%
Visits to parks, recreation areas, and historic sites	83	79.8%	17	16.3%	4	3.8%
Number of non-resident visitors	76	73.1%	23	22.1%	5	4.8%
Per capita tourist expenditures	76	73.1%	21	20.2%	7	6.7%
Resident attitudes toward tourism	66	64.1%	34	33%	3	2.9%
Tourism promotion budget	64	62.1%	31	30.1%	8	7.8%
Inquiries from promotions	62	60.2%	35	34%	6	5.8%
Lodging revenues	61	58.7%	33	31.7%	10	9.6%
Annual number of new tourism businesses	60	57.7%	31	29.8%	13	12.5%
Number of tourism employees	54	52.4%	43	41.7%	6	5.8%
Resident perceptions of quality of life	54	51.9%	40	38.5%	10	9.6%
Percent of labor force in tourism	53	52%	42	41.2%	7	6.9%
Highway traffic count	50	47.6%	40	38.1%	15	14.3%
Presence of a sustainable tourism plan	50	48.5%	40	38.8%	13	12.6%
Number of non-resident fishing and hunting licenses	47	45.2%	44	42.3%	13	12.5%
Labor income from tourism	46	44.2%	49	47.1%	9	8.7%
Water pollution from sewage	36	35%	36	35%	31	30.1%
Airline deplanements	31	30.4%	35	34.3%	36	35.3%
Crime rate	31	30.4%	32	31.4%	39	38.2%
Building permits	22	21.2%	40	38.5%	42	40.4%
Gasoline tax revenue	20	2%	49	49%	31	31%
Number of State Parks	18	18%	37	37%	45	45%
Per capita water consumption	16	15.7%	35	34.3%	51	5%
Real estate sales	16	15.5%	52	50.5%	35	34%
State Park management budget	13	12.6%	38	36.9%	52	50.5%
Per capita energy consumption	6	5.9%	34	33.3%	62	60.8%

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