

Sport and Recreation Influence upon Mountain Area and Sustainable Tourism Development

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Abstract: In contemporary tourism, sport and recreation are increasingly becoming the dominant motives for undertaking the journey, and as a result of modern living, active holidays are more frequent. Mountain areas have always been attractive to deal with the various sports activities. Winter sports were the initiators of the development of mountain resorts. Mountain resorts invest in construction of hotels, ski lifts, snowmaking equipment, for the sake of attracting a growing number of tourist clientele. On the other hand, sport and recreation also serve to promote summer mountain tourism. Tennis, golf, swimming, horseback riding are key tools to attract visitors in the summer months toward the resorts facilities. The main problems regarding the development of mountain tourism centers come in the form of the growing concern for the preservation of the environment, of the human and traffic congestion in the mountains and the intensive use of natural resources by tourists. This paper aims to highlight the positive and negative impacts of sport and recreation in the development of mountain tourism and to present possible solutions to reduce negative impacts. Methodology is based on document review of many bibliographic resources, which are related with skiing and mountain biking as examples of winter and summer sport activities on mountains.

Key words: *sport and recreation, mountain tourism, sustainable development, environmental protection*

1. Introduction

The new millennium is one that poses a number of new tourism challenges. Most of the population in the developed world lives in urban areas. Mountains, lakes, oceans, jungle, desert islands and other wild places represent escape locations that offer excitement, stimulation and potential adventure (Breedie and Hudson, 2003). As the face of tourism changes globally, travelers are looking for thematic experiences such as ecotourism, village tourism, sport tourism etc. In this paper, the authors focus on the mountains as locations for tourist traveling, sport and recreation, seen as the main tourist activities on vacations. Sport tourism is one of the fastest-growing segments of the tourism industry and a relatively new focus in destination planning. (Turco et al, 2003). The main factors leading to the emergence of sport activities in tourism, are:

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a) Increased sport and recreation needs, which arise as a result of the modern way of life;

b) Increased spare time and

c) Increased household income (Relac and Bartoluci, 1987).

Sport tourism can be defined in many different ways. It is a concept operationalized, according to the following key attributes (1) active and passive involvement in sport activity; (2) participation in casually and organized fashions; (3) experience for non-commercial or business/commercial reasons and (4) enticing travel away from home and work (Epitropoulos et al., 2003).

Hall (1992) postulated that there are two primary behaviors involved in sport tourism: travel away from home to observe sport or travel to participate in sport. But, visiting sports halls of fame, sports museums and famous sporting venues such as the Olympic Stadiums has become an increasingly popular tourist pursuit. So, there are three distinct types of behavior associated with sport tourism: (1) actively participating (Active Sport Tourism), (2) spectating (Event Sport Tourism), and (3) visiting and, perhaps, paying homage (Nostalgia Sport Tourism) (Gibson, 1998).

An appropriate definition of sport tourism might read as follows: "leisure-based travel that takes individuals temporarily outside of their home communities to participate in physical activities, to watch physical activities, or to venerate attractions associated with physical activities" (Gibson, 1998, 49).

In this paper, emphasis is placed on the Active Sport Tourism. De Knopp (1990) identified three types of active sport vacations: (1) the pure sport holiday, such as a trip to go skiing; (2) taking advantage of the sport facilities at a holiday destination, although sport is not the primary purpose of the trip; (3) the private sporting holiday, where tourists take part in non-organized sports activities such as volleyball on the sand or beach cricket. In general, the most popular physical activities for Europeans on vacation are walking, bicycling, and skiing (Gibson, 1998).

2. 2. Mountains as Attractive Sport Tourism Destinations

For millennia, mountains have been important for human livelihoods, in terms of agriculture and livestock raising as well as transport and trading of goods. Yet, in the current world economy, many mountains have become marginal areas where few investments are made, people are economically disadvantaged, and resources are being degraded through many types of overuse. Tourism has become a primary source of revenue for many mountain areas, providing a rare opportunity for mountain people to participate directly in the global economy. There are many opportunities for the development of tourism in mountain regions (Mountain Agenda, 1999).

Clean, cool air, the varied topography, and the scenic beauty of mountains and cultural landscapes are just some of the special features on which is based the mountain

tourism. Mountains have specific qualities that are conducive to health and wellness tourism and activities that focus on contemplation and meditation. There are also the inherent dangers that attract some daring tourists, and particular mountain arenas for specific sports and leisure activities (Schorner, 2011).

In many parts of the world, mountain tourism is driven by outdoor recreation activities such as downhill skiing, snowmobiling, backpacking etc. (Fredman, 2008).

The divisions within sports disciplines are continually evolving. New methods and conditions are adopted by the different participation groups, driven by search for new and original experiences and a distinctive identity. In the case of the mountain sports, this segmentation phenomenon concerns both the winter and the summer season (Bourdeau, Corneloup and Mao, 2004).

2.1. Winter Sport Activities on Mountains

Winter sport areas can now be found in mountains around the world. Their development has been a key driving force in mountain tourism, allowing the mountains to become playgrounds for urban areas - a market estimated at 65- 70 million people worldwide (Mountain Agenda, 1999). In resorts in traditional mountain tourism countries, most companies in the winter sport industry (hotels, cable cars, retail stores, etc.) are small and medium-sized (Mountain Agenda, 1999).

Table 1. The diversification of winter sports activities

Traditional winter sport activity	Contemporary winter sports activities
Skiing	Snowboarding
Cross-country skiing	Snowmobiling
Telemarking	Snowshoeing
Cat-skiing	Heli-skiing
Winter sports events	Parapente/hangliding
Ice-skating	Tubing
Horse-drawn sleigh	Dog sledging
Curling	Snow cycling
Tobogganing	Thrill-sleds/extreme sledding
	Ice-climbing
	Ice-drawing
	Ice sculpting
	Snow skating

Source: After Hudson, 2004

Winter sports embrace activities, ranging from ice-skating to ice climbing, but it is skiing that is the mainstay of the winter tourism industry. Table 1 lists traditional winter sports along with those that are gaining popularity in the 21st century (Hudson,

2004). Recent trends in mountain tourism activities around the world show few consistent patterns. Increases in downhill skiing appear to have leveled off in many places, while cross-country skiing and snowmobiling seem to be increasing (Fredman and Heberlein 2001).

2.2. Summer Sport Activities on Mountains

The popularity of operating chairlifts at alpine ski areas in the summer to accommodate activities such as hiking and mountain biking is growing. Most significant ski areas now have at least one chairlift operating in the summer (Needham, Rollins and Vaske, 2005). Summer leisure sports, through upgrading and diversification have become an attractive component of mountain tourism. In mountains throughout the world, mountaineering has been subdivided, re-invented and redefined. Climbing is now adventure climbing or sports climbing; hill walking in "exotic" places has been redefined as trekking; scrambling has emerged as a hybrid activity with its own definitive guidebooks; cycling has moved "off-road" as mountain biking; "canyoning" has emerged as an adventure activity, and bungee jumping is now well developed (Hudson, 2000).

Some of the most popular summer sport activities on mountains are trekking, backpacking, hiking, mountain biking, horseback riding, climbing, mountaineering, canyoning, bungee jumping, hang-gliding, paragliding, river rafting, whitewater kayaking and canoeing etc.

3. Methodology

The data collection method included a document review. The review focuses on the research conducted over the years on the influence of skiing and mountain biking on mountain environment. The authors review the pertinent literature by focusing on the various findings associated with these investigations and underlining the rules for sustainable development.

4. Sport and Recreation Influence upon Mountain Area as Seen Through Examples of Skiing and Mountain Biking

Tourism affects mountains in many ways. Economically, tourist resorts in mountains directly depend on their customers. In addition, there are direct and indirect benefits to many sectors and communities inside and outside the resort areas. However, a considerable share of tourism revenue leaks to areas outside the mountains. In addition, tourist activities have biophysical impacts. For example, paths and ski runs may modify sensitive alpine areas; tourists have well-known impacts along mountain trails; and wildlife may be disturbed. On the social and cultural side, tourists may

disrupt traditions, influence mountain communities by their numbers and lifestyles, and attract service providers from outside the mountains to become permanent residents in mountain resorts. These negative impacts have to be counterbalanced against positive influences, including economic benefits (Schorner, 2011).

Through skiing as winter- and mountain biking as summer sport activity here will be explained positive and negative influences on mountain landscape.

Ski resort-based tourism development brings many benefits to a region, including economic and income diversification, improvement of services and infrastructure, and the creation of "psychological stability" among residents. However, there are also several negative impacts, including environmental damage, landscape changes, social confrontation between those who support and reject tourism, and degradation of cultural and urban heritage. (Lasanta et al, 2007).

Briggs (2000) in his work highlights that downhill skiing requires dramatically changing the landscape of mountain wilderness areas, thus impacting the environment both on and around a ski area. An increased number of visitors means more cars and more use of snowmaking and grooming equipment, which generally run on diesel engines. Each of these pollution sources contributes to smog and acid rain, thereby affecting air quality. On the other hand, Briggs (2000) notes that the increased capacity for visitors of an area boosts the local economy and provides recreational opportunities for the general public. He also states that water quality and stream health are affected by abstractions for snowmaking. Also, runoff from real estate developments or seepage from wastewater can increase microbial, chemical, and thermal pollution in streams, lakes, and groundwater. Poor water quality and stream health can devastate insect and fish populations. Other forms of wildlife can also suffer from expansions of trail systems, real estate development, and year-round resort use, which can all lead to a loss of habitat. However, there is evidence that much species co-exist with ski areas and some species have even increased their numbers in areas with ski resorts. Deer and elk, for example, are not scared away by lifts and people, and the open slopes with nearby forests create a more diverse habitat in many areas.

Developmental sprawl, as condominiums, houses and strip developments increase traffic and housing inflation, leading to economic, social, and infrastructure problems. Beyond the confines of the resort, the increased number of visitors raises demands for housing, roads, water, schools, sewage treatment, and trash disposal. Environmentalists are concerned by the large amounts of cash that the large ski corporations have borrowed to invest in improvements and expansion. They worry that a few less snow years or a recession could leave these resorts in heavy debt, leading them to compromise the environment in pursuit of fulfilling the ultimate corporate duty (Briggs, 2000).

Within the context of a rapid growth in outdoor recreation over the last 20 years, mountain biking is a relatively new activity when compared, for example, to tramping (hill walking), rock climbing and kayaking. Mountain biking requires similar geographical characteristics to other outdoor activities and hence the pressures on public land have grown accordingly (Chavez *et al.*, 1993).

The sustainability of mountain bike riding in natural settings relies on incorporating the environmental sensitivity of the area under consideration and measures to reduce the impact of riders into the design of trails while meeting rider preferences.

Cessford (1995) conceded that mountain bikers could potentially damage trails while traveling downhill if they skid and employ poor braking techniques, especially in casual racing or training situations. These practices loosen the track surface, move material down the slope and create ruts, which channel water flow.

Environmental impacts on trails and surrounding areas are primarily soil and vegetation related. Soil compaction, erosion, trail widening and vegetation disturbance are commonly cited direct impacts, but they vary in severity with location, soil type, rainfall and use. The establishment of a track in a natural setting alters the environment and, therefore, its very existence can be a source of impacts, especially for soil disturbance, erosion and vegetation loss (Sun and Walsh, 1998). Once a trail is formed, any further use only adds to these effects. It is found that trail users cause approximately 35% of all erosion impacts on trails. The other two-thirds are attributable to a complex interaction of natural influences, such as rainfall and water runoff, terrain and soil texture and vegetation cover (Goefl and Alder, 2001).

Multiple-use trails are characterized by conflict between users, and because mountain bikes often share trails with walkers, horse riders, motorbikes and four wheels drive vehicles a range of conflicts and concerns are evident. The primary social concerns are safety, trail damage, lack of environmental awareness and the inappropriate use of technology in natural settings (Cessford, 1995).

5. Sustainable Development as Seen Through Examples of Skiing and Mountain Biking

Without planning, human activities would be at best haphazard, formless and disjointed (Mason and Leberman, 2000). The planning process, adopted in the recreation and tourism fields, tends to display the same characteristics as those found in planning more generally. It is often disjointed and reactive. It is complicated by the fact that the process may involve a variety of landowners, public bodies and private providers, as well as a different user groups (Williams, 1998, Mason and Leberman, 2000). This means that the process is complex and at times difficult to operationalize. In relation to the objectives of modern planning, Williams (1998) suggested that it seeks

optimal solutions to perceived problems and that it is designed to increase, and hopefully maximize, development benefits, which will produce predictable outcome.

Communication between ski resorts and environmentalists is a key of success. By working through their differences, the parties can often reach a consensus before a plan is formalized and submitted to public agencies for review. Ski resorts of the future will have to look at environmental problems as business issues and make environmental investments for the same reasons they make other investments (Hudson, 2004).

Ski Area Citizen's Coalition (SACC) from US defined eleven environmentally friendly criteria for ski resorts. The criteria include:

- Avoiding expansion of developed skiing acreage into undisturbed forest;
- Avoiding commercial or residential development on undisturbed lands;
- Avoiding real estate development in conjunction with terrain expansion;
- Avoiding terrain alteration in environmentally sensitive areas;
- Undertaking new snowmaking activities;
- Avoiding water degradation from resort activities;
- Environmental policy positions and public disclosure;
- Wildlife habitat and forest protection;
- Containing impacts within the ski area boundary;
- Recycling, water conservation, energy conservation and pollution reduction and
- Traffic and emissions reduction (Hansen, 2000).

Goeft and Alder (2001, 208) concluded "mountain bike riding in natural settings will only be sustainable if trails are located, established and managed in a manner that integrates the environmental sensitivity of the area and rider preferences. Environmental studies indicated that impacts such as soil compaction and erosion of the trail surface due to mountain biking on trails vary. Nevertheless, environmental changes are to be expected and they may not be problematic as long as they remain within the limits deemed acceptable for a trail. These conditions include maintaining a firm trail surface, avoiding trail widening and minimizing erosion. These conditions appear to be obtainable through good trail placement, design and management. In the case of existing trails, trail hardening where there is extreme environmental damage, rider education and trail closures are some of the options available to managers".

The International Mountain Biking Association (IMBA) promotes formal mountain bike rules, which are aimed at reducing both environmental damage and user conflict. These rules are as follows:

- Ride on open trails only;
- Leave no trace;
- Control your bicycle;
- Always yield the trail;
- Never spook animals and

- Plan ahead. (Mason and Leberman, 2000).

"The main environmental consideration is to place the trail where there are appropriate soils that can withstand the impacts created by mountain bikes and the avoidance of steep downhill sections, especially if the trail is shared with walkers. Where steep downhill cannot be avoided or are desired, erosion prevention measures (e.g. water bars) should be included at the planning stage. Consideration should be given to the inclusion of curves, which could reduce the steepness of a slope and effectively reduce its length. Care should be taken to ensure that the curves are designed in such a way that they do not add to the erosion potential through increased skidding. Clearly where possible, mountain-bike-specific trails should be established to avoid conflicts with other trail users. Where this is not possible multiple-use trails can be developed, however, sharing of trails with motorized vehicles should be avoided. Multiple-use trails should be clearly marked as such and be carefully designed to ensure that the needs of all trail users are considered. In the case of unresolved user conflicts, management options ranging from user education to prohibition and user separation may be necessary" (Goefit and Alder, 2001, 208).

6. Conclusions

Outdoor recreation refers to activities that people undertake out of doors in places where they can access nature or green areas. The places associated with outdoor recreation have always included forests, the coast, lakes and rivers, mountains and other spectacular scenery. Recreation activities range from the very passive, such as sitting relaxing or enjoying a view to the very active, such as skiing, mountain biking or horse riding.

Mountains are ideally places for doing such activities and tourism development on mountains is often based on sport and recreation.. It brings numerous benefits to mountain areas, but there are a several negative environmental impacts that must be reduced. This primarily refers to soil erosion and compaction, trail widening, changes in vegetation cover, air- and water pollution etc. A sustainable development plan to protect the natural environment is crucial and must be made for each tourist destination. Visitor education can also bring positive results in terms of sustainable development. Visitors must follow the rules, which are aimed at reducing environmental damage. Landowners, public bodies and private providers, as well as, different user groups must align their interests because otherwise unsustainable development will lead to disastrous consequences.

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