

THE SPECIFICS OF THE MOUNTAIN BIKE – DOWNHILL CASE STUDY DH FLOW RIDE COMPETITION BISTRITA

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ABSTRACT. Specialized articles and publications reveal the impact that mountain biking registers worldwide today in the field of outdoor sports and mobility. The aforementioned field is under rapid development, a fact revealed by the increasing number of practitioners, the competitions organized throughout all continents, addressing a wide range of ages and proficiency categories, from amateurs to high-performance professional athletes. Mountain biking is gaining popularity in Romania as well, where several competitions (Enduro, Downhill, Cross) are organized, engaging numerous competitors. Most of the locations where downhill skiing is practiced (and mechanical means of ascent are present, especially chairlifts) have become areas adapted for practicing mountain biking in the off-season.

Keywords: *mountain bike, downhill biking, natural areas, implications*

Introduction

Bistrita counts among the aforementioned areas. The chairlift of the public slope (the controversial *Cocoș* ski slope) has been adapted for the transport of bicycles to the peak. The array of slopes display various degrees of difficulty, thus facilitating the practice of mountain biking in its many forms, as well as the organization of competitions. The growth of the Mountain biking phenomenon in Romania is supported in practice by an increase in adapted spaces in natural areas for this type of recreational activities.

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The study of the currently specialized literature, in addition to the study of layout models of different mountain biking locations reveals important aspects applicable in Romania. These aspects will outline criteria for evaluating destinations and quantifying the impact of mountain biking.

Objectives of the study

- analysis of specialized literature (up-to-date);
- identification of the main specific aspects of mountain biking as a recreational and sporting activity, considering the angles of methods of practice, technique and specific materials;
 - specification of the main characteristics of the specific effort
 - knowledge of the current methods of evaluation and management of sports events dedicated to mountain biking
 - development of evaluation methods of the negative effects (erosion, pollution) that appear in the areas intended for cycling through the development of routes (ramps, turns, suspension bridges)
 - the objective survey of the level of mountain biking in Bistrița.

Mountain Cycling (general considerations)

Mountain biking represents a rapidly developing field within the outdoors recreational sports sector, which has recently registered a surge throughout the world. Current studies reveal that the mountain bike phenomenon contributes a number of social and economic benefits to regional areas and the wider community by stimulating tourism and recreational spending. It is stated that mountain biking contributes \$133 billion to the US economy, creates nearly 1.1 million job opportunities and supports sustainable growth in rural communities (Newsome, Davies, 2009) It is estimated that the MTB phenomenon will continue to grow in popularity, due to technological innovation (Electric bike), which facilitates easier access to natural areas (O'Donnell & Carroll, 2003, White et al., 2006).

The concept of mountain biking involves many different forms of practice in terms of motivation, skills, and equipment, thus the main categories are; *Cross Country, Touring, Downhill, Free Riding, Dirt Jumping* (Goft & Alder, 2001). The routes vary from forest roads, mountain paths, routes with complex layouts of the terrain configuration (ramps, turns, suspension bridges, etc.), to rugged extreme routes. A. Cross Country: includes a wide range of participants, from inexperienced to passionate riders, using groomed trails, such as disused railway tracks, access roads and park management (Newsome, 2009). Standard mountain bikes, (with

little to no suspension), limit access, reducing it to less technical options. There are also the competitive versions of Cross Country over different distances that include flat sections, uphill and downhill, obstacles (logs, rocks/jumps).

B. Touring: cyclists concerned with long routes, (sometimes involving camping). Because they have to carry camping equipment, wide, low-gradient trails through natural areas are used.

C. Downhill: involves a high technical level and specialized equipment (highly sophisticated full-suspension bikes adapted for downhill riding on difficult trails).

Downhill bikes are heavy and therefore shuttle services are often provided. The route is characterized by turns, steep inclines, jumps, short sections of flat terrain (Newsome, Davies, 2009).

D. Free Riding: riders looking for technical challenges, (rocks, logs and overhangs, associated with steep downhill segments (Newsome, Davies, 2009).

F. Dirt Jumping: with specific jumps and jumps, therefore an extremely technical variant (Newsome, Davies, 2009).

These activities can have a significant impact on the environment if not properly designed and constructed. All these emerging categories are relatively new, yet are rapidly establishing themselves at the world sports level, becoming Olympic Sports events in record time.

MTB field involves a specific issue that refers to:

1. the increased risk of injury caused by specific developments involving high speed of travel, reduced visibility (Horn et al., 1994, Kerr, 2003), technical trails or design and construction flaws of the trails. There are many examples of lawsuits in the U.S. blaming the unsatisfactory management of the natural area for cycling accidents (Newsome, Davies, 2009).

2. the impact on the natural environment caused by the incursions of the increasing number of participants into the natural environment, the specific arrangements that modify the natural design of the relief, thus leading to the general erosion of the paths, the reduction of water quality, the disturbance of wildlife and changes in the vegetation.

Case Study- DH Flow Ride Bistrița

In spite of its novelty of the field, Mountain biking is spreading globally and rapidly establishing itself as an Olympic sport. The first world championships recognized by the UCI took place in 1990, and subsequently, the cross-country discipline was nominated as an Olympic sport in 1996, in Atlanta.

In Romania, the first unofficial competition took place near Sibiu in 1995, followed by the first National Championship held in Poiana Brașov in 1997. In 2004, Romania had its first and only participation in this sport discipline at the Olympic Games, through the athlete Tudor Oprea).

The city of Bistrita is a city of withstanding mountain biking tradition (in the DH area, 30 athletes enrolled in various clubs have claimed, over time, important medals and places on the podium in national and international competitions). More than 1000 amateur practitioners of this sport are registered in cycling clubs or associations: *Bistritz Racing Club, Bistrita DH, Tura cu copaci* (community of mountain bikers).

Nowadays, the municipality of Bistrița provides three locations for the practice of mountain biking:

1. The Schullerwald Forest-School, a landscaping project started in the summer of 2013, includes trails dedicated to MTB (a circuit of 1.7 km. with different degrees of difficulty), trails additionally accessible to mountain runners. This project has been of interest to the practitioners of outdoor physical activities, which will shortly benefit from the modernization of the area, sports fields, play areas dedicated to children, recreational points, climbing panels, etc.

The location is ideal for organizing running competitions, tourist orientation, mountain biking, competitions which can accommodate many participants.

2. The Codrișor Bike Park fosters numerous routes equipped with ramps, turns and other MTB-specific facilities. During its 15-years lifespan, the area has developed significantly, the routes have diversified and become technically complex, bridges and suspended route segments have been implemented. The location amasses over 12 km of route, with the longest trail of 2.2 km and 230m altitude difference.

The first national DH cycling competition hosted by Bistrița FlowRide Cup 2017 took place here, gathering 106 cyclists from Romania (contest categories *Junior, Elite Masters, Hobby*).

3. The *Cocoș* Bike Park, located near Bistrița, benefits from the gondola lift of the ski slope in the winter season (the design of the bicycle park increases the functionality of the cable installation).

The project in question aims to enhance the *Wonderland* investment area, which includes the *Cocoș* ski slope and the future *Alpine Coast*, with the final goal of increasing the activity level of the complex throughout the year. Up to date, 4 routes with progressive degrees of difficulty have been created.

The project increases the appeal of the area and capitalizes on the pre-existing investments, including the adventure park, the three bicycle routes used by amateur cyclists and the cable transport facility, equipped with 37 support structures for the transport of bicycles.

The trails are located in the vicinity of the ski slope, on an area of approximately 75 ha, starting from the upper plateau (the top of the chairlift), and contain tracks of different lengths (max. 3 km) and difficulty degrees:

- Downhill (Family line, Race line, Flow line, Jump line);
- Cross country (family and race lines, enduro, marathon)
- Pumptrack, dirt line (at the base of the slope)

All four routes are practicable:

- Downhill route - advanced degree of difficulty; level difference 250 m; length 1.7 km.
- The Flow trail - medium level of difficulty, level difference 250 m; length 2.6 km.
- Family trail - easy level of difficulty, level difference 250 m; length 4 km.
- A-LINE trail – medium-easy degree of difficulty, level difference 250 m, length 2.5 km.

All routes take advantage of the topography of the area, having minimally affected the local forest, and display specially designed features such as ramps, trampolines, slope breaks and raised mantels.

Conclusion and suggestions

In spite of the controversy around the location and functionality of the *Cocoș* slope in the winter season, the facility is increasingly becoming an area of interest for mountain bikers (enduro and downhill).

This is mainly due to the *gondola* cable climbing facility that allows the transportation of bicycles to the upper area located at an altitude of approximately 700 m. This fact allowed the setting up of a bicycle park of many routes with different degrees of difficulty (2 downhill routes: *Family* and *Race*, two cross-country routes, *Jump*, *Marathon*, *Natural Pump* track and *Dirt line*).

The park dedicated to MTB totals almost 15 km of route arranged with ramps and trampolines, with an average difference in level of 250 m. This allowed the municipality of Bistrița to host numerous competitions, the noteworthy being the national stages of downhill mountain biking in the 2021-2022 editions (*Cupa Flow Ride*, Bistrița).

The case study refers to the comparative analysis of the last editions, an analysis that will highlight the evolution of the field revealed by the large number of participants, the performances achieved and the superior technical level. In conclusion, the current *Cocoș* Ski Slope near Bistrița can become an important regional (even national) destination for practicing mountain biking.

REFERENCES

- Arnberger, A. (2006). Recreation use of urban forests: an inter-area comparison. *Urban For. Urban Green, Urban Forestry & Urban Greening* Volume 4, Issues 3–4, 3 April 2006, Retrieved from: <https://doi.org/10.1016/j.ufug.2006.01.004>.
- Newsome D., Davies C., (2009). *A case study in estimating the area of informal trail development and associated impacts caused by mountain bike activity in John Forrest National Park, Western Australia*, Published online: 30 Oct 2009. Retrieved from: <https://www.tandfonline.com/doi/abs/10.1080/14724040802538308>.
- Southwick R., Bergstrom J., (2006). *The Economic Contribution of Active Outdoor Recreation – Technical Report on Methods and Findings*. Retrieved from: <https://outdoorindustry.org/wp-content/uploads/2017/03/2006-ResearchRecreationEconomyStateby-State.pdf>.
- Goefl, U., Alder, J., (2001). Sustainable Mountain Biking: A Case Study from the Southwest of Western Australia. *Journal of Sustainable Tourism*, 9 (3):193-211. Retrieved from: https://www.researchgate.net/publication/237606192_Sustainable_Mountain_Biking_A_Case_Study_from_the_Southwest_of_Western_Australia.
- Hardiman, N., Burgin, Sh., (2013). *Mountain biking: downhill for the environment or chance to up a gear?* Published online: 20 Dec 2013, Retrieved from: https://www.academia.edu/20983516/Mountain_biking_downhill_for_the_environment_or_chance_to_up_a_gear.
- Johannes, St., Gey, H., (2022). Self-assessment of riding skills and perception of trail difficulty in mountain biking - An investigation within the German-speaking mountain biking community. *Journal of Outdoor Recreation and Tourism*, September 39. Retrieved from: https://www.researchgate.net/publication/11241190_Estimating_the_benefits_and_costs_to_mountain_bikers_of_changes_in_trail_characteristics_access_fees_and_site_closures_Choice_experiments_and_benefits_transfer.
- SkårAlf, M., Vistad, I., (2008). Motivation for mountain biking in Norway: Change and stability in late-modern outdoor recreation. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, March 2008, 62 (1): 36 - 45. Retrieved from: https://www.researchgate.net/publication/233256901_Motivation_for_mountain_biking_in_Norway_Change_and_stability_in_late-modern_outdoor_recreation.
- Povesti cu piste of bicycle (n.d.), from: <https://www.ziardebistrita.ro/povesti-cu-piste-of-bicycle>.
- Web site: <http://cupa.marosbike.ro/ro/info-concurenti/mountainbike-cross-country>.