

Mountain biking in the Canadian rocky mountains: A situational analysis

Jan Mosedale

The Canadian Environmental Network, Canada

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aga@cen-rce.org

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Abstract

A high density of National Parks and other protected areas within a small area of the Canadian Rocky Mountains are close to major population centres. Protected areas are therefore an important component of the outdoor recreation system. Yet recreation, which is often incompatible with the mandate of the managing agency, can impose considerable stress on these ecosystems. This study combined the Visitor Activity Management Process with the Appropriateness Model in order to focus on policies regarding recreation and mountain biking in the Canadian Rocky Mountains and to offer a situational analysis, an examination of management strategies and specific recommendations.

Introduction

Protected areas are often regarded as playgrounds for outdoor recreation and thus may experience high use. Human use, including mountain biking, can impose considerable stress on these ecosystems, which is intensified as the boundaries of human use are pushed aside by technological advances. The Canadian Rocky Mountains offer a spectacular setting and the necessary topographic features to be conducive to mountain biking. "Mountain environments are ... part of a widespread outdoor recreation system" (Kariel & Draper, 1992: 97) and mountain protected areas are important components of this system.

Humans are the dominant species in every National Park. As a result of our social evolution we have expanded into one niche after another. We have created new niches where none existed. Further, we are a highly generalized animal capable of an immense range of behavior [and recreational activities].... In short, to understand the natural systems of the park you must understand the park's most dominant species. (Campbell, 1979: 53)

Various agencies, private owners and businesses manage regions within the Canadian Rocky Mountains and their policies, mandates and management objectives are an important tool in controlling the activity. The mountain range also falls under two separate sets of legislation and park systems, as it crosses the provincial border between Alberta and British Columbia. Land managers had very little scientific information on the impacts of mountain biking (Weir, 2000) or effective management strategies (Chavez et al., 1993) when the activity started to become popular in the late 1970s. Many believed that mountain biking had considerable environmental impacts and caused a great deal of conflict with other user groups (Chavez, 1997; Jacoby, 1990) and, as a result, the activity was banned from many public lands in the United States (Baker, 1990; Chavez et al., 1993). Since mountain biking did not reach the same popularity as it did in certain areas of the United States during the 1980s, land managers in the Canadian Rocky Mountains did not have to resort to such drastic measures.

The popularity of mountain biking is steadily growing and is a force not to be underestimated or ignored. The mountain biking community will likely increase its efforts of establishing new illegal trails, should legal opportunities decrease much further or even disappear. Recent developments have shown that mountain biking is increasingly perceived as being a problem in some areas. It is therefore essential to investigate current opportunities in various jurisdictions as a prerequisite for any successful local management strategies. Since differences in management strategies can influence neighbouring areas, it is necessary to examine the mountain biking activity on a regional perspective.

Research Method

This research was predominantly based on the VAMP framework and the appropriateness model (Nilsen, 1994). (See Figure 1) Those two frameworks were chosen due to the absence of input from the natural sciences (time constraints did not permit a focus on the aspects of environmental impacts associated with mountain biking) and the non-reliance on indicators. Although indicators might be useful on a local scale and within one jurisdiction, they were too complex to determine at the proposed regional scale. Both frameworks depend strongly on the agencies' policies and mandates, which are one of the cornerstones of this research.

Figure 1. Framework used in this study



The study area consisted of the southern section of the Canadian Rocky Mountains, reaching from Fernie, British Columbia, to Edson, Alberta. The region was chosen due to a high density of National Parks and other protected areas within a small area that is close to major population centres. The qualitative data were collected by interviews with land managers, protected area staff and mountain bike riders. A total of 36 respondents were interviewed, with approximately 750 minutes of interviews recorded and subsequently summarised.

The respondents representing the protecting and land-use agencies and a few local mountain bike riders in Banff/Lake Louise and Jasper National Parks were chosen in cooperation with the Parks Canada Land Use Planner for Jasper National Park and its Backcountry Recreation Specialist for Banff, Jasper, Yoho, Kootenay, Waterton Lakes, Mount Revelstoke and Glacier National Parks. The remaining mountain bike riders were located through local bike stores. All respondents were presented with a condensed version of the project proposal to ensure their awareness of the research purpose and were encouraged to ask questions if details were unclear.

Situational Analysis

The study regions have demonstrated a wide diversity of issues and problems ranging across the Canadian Rocky Mountains. An examination of these various issues is necessary in order to assess the effectiveness of the employed management strategies.

Invermere, Radium Hot Springs and Golden

The western areas of the Canadian Rockies are experiencing a controlled growth in mountain biking opportunities, mainly due to efforts by the local mountain bike communities in cooperation with the BC Forest Service. The respective mountain bike clubs are the driving force behind the expansion of the trail systems and are eager to promote the area to visitors. The Golden Mountain Bike Club also organises, with the support of the local community,

the annual Mount 7 Psychosis downhill race, which is one of the longest downhill race in Canada.

Fernie

The regionally well-known trail system in and around Fernie has, in most cases, been constructed without the knowledge of the managing agencies (the BC Forest Service, BC Parks, and Crestbrook Forest Industries Ltd) and has not been regulated. This has led to the construction of trails that are highly prone to erosion pressures, following the trend of downhill mountain biking and free riding. Although the oldest single-track trails are not much older than seven or eight years, their steepness encourages degradation and makes erosion control difficult. Crestbrook Forest Industries Ltd is now working with the Fernie Mountain Bike Club to direct trail cutting to appropriate areas, advise the trail builders on potential harvesting areas and to re-establish trails after harvesting operations.

Kootenay and Yoho National Parks

All designated mountain bike trails are old fire roads that are not maintained and see relatively little mountain biking use. Due to the small population living in Yoho National Park and the distance of the Kootenay National Park to large population centres, there seems to be no problem with Illegal Mountain biking in these two national parks.

Banff National Park

With the exception of Banff and Lake Louise townsites, all trails in Banff National Park are closed to mountain biking unless they have been designated as open. Mountain biking opportunities are therefore limited in the national park.

The land-access issues for mountain bike riders in Banff National Park have centred on a few key trails that has either already been closed are in the process of being closed or where mountain bike riders face restriction of some sort or another.

Bryant Creek Trail:

Parks Canada decided to close this trail to mountain bikes out of concern for the impact of general human use on the local grizzly bear population of the Middle spray Valley. Although the Bryant Creek Trail was very popular with mountain bike riders, Parks Canada did not consult local riders before the closure. As a result of this marginalisation, the local mountain bike riders formed the Bow Valley Mountain Bike Alliance (BVMBA), which is now working with Parks Canada on a number of advocacy issues.

Moraine Lake Highline Trail:

A restricted activity order for the Moraine Lake Highline Trail was put in place in July 1999 due to a habituated grizzly bear that has shown no fear of human encounters and has caused considerable distress to users around Moraine Lake. The restricted activity order limited hiker access to groups of six and equestrians to groups of two, but prohibited mountain bike use whenever the order was in place. A workshop by Parks Canada that was held in conjunction with the BVMBAs recommended the restriction of mountain bike riders travelling in a group of less than three with no less than 60m distance between the individual riders. The workshop also suggested a drop-out trail to circumvent the three kilometres closest to Moraine Lake where the incidents had happened and recommended the commission of a study to review literature and data on grizzly bear and mountain bike encounters. This study stated that "there is no ecological rationale that we are aware of for managing cyclists to lessen habitat disturbance (i.e., increase habitat effectiveness) without also managing other user groups (e.g. hikers) and developments" (Herrero & Herrero, 2000: p. 17); suggesting that there is no scientific basis for managing the mountain biking activity in isolation of other recreational use.

These two trails demonstrate the past and present approaches of Parks Canada when trying to manage human use problems in Banff National Park.

Jasper National Park

Although Banff and Jasper National Parks are experiencing similar problems (yet in varying levels of intensity), they have adopted different management approaches. Contrary to Banff National Park, Parks Canada suggests a number of trails for mountain biking in Jasper National Park, but any trail established by Parks Canada is open to mountain bike riders unless it has been declared closed. Mountain bike riders in Jasper National Park are mostly cross-country riders, as the topography does not lend itself to free-riding or down-hilling (i.e., there is no easily accessible steep terrain). The local biking community is actively trying to discourage these types of mountain biking in the national park by organising trail-building trips to nearby Valemount, BC, for riders interested in free-riding or down-hilling. Parks Canada and the local mountain biking community are also working together towards educating riders in Jasper National Park on the issues of resource damage, user conflicts, wildlife displacement, and informal trails. Efforts are under way to organise a mountain bike advocacy group in order to communicate more effectively with Parks Canada.

Management Strategies

The advents of new recreation activities are often a challenge for land managers who have to balance conflicting activities and other mandates of

their agencies, such as the preservation of ecological integrity. Although mountain biking emerged as a fringe sport in the 1970s, it has outlived the fad stage and reached the attention of the general public in the early 1980s. However, even after approximately 20 years of mountain bike use in the Canadian Rocky Mountains, most agencies have not devised specific mountain bike policies or management strategies. Many agencies, in the study region, are merely reacting to problems, rather than using proactive management measures. Although the majority of this study's respondents from land-use agencies stated that no specific management actions were taken to control mountain biking in their jurisdiction, many management strategies indirectly affect the mountain biking community.

Banff National Park has demonstrated the most severe problems associated with mountain biking within the study area and has devised certain management strategies and actions to control the negative impacts of mountain biking on a variety of issues (Table 1 presents a summary of these strategies and actions). Parks Canada has changed its management strategy since the Bryant Creek Trail closure, which featured very little-to-no input from the mountain biking community, to include more bridge-building tools in conjunction with rigorous direct actions. Parks Canada also indirectly controls the type of mountain biking that legally occurs in the national park, as only trails with cross-country characteristics and small potential for erosion have been designated for mountain bike use. The problem of informal trails, especially around the Banff and Lake Louise town-sites, can only be managed successfully by bridge-building tools and by further incorporating the local mountain bike community in the decision-making process.

Table 1. Summary of strategies and actions taken in Banff National Park

Strategy	Management Action	Wildlife Displacement	Public Safety	User Conflict	Resource Damage	Informal Trails
Direct	Closures and other restrictions	✓	✓	✓	✓	✓
	Law enforcement	✓	✓	no	✓	✓
	User group separation	n.s.	✓	✓	n.s.	n.s.
	Facilitate trail construction	n.s.	n.s.	no	no	n.s.
	Trail maintenance	n.s.	n.s.	n.s.	✓	n.s.
Indirect	Education & information	✓	✓	✓	✓	✓
	Trail use designation	✓	✓	✓	✓	✓
Bridge-building	Communication	✓	✓	✓	✓	✓
	Workshops	no	no	no	no	no
	Volunteer patrols	n.s.	✓	✓	✓	n.s.
	Trail maintenance by user group	n.s.	n.s.	n.s.	no	n.s.

n.s. = not applicable

Conclusions

The differences in the level of trail system development seem to depend on a variety of factors, such as the proximity to large urban centres, the mandate of the land-use agency, the relationship between the mountain biking community and land managers, and the level of visitor use. The issues and problems appear to vary accordingly and are, therefore, presumably influenced by the same factors. The majority of problems were reported in protected areas, reflecting the mandates and main objectives towards conservation rather than the accommodation of recreational opportunities.

Increased human use poses severe problems in many fragile ecosystems within protected areas of the Canadian Rocky Mountains. On the other hand, a high density of protected areas within a small area that is close to major population centres (e.g., the Banff/Canmore/Kananaskis region) make protected areas ideal playgrounds for recreationists. As mountain biking opportunities are becoming ever more restricted, mountain bikers are becoming frustrated with the local situation and are constructing illegal trails or using game trails. It is therefore necessary to find alternative ways of reducing total user numbers than drastic measures targeting and marginalizing only the mountain biking community. Land managers also need to provide recreational opportunities in sacrifice areas - either within or outside of protected areas - in order to alleviate the stress imposed on fragile ecosystems. Outdoor recreation

activities are dynamic in nature as new trends and new technologies emerge that can change the characteristics of the activity, user preference studies should therefore be combined with data on the landscape and important wildlife habitat in order to separate human use areas from high-quality wildlife habitat. Management decisions taken in one jurisdiction are likely to affect neighbouring areas, since use will shift to alternative mountain biking opportunities. Regional collaboration is hence needed in order to successfully manage mountain biking in the Canadian Rocky Mountains.

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Notes to readers

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