

HOW WINTER TOURISM TRANSFORMED AGRARIAN LIVELIHOODS IN AN ALPINE VILLAGE. THE CASE OF DAMÜLS IN VORARLBERG/AUSTRIA

KAKO JE ZIMSKI TURIZAM PREOBRAZIO POLJOPRIVREDNU EGZISTENCIJU ALPSKOG SELA, NA PRIMJERU MJESTA DAMÜLS U POKRAJINI VORARLBERG (AUSTRIJA)

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Summary

Winter after winter, hundreds of thousands of skiers visit Alpine communities to experience bodily-mediated landscape sensations. Studying Damüls, a well-known ski resort in Austria's westernmost province Vorarlberg, we can show that both massive economic growth and massive interventions into Alpine landscapes accompanied winter tourism development. We narrate the environmental history of Damüls over 200 years by analysing strategies of commodification of »nature« and property rights, shedding light on the potentials and pitfalls of sustainable development of remote Alpine communities when they draw their income from winter tourism. The paper investigates how inhabitants dealt with changing environmental and economic conditions in a pre-industrial era. Settlers experienced resource limitations typical for an agrarian society. When the valleys were industrialized, Damüls nearly vanished as a permanent settlement. Then, tourists entered the stage, turning the wheel of local development into a different direction in several steps. Travel writers and photographers had integrated Damüls into the mental topography of urban leisure seekers in the 19th century. A romantic tourist gaze of Damüls developed. From the 1930s onwards, federal authorities discovered the economic power of tourism to improve national trade balances and fostered the tourism transformation. While the impact of tourism was modest in the interwar years due to limited capital and energy availability, these limitations were lifted when the '1950s syndrome' arrived. This third step was characterized by a massive building boom, influencing even inherited property rights. Ski lifts, hotels, roads and later snow systems and ski slope-buildings mushroomed, providing comfortable access to snow-secure Alpine landscapes. The maintenance of this infrastructure requires energy and capital investments, leading to material and energy flows that depend on the availability of cheap energy in large amounts. Agrarian Damüls produced a very modest surplus, depending on available labour input. Touristic Damüls gobbles up energy to provide for tourists leading to a much greater economic gain, but with a considerable impact on natural systems. A sustainable future of Alpine settlements requires new forms of dealing with Alpine nature, forms that are less dependent on the industrialized, globalized system of mobility of people, energy and matter that leads to greenhouse gas emissions, pollution and habitat destruction.

Key words: Damüls / Austria, Environmental History, Sustainability, Long-Term-Socio-Ecological-Research, Winter Sports, Alpine History

Ključne riječi: Damüls / Austrija, povijest okoliša, dugoročna društveno-ekološka istraživanja, povijest zimskih sportova, alpska povijest

INTRODUCTION

John K. Walton has convincingly labelled tourism as »an outstandingly significant current phenomenon, the world's largest and most dynamic industry, a leading sector both in continuing globalisation and the generation of cultural resistance to its implications, with the capacity to create enormous environmental footprints and to transform cultures in ways that are hard to predict (...).«¹ Tourism moves global flows of capital, people, and knowledge and thus fundamentally transforms materiality, social relations, communities and life-worlds. Tourism can stimulate exceptional local economic growth. This in turn has often a pronounced impact on the environment, especially since tourists tend to visit exotic, rural, remote places with large ecological diversity and picturesque cultural and natural landscapes, potentially endangering the landscapes they come to see and enjoy by doing so.

From an environmental historian's point of view, the increased commodification of natural and social resources is the essence, the very nature of economic growth.² As Donald Worster argues, commodification goes hand in hand with the social transformation of »nature« into »land« which is afterwards »rationally and systemically reshaped in order to intensify [...] the accumulation of personal wealth.«³ Commodified agroecosystems show »a movement towards the radical simplification of the natural ecological order [...].«⁴ The same is true for the commodification of social resources.⁵ Industrialization and economic growth progressively transform socio-natural limitations of places.⁶ In this paper, we study the processes of delimitation caused by tourism in the mountain village of Damüls in Austria's westernmost province Vorarlberg over 200 years. Damüls is located in a valley and its borders are either mountain peaks, passes and high plateaus or the steep ravines of alpine creeks. The community has been permanently inhabited for over 700 years despite the harsh environmental conditions. Figure 1 depicts the study area.

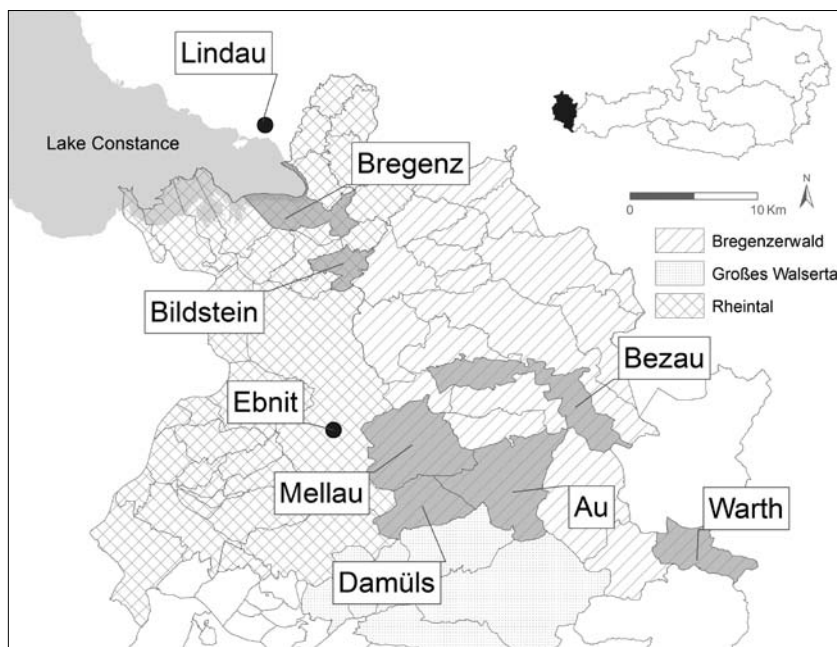


Figure 1: Map of the study region Damüls and its surroundings. Original work by Tamara Fetzl.

- ¹ Walton, John K. 2006. *Transport, travel, tourism and mobility: a cultural turn?* In: *The Journal of Transport History* 27/2, 129-134.
- ² Worster, Donald. 1993. *The Wealth of Nature. Environmental History and the Ecological Imagination*. Oxford, 203-219.
- ³ Worster, Donald. 1990. *Transformation of the Earth. Toward an Agroecological Perspective in History*. In: *The Journal of American History* 76/4, 1101.
- ⁴ Ibid.
- ⁵ Harvey, David. 2003. *The New Imperialism*. Oxford, 141-156.
- ⁶ Prudham, Scott. 2003. *Taming Trees: Capital, Science, and Nature in Pacific Slope Tree Improvement*. In: *Annals of the Association of American Geographers* 93/3, 640.

The village area of 20,9 km² covers altitudes from 1150 to 2095 meters and is accessible from »Bregenzerwald« and »Großes Walsertal« by road. The area is characterized by a complex geology of marl, chalk, flysch- and sandstone with steep north-facing ravines and undulating south-facing slopes.⁷ Damüls receives plentiful precipitation. Winter lasts up to six months and snow cover reaches up to three meters. This is likely one reason for the transformation of Damüls from an alpine farming community into the third largest winter sport destination of Vorarlberg over the 20th century.

We analyze the village's transformation between 1810 and 2010, using a mix of qualitative and quantitative methods and various sources typical for environmental history.⁸ We follow the transformation of a peripheral Alpine village into a tourism hub from the 1920s onwards, looking at the political and economic ramifications of interventions into Alpine nature as well as at changes in the perception of this nature. Long-term research in a micro region can reveal how humans were confronted with external forces threatening the sustainability of their livelihood. Inhabitants mediated external pressures by transforming their social structures and infrastructures. While the scope of their actions was limited by scarcity of energy and capital until the 1940s, the post-war boom delimited their potential to cope with change.⁹ Any process of commodification in mountainous regions »inevitably results in changes [...] of the identity of mountain communities [...] that have promoted the current forms of territorial and cultural appropriation.«¹⁰ The visible transformation of landscape aesthetics and tangible remodeling of ecosystem compositions resulting from processes of touristic commodification were accompanied by a shift in land use and property patterns in Damüls. Land was formerly predominantly utilized collectively as a common-pool resource, regulated by complex social institutions.¹¹ The touristic commodification of landscapes in Damüls led to a revision of this social pattern after WWII. Novel capital and energy availability enabled livelihoods that broke with the older subsistence pattern of socio-economic reproduction. We do not wish to suggest that all subsistence patterns are sustainable. But in this case, the difference between a low input-low output subsistence-oriented agricultural livelihood and the material and energy flows of winter tourism are clearly visible, the latter being a much greater challenge to sustainability.¹² A winter tourism-based livelihood entails heavy use of fossil energy and far-ranging interventions into fragile alpine ecosystems, therefore it poses a structural challenge to local and regional sustainable development. The following analysis will shed light on this development.

AGRARIAN LIVELIHOODS IN THE ALPINE VILLAGE OF DAMÜLS IN THE 19TH CENTURY

When the 'Walser' settlers from Switzerland reached Damüls during the 13th century, they cleared the high Alpine forest and used the resulting grassland for dairy farming and the cultivation of rye. To complement the local resource base, they drew income from providing transportation services by mule tracking and carrying loads over Alpine paths.¹³

⁷ Staudinger, Markus. 2009. *Biotop. Aktualisierung des Biotopinventars Vorarlberg. Gemeinde Damüls*. Vorarlberger Landesregierung, 9.

⁸ In particular text and image analysis, descriptive statistics, as well as GIS to analyze historical records, demographic censuses, tourism advertising brochures, travel literature, maps and aerial images. The article in part summarizes results from a study published in 2012 in the book »Wie das 1950er Syndrom in die Täler kam. Umwelthistorische Überlegungen zur Konstruktion von Wintersportlandschaften«.

⁹ Pfister, Christian. 2010. *The "1950s Syndrome" and the Transition from a Slow-Going to a Rapid Loss of Global Sustainability*. In: Uekoetter, Frank (ed.). 2010. *The Turning Points of Environmental History*. Pittsburgh, 90-119.

¹⁰ Vaccaro, Ismael and Beltran, Oriol. 2009. *The mountainous space as a commodity: The Pyrenees at the age of globalization*. In: *Journal of Alpine Research/Revue de géographie alpine* 97/3, 2.

¹¹ McC. Netting, Robert. 1981. *Balancing on an Alp. Ecological change and continuity in a Swiss mountain community*. Cambridge, 10-41.

¹² Krausmann, Fridolin. 2004. *Milk, manure, and muscle power. Livestock and the transformation of preindustrial agriculture in Central Europe*. *Human Ecology* 32/6, 735-772.

¹³ Feuerstein, Arnold. 1929. *Damüls - die höchste ständige Siedlung im Bregenzerwald*. Geographischer Jahresbericht aus Österreich XIV/XV, 16.

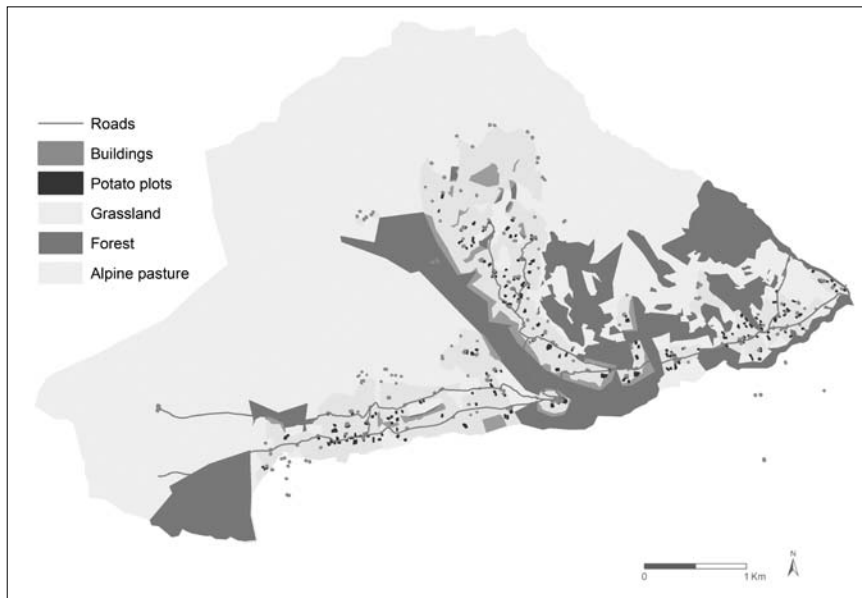


Figure 2: Land Cover in Damüls in 1857. Map based on: Vorarlberger Landesarchiv, Österr. Grundkataster, Bauparzellen Protokoll 1857, 91006 KG Damüls, Hs 1, Map by Tamara Fetzl.

In 1810, when the province Vorarlberg was under the authority of Bavaria, its topography was mapped for the first time. These maps reveal that the village was characterized by grassland and meadows. Almost 75 percent of the area consisted of grassland, of which around 50 percent was characterized as ‘less productive common pasture’. Grassland in Damüls was mainly used as collective mountain pasture. Each farmer possessed inheritable grazing rights, regulated by complex legal arrangements. Forests were also treated as common property in Damüls, each inhabitant held rights to lumber.¹⁴ Trees grew mainly in shadowy valleys and ravines. These parts of the village were hardly fertile enough for other forms of land use.¹⁵ Notably, the Bavarian land register does not give any hint of cropland. In 1886, historian Josef Grabher reported that the inhabitants of Damüls cultivated barley, which grew only feebly.¹⁶ According to Grabher, cropland and barley cultivation ceased, when local weather and climate changed in Damüls due to deforestation.¹⁷

Grabher did not take into consideration that the first half of the 19th century was very cold all over Europe. In 1810, a series of volcanic eruptions had ejected ash into the atmosphere, which led to widespread cooling. The event was enforced by declining sun activity, the so-called Dalton Minimum. The resulting global climate change had a severe impact on Damüls. All seasons became colder and drier. Temperatures plunged to a minimum in 1816, followed by increased precipitation in summer and autumn. People all over Europe experienced years without summers and agriculture fell into a deep crisis. Rain spoiled the hay harvest, the wet grass lost its fodder value. Snowfall on mountain pastures decreased milk yields and the number of resulting cheese wheels. Crops putrefied in the fields.¹⁸ In 1810, Peter Biechele, the parish priest of Warth, a neighboring village, complained about the ‘Siberian climate’¹⁹ and in 1836, Kreishauptmann Johann Nepomuk Ebner reported that crops could not be grown in Damüls anymore.²⁰

¹⁴ Vorarlberger Landesarchiv (VLA). Bayerischer Steuerkataster 1/18. LG Sonnenberg: Damüls.

¹⁵ Grabher, Josef. 1886. *Damüls einst und jetzt. Eine historisch-statistische Studie*. Vorarlberger Museumsverein XXVI. Bregenz, 7.

¹⁶ *Ibid.*, 8.

¹⁷ *Ibid.*

¹⁸ Wanner, Heinz and Pfister, Christian. 1999. *Klimavariation und Anomalien*. In: Pfister, Christian. *Wetternachhersage. 500 Jahre Klimavariationen und Naturkatastrophen (1696–1995)*. Bern, 76 and 154.

¹⁹ Bilgeri, Benedikt. 1949. *Der Getreideanbau im Lande Vorarlberg. Ein Beitrag zur Wirtschafts-, Siedlungs- und Stammesgeschichte*. Sonderdruck aus der Zeitschrift Montfort 1/3, 102.

²⁰ *Ibid.*

Two decades after 1836, when the climate slowly warmed up, the land use pattern in Damüls had changed considerably. Figure 2 is based on a taxation-oriented land survey by authorities of the Austrian-Hungarian monarchy and shows the situation in Damüls in 1857. The survey reveals that fields were spread all over the village.

In 1857, cropland was mainly used for the cultivation of potatoes, which had been introduced in reaction to the cooler and wetter climate.²¹ This crop is adapted to disadvantageous soils and cold. The potato plant is also resistant to hailstorms and snowfall during the summer.²² While introducing potatoes can be considered a form of agricultural modernization, their cultivation fit perfectly within traditional hoe farming widespread in the area.²³ The cultivation required a large labor force. Children and women bore the main work burden.²⁴ In total, the land survey of 1857 documents 226 potato plots close to dwellings. 4,9 hectares were used, all plots were located on the south-facing slopes and terraces of Damüls, where snow melted earlier, providing favorable conditions. Using Robert McC. Netting's numbers for the Alpine village of Törbel/Switzerland, we infer that farmers were able to produce between 87 and 104 tons of potatoes a year, varying with natural conditions as well as with the availability of labor input on the plots.²⁵ Since about 20 percent of the harvest needs to be saved for the following season, we conclude that each inhabitant – including the aged and children – could consume between 0,5 and 0,6 kilogram potatoes per day. While these figures are estimates, their plausibility is supported by local sources providing evidence that farmers in Damüls produced a surplus sold to other villages as »Damülser Vieläugler«.²⁶

The history of potato cultivation is important, because inhabitants saved money otherwise necessary for the import of bread, cereals and even potatoes from the valley.²⁷ Potatoes improved the diet of villagers when eaten in combination with cheese, milk, meat, and eggs produced on their farms. Furthermore, people cultivated turnip, radish, red currants, and lettuce in their gardens. Alpine creeks were rich in fish.²⁸ Villagers collected and preserved wild blueberry and mountain cranberry, rowanberry, blackberry, raspberry and elderberry.²⁹ Despite this portfolio, the sparse contemporary written sources perceived the Alpine livelihood thus created as poor and dreary: »Die Damülser sind wahrhaftig sehr arm und leben kümmerlich von Mehlmus und Kartoffeln, trinken auch nur am Sonntag ein Gläschen Schnaps.«³⁰ [The inhabitants are really very poor and sustain themselves poorly on flour-pap and potatoes, only on Sundays they drink a tot of schnapps. Transl. by R.G.] While there is no doubt that the inhabitants of Damüls lived a rather simple life, people managed more than just to survive on their subsistence-based living. If they earned money, e.g. by selling calves, milk, cheese or potatoes, they improved their dwellings, haystacks, stables, or invested money in livestock, meeting the four criteria of agricultural sustainability that McC Netting has suggested.³¹ He suggested to view relatively stable production per unit of land, stable or increasing yields, and resilience to short-term or seasonal perturbations as one criterion. Predictable and relatively stable inputs of energy to achieve this goal are the second criterion, because a situation is not sustainable when the return upon energy investment decreases. The fourth criterion are economically favorable rates of return between inputs and outputs, both in energy and in monetary terms,

²¹ Ibid., 49.

²² McC. Netting, *Balancing*, 1981, 159–160.

²³ Bilgeri, *Getreideanbau*, 1949, 111.

²⁴ Sandgruber, Roman. 1982. *Die Anfänge der Konsumgesellschaft. Konsumgüterverbrauch, Lebensstandard und Alltagskultur in Österreich im 18. und 19. Jahrhundert*. Wien, 51.

²⁵ Robert McC. Netting Netting estimated harvests of 150–180 kilogram potato on 0,1 hectare. See: McC. Netting, *Balancing*, 1981, 39.

²⁶ Feuerstein, *Damüls*, 1929, 22-23.

²⁷ Authors interview with BERTSCH, Regina, Damüls, 1/10/2008.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Steub, Ludwig. 1871. *Drei Sommer in Tirol*. Stuttgart, 96.

³¹ McC. Netting, *Balancing*, 1981, 38., see also the discussion in: Verena Winiwarter, *Agro-Ecological History – Intrinsic Resource Problems of Solar Based Societies*. In: Brigitta Benzing, Bernd Herrmann (eds.) 2003, *Exploitation and Overexploitation in Societies Past and Present (= IUAES-Series)*, Münster, 81-100.

plus a diversity of crops and agricultural operations that limits risk and strengthens stability. Finally, for an agro-ecological systems sustainability, returns to labor and other energy inputs must be sufficient to provide an acceptable livelihood to the producers. Sufficient income includes also sufficient savings to meet contingencies and to be able to make the investments necessary for long-term productivity, which is what the villagers were able to do.³²

While it is true that social systems need to have some degree of stability in order to be feasible, the notion of stability overshadows the importance of dynamics and change in agriculture in order to obtain feasible conditions with stable outcome. Population dynamic is one possible indication of successful resource exploitation, but not necessarily of sustainability. Let us look into the issue in Damüls: Were pre-industrial living conditions in Damüls dreary or favorable? Population development in the second half of the 19th century supports a positive view. Church registers show that between 1830 and 1890, the population of Damüls increased from 365 to 408 inhabitants.³³ In 1869, the first Austrian census counted 383 inhabitants.³⁴ The sources document that the number of births increased and child mortality decreased,³⁵ which we can interpret as an indication for improved living conditions.³⁶ According to Robert McC. Netting, potatoes were responsible for a decline in child mortality and population growth in Törbel/Switzerland. He held that a nutritious meal of cooked, mashed potato with butter or milk could be prepared with less labor investment than grain pulp or bread, yielding a more favorable return on investment.³⁷

A growing population under agrarian conditions meant a growing number of working hands and allowed agricultural intensification. Agricultural work under pre-industrial conditions was mostly manual work, and labor availability was at least seasonally a severe constraint. Considerable manual labor was needed for the improvement of soil by manuring or for »schwenden« (uprooting tree sprouts on the grassland). Potato plots had to be plowed and hoed. The abundant stones had to be collected from all land to improve it. A network of wooden fences had to be erected and maintained. Furthermore, grass had to be cut, dried and stored for the winter as hay. Cows had to be milked and the milk processed into cheese. More young, healthy members of the village population meant that the community could produce more potatoes, milk, cheese and meat and thus improve their living conditions. The growing population in the second half of the 19th century can be considered as a sign of better living conditions. Better conditions, in turn, resulted from the larger available work force due to population growth. This important feedback loop has been discussed widely in the literature on agricultural intensification, with Ester Boserup and her followers arguing that such a feedbacked dynamic could be sustainable for humans as long as intensification brought increased nutrition directly or via more marketable goods.³⁸

But while intensification was beneficial for the villagers, the growing population increased the pressure on natural resources. Under pre-industrial conditions, inhabitants used wood and timber for multiple purposes from building to heating. Forests consisted mainly of spruce and fir trees, some beeches grew in lower areas of the village. They had been utilized intensively over centuries. In 1857, forests covered 485 hectares, only about 23 percent of the total area, because the major share of the village had already been cleared earlier. Toponyms such as »Schwende« (rooting tree sprouts) and »Brand« (clearing with fire) hint at a long tradition of clearing but point also at a place-based culture of remembrance for clearing activities of ancestors.³⁹ Forest area was reduced by about 106 hectares between 1857 and 1924 (from 23

³² McC. Netting, Robert. 1993. *Smallholders, Householders. Farm families and the ecology of intensive, sustainable agriculture*. Stanford, 136-137.

³³ Hackspiel, Kurt. 1947. *Heimatkundliche Stoffsammlung für die Volksschule Damüls*. Damüls, 28.

³⁴ URL: <http://www.statistik.at/blickgem/blick1/g80209.pdf> (7/5/2013).

³⁵ Hackspiel, *Heimatkundliche Stoffsammlung*, 1949, 28.

³⁶ Höpflinger, Françoise. 1997. *Bevölkerungssoziologie. Eine Einführung in bevölkerungssoziologische Ansätze und demographische Prozesse*. München, 15-17.

³⁷ McC. Netting, *Balancing*, 1981, 159.

³⁸ Fischer-Kowalski, Marina et al., 2014. *Ester Boserup's Legacy on Sustainability. Orientations for Contemporary Research*. Dordrecht.

³⁹ Feuerstein, *Damüls*, 1929, 10.

to 18 percent of the total area). Geographer Arnold Feuerstein argued in 1924 that the specialization on dairy farming and the expansion of the grassland had pushed back forests. Furthermore, grazing rights in some forests hampered regeneration.⁴⁰

When investigating sustainability, scale is a very important issue. It has to be taken into account that the situation of Damüls during the second half of the 19th and the beginning of the 20th century is the result of the co-development of a mountain village and the surrounding valleys. Industrialization in the major valley of the province, the Rhine Valley started as early as 1853, when the railway connected cities in South Germany with Lindau at Lake Constance. The second railway was built in 1857, connecting Swiss cities with Vorarlberg. In 1872, the »Vorarlberg Bahn« was built, and in 1884, the province moved closer to the Austro-Hungarian Empire via the »Arlbergtunnel«, a railway connection from Vorarlberg to Vienna.⁴¹

The connection of the Rhine Valley to the industrialized centers in Germany, Switzerland and the Austro-Hungarian Empire considerably transformed ways of living and modes of production in Vorarlberg. Cheap imports such as cotton, grain and potato reached the province. Exporting manufactured goods, primarily textiles, became easier. In the industrial transformation of the Rhine Valley, textile manufacturing expanded. More and more farmers from alpine villages such as Damüls were attracted to jobs in the factories and left their homes. The demographic impact was severe. Villages close to the Rhine Valley, e.g. Damüls, Ebnit, and Bildstein were the worst affected, while the villages in the Rhine Valley grew by about 40 percent between 1880 and 1924.⁴² Between 1880 and 1924, 27 families left Damüls. The population decreased from 383 to 204 inhabitants.⁴³ Mostly young people migrated, dramatically reducing the available labor force for agriculture. The out-migration had considerable impact on land use in Damüls. Labor-intensive potato plots vanished completely. From then on, people had to import the basics of their daily diet. Meadows diminished due to the reduced livestock, and marginal agricultural land was not cultivated anymore. Farmhouses, barns, storehouses, haystacks and stables were either sold or decayed. At the turn of the century, the remaining population of Damüls was desperately seeking new income possibilities.⁴⁴ This development contributed in important ways to the villager's positive attitude towards the growing number of tourists.

CREATING AN ATTRACTION: TOURISTIC REPRESENTATIONS OF DAMÜLS IN THE LATE 19TH AND THE EARLY 20TH CENTURIES

While farmers left Damüls, the village became part of the mental topography of urban middle-class tourists from southern German cities. They entered the province by railway and brought a novel perspective to peripheral, alpine villages. Initially, tourists had visited Lake Constance and the picturesque towns of Bregenz and Feldkirch in the Rhine Valley. By and by, they began to discover even the remotest places in the Alps, following the romantic connotations the literary routes of travel writers had laid.⁴⁵ Ludwig Steub's famous book »Drei Sommer in Tirol« (Three Summers in the Tyrol) guided an entire generation of alpinists and tourists on their explorations of the periphery. Steub wrote about his journey from Au/Bregenzerwald to the »Große Walsertal« whereby he passed Damüls. In 1849, he described Damüls as an isolated civilization, separated by mountains from the Bregenzerwald, which was itself quite remote. Coaches could reach Bezau, the principal village of the Bregenzerwald from Bregenz in six hours. The

⁴⁰ Ibid., 21.

⁴¹ URL: <http://www.arlbergbahn.at/bahnbau.html> (7/5/2013).

⁴² Baur, Andrä. 1939. *Entvölkerung und Existenzverhältnisse in Vorarlberger Berglagen*. Beiträge zur Wirtschaftskunde der Alpenländer der Gegenwart. Bregenz, 43.

⁴³ Gross, Robert. 2012. *Wie das 1950er-Syndrom in die Täler kam. Umwelthistorische Überlegungen zur Konstruktion von Wintersportlandschaften am Beispiel Damüls in Vorarlberg*. Regensburg, 37.

⁴⁴ Feuerstein, *Damüls*, 1929, 25.

⁴⁵ Tschöfen, Bernhard. 1999. *Berg – Kultur – Moderne. Volkskundliches aus den Alpen*. Wien, 77.

distance between Bezau and Damüls required another five to six hours.⁴⁶ Steub reached the village via a steep and stony mule track over deep ravines and canyons.⁴⁷ The landscape was »ernst und einfach«⁴⁸ [solemn and frugal, transl. by R.G.], with cleared forests and cultivation limited to little gardens. Dairy farming was the main activity; framed by wooden fences, widely dispersed barnyards and homesteads littered the green slopes.⁴⁹

Ludwig Steub used the flowery metaphors of his time to describe the narrowness and remoteness of the alpine village. In Damüls, »dreht sich alles um Gottesdienst und Tageswerk, und dies selbst kennt keinen anderen Wechsel als Arbeit in den Hütten und Arbeit auf den nahen Wiesen [...], das geräuschvollste Ding in der Runde ist das Meßglöcklein, das im Kirchturm hängt. Der Lebenslauf scheidet sich in die Langeweile der endlosen Schneezeit und die kargen Freuden des winterlichen Sommers.«⁵⁰ [Everyday life in Damüls revolves around divine service and work, and work does not know any change other than between work in the alpine cabins or on meadows, the loudest sound being that of the small bell in the church tower. Life in Damüls consists of boredom in the endless snowy time and the meager pleasures of a wintery summer, transl. by R.G.] However, when Steub described the panorama from the highest mountain peak in the Damüls, the »Mittagspitze«, he rhapsodized about the majestic gaze on the Alps: »Der Erklammer der Spitze genießt eine unermessliche Aussicht. Es ist ein wunderherrlicher Anblick, wenn die ersten Strahlen der Morgensonne auf den Kranz von glänzenden Fernern fallen, die mit ewigem Eis und Schnee bekleidet, schroff und unnahbar, stolz und schweigend in die blauen Lüfte steigen. [...] Steil unter der Spitze liegt das Dörfchen Mellau an der Ache und an dieser hin die schmalen Thalgäue des Bregenzerwaldes, eingeschlossen von weidreichen Höhen und über den Wald hinaus liegt der Bodensee und alle die Städte und Flecken die das schwäbische Meer bespült, winken weiß und zierlich hinauf.«⁵¹ [Any climber of the peak of the Mittagspitze enjoys a boundless view. It is a wonderful sight when the first beams of the morning sun fall on the rim of shiny glaciers, which, clad in everlasting ice and snow, cragged and aloof, proud and silent, rise into the blue air. [...] Steep under this peak lies the village Mellau at the Ache and along it, the narrow valleys of the Bregenzerwald, encased by meadow-laden heights; and across the forest lies Lake Constance and all the towns and places the along the »Swabian Sea« beckon upwards white and gracefully, transl. by R.G.]

Despite the ambivalent description of Damüls in the travel literature, more and more tourists visited the village at the end of the 19th century. Books like Steub's work guided tourist perception and created a difference between the lowly-regarded industrialized valleys and the agrarian periphery styled into a picturesque scenery. In 1907 Ludwig Hörmann von Hörbach followed Ludwig Steub's walking tours. Hörmann von Hörbach was born in the province in lowland Feldkirch in 1837. He was a folklorist, cultural historian and travel writer. He travelled all over the Alps and wrote essays for newspapers and the journals of Alpine associations, as well as monographs.⁵² He recorded his impressions of the village in his essay »Über Damüls ins Laternsertal«. By then, a road to the valley connected Damüls to the outside world, sparing hikers the exhausting ascent to the village. Hörmann von Hörbach observed farmers scattered on steep slopes, collecting flavorsome hay in heavy hay bales⁵³ carried on their heads and backs. While Ludwig Steub depicted the farmhouses of Damüls as »miserable dwellings«, Hörmann von Hörbach praised them as stately farmsteads,⁵⁴ topped by the mountain peak »Mittagsspitze«. Alike Steub, Hörmann von Hörbach emphasized the panorama from »Mittagsspitze« with an exaggerated listing of

⁴⁶ Gross, *Wie das 1950er Syndrom*, 2012, 68.

⁴⁷ Steub, *Drei Sommer in Tirol*, 1871, 71.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*, 85.

⁵⁰ *Ibid.*, 99.

⁵¹ *Ibid.*, 98–99.

⁵² Österreichisches Biographisches Lexikon (ÖBL) 1815–1950, 2/9, 1959, 366. See: URL://<http://www.biographien.ac.at/oebl/7/5/2013>.

⁵³ von Hörmann, Ludwig. 1907. *Über Damüls ins Laternsertal*. In: *Mitteilungen des Deutschen und Österreichischen Alpenvereins* 20, 250.

⁵⁴ *Ibid.*



Figure 3: Picture postcard of Damüls church, the Alpe Uga and mountain peak »Mittagsspitze«. Publisher Herm. Steck, Feldkirch 1903. With permission of Vorarlberger Landesbibliothek.

all glaciers, mountain peaks, lakes, villages and valleys perceivable from the top of Damüls. As early as 1904, picture postcards depicting Damüls were produced. Figure 3 shows such a postcard portraying the village.

The photograph displays the church, the presbytery to its right side, and the guesthouse Adler on the far right. In front of the church, a potato plot is visible. The left part of the background is dominated by the area called »Uga«, the »Alpe Uga« and the »Mittagsspitze«. In the background, the scattered dwellings of the inhabitants are visible. The picture was probably taken in spring, as the base of »Mittagsspitze« is partly covered with snow. The composition is classic, the »Mittagsspitze«, the old church, meadows and the forest taken together produce a romantic landscape that invites the beholder to visit Damüls. The essays of Ludwig Steub and Ludwig Hörbach von Hörmann described Damüls from the perspective of tourists who visited the village during spring, summer and autumn. Skiing and winter tourism played only a marginal role in Damüls before 1925.

Visual perception is central for tourism. Tourism development and the growing importance of visual consumption of Alpine topography as »beautiful landscape« were coupled to early forms of tourism commodification in Damüls. The appearance of a »romantic tourist gaze« in picture postcards but also in texts of travel writers points to a considerable societal shift. Damüls was now perceived rather as landscape of consumption than of production.⁵⁵ The highly differentiated cultural landscapes of Damüls had formed over centuries due to farming practices. The tourist gaze projected romantic ideas of nature and culture onto agriculturally productive landscapes. Tourists followed the stereotypes of individual writers conceptualizing the Alps as ideally suited hide-away of the prototypically Germanic individual. The basic idea was appealingly simple: the higher one climbs the mountain, the more pristine and unaffected by industrialized white-bread lifestyles are the land and its people.⁵⁶ Culturally homogenized stereotypes amalgamated with a re-evaluation of mountain landscapes, which were now bestowed with meanings of healing and cleansing. The physical ascent from the valley to the mountain was seen as a healing process.⁵⁷ In those days, Damüls was imbued the status of a high alpine convalescent home, benefiting urbanites distressed by modern lifestyle. This new image, mediated by photographs and texts, was consequential for Damüls. The owner of the guesthouse »Adler« reported in 1907 that he had sold more than

⁵⁵ Urry, John. 1995. *The Tourist Gaze and the Environment*. In: Urry, John, *Consuming Places*. New York, 180.

⁵⁶ Tschöfen, Berg, 1999, 53.

⁵⁷ StremLOW, Matthias. 1998. *Die Alpen aus der Untersicht. Von der Verheißung der nahen Fremde zur Sportarena. Kontinuität und Wandel von Alpenbildern seit 1700*. Wien, 160.

thousand picture postcards during the summer and that the number of tourists increased year after year.⁵⁸ Land use patterns and property rights were not transformed in Damüls in the early 20th century, because WWI broke out. But the headstone for commodification of the socio-natural features of Damüls had been laid by incorporating the community into the mental topography of urban middle class leisure seekers. Mountain climbers and hiker's demands on local resources had remained modest. They used mule tracks and were basically content with local resources for their food needs. Winter showshoeing did not harm the landscape, as it remained a pastime for few. The early winter tourism still met the basic criteria of sustainable tourism. According to the influential UNWTO/UNEP guidelines, sustainable tourism should:

1. Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
2. Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
3. Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.⁵⁹

The subsequent development of winter tourism would become a challenge to maintaining essential ecological processes and the conservation of natural heritage and biodiversity, and would also transform local livelihoods and cultural heritage. This process started after WWI but would take several decades.

TOURISM PIONEERS IN DAMÜLS AND NATIONAL SOCIALIST MODERNIZATION EFFORTS

After the end of WWI, new forms of leisure culture developed in Austria. Sports diffused in society and a growing number of the urban middle- and working class participated in the movement. Skiing, a niche activity before WWI, became more and more popular. Many young men had learned to ski during WWI. When the war was over, they flocked to the wintry Alps to ski. Austria experienced its first skiing boom in the 1920s.⁶⁰ Skiing was perceived as a way to leave war traumata behind by gliding in the mountains. Skiers brought novel ways of living to villages such as Damüls and by doing so, they began to transform locally-based life worlds.⁶¹ In 1925, the first skiing courses took place in Damüls, creating a demand for catering and housing in the village guesthouse Adler. Provincial authorities had disliked tourists in mountainous villages in the beginning. Otto Ender, governor of Vorarlberg, held that open minded tourists would threaten the Catholic moral of rural societies.⁶² However, in the late 1920s, more and more federal politicians became convinced that tourism might have a considerable positive impact on local economies, and could stop depopulation.⁶³ When Austria was hit by the Great Depression in 1930, tourism became a strategy to decrease the deficit in the national trade balance.⁶⁴

The »invisible export« created by the foreign currency tourists brought into the country became a household word and basic economic concept in those days.⁶⁵ The strategy left visible traces in Alpine villages because of the resulting building boom. In Damüls, guesthouse »Alpenblume« opened its doors in

⁵⁸ von Hörmann, *Über Damüls*, 1907, 250.

⁵⁹ URL: <http://sdt.unwto.org/content/about-us-5>, quote on website taken from: *Making Tourism More Sustainable - A Guide for Policy Makers*, UNEP and UNWTO, 2005, p.11-12 (29/9/2015).

⁶⁰ Norden, Gilbert. 1998. *Breitensport und Spitzensport vom 19. Jahrhundert bis zur Gegenwart*. In: *Turnen und Sport in der Geschichte Österreichs*. Schriften des Instituts für Österreichkunde 60. Wien, 65–66.

⁶¹ Tschofen, *Berg*, 1999, 20.

⁶² Gross, *Wie das 1950er Syndrom*, 2012, 38.

⁶³ Gross, Robert. 2013. *Zwischen Kruckenkreuz und Hakenkreuz. Tourismuslandschaften während der 1000-Reichsmark-Sperre*. In: *Montfort* 65/2, 54.

⁶⁴ *Ibid.*

⁶⁵ These exports provide income from the service sector (e.g. tourism), not from selling raw materials or processed goods. See: Albers, Willy et al. 1982. *Handwörterbuch der Wirtschaftswissenschaften* 9. *Wirtschaft und Politik bis Zölle*. Stuttgart, 540.



Figure 4: Picture postcard »Damüls 1431m. Berghotel Madlener.« (sent September 25, 1954), Publisher Foto Risch-Lau. With permission of Vorarlberger Landesbibliothek.

1928, »Berghotel Madlener« and guesthouse »Sonnenheim« followed in 1932 and »Gasthof Walisgaden« was opened in 1938. Damüls provided 300 beds in 1933, of which roughly one third was located in farmhouses. In the season 1932/33, the village counted about 10.000 overnight stays. 80 percent of those were German guests, who stayed on averages up to six days.⁶⁶ Damüls found itself in the midst of tourism-driven modernization in the beginning of the 1930s. Modernity was expressed vividly by the architecture of »Berghotel Madlener« depicted in Figure 4.

The building differs considerably from the architecture of farmhouses. Alois Madlener, the owner of the guesthouse had commissioned the well-known architect Alfons Fritz, who was responsible for a range of modern buildings in the province of Vorarlberg. Alfons Fritz paid reverence to modern alpine architecture in the guesthouse design. »Berghotel Madlener« points to a self-perception of tourism entrepreneurs in the 1930s as innovators. Tourism modernization literally superimposed traditional, agrarian (infra-)structures, demonstrated also by the fact that Alois Madlener - together with the mill owner - built the first power plant of Damüls.⁶⁷

The »romantic tourist gaze is directed to features of landscapes [...] which separate them off from everyday [...] experiences.«⁶⁸ The electrified »Berghotel Madlener« - because of its outstanding architecture - is a telling example for the production of a »in some sense out-of-the-ordinary«⁶⁹ tourist attraction, which raised capital availability in Damüls.

The modernization of Damüls came to a sudden halt when Adolf Hitler introduced the »1000-Reichsmark-Sperre«, which was in effect from May 27th, 1933 to July, 11th, 1936. German citizens had to pay a fee of 1000 RM (corresponding to about € 4000 in recent value)⁷⁰ when they crossed the border between Austria and Germany for tourism purposes. Hitler wanted to accelerate the annexation of Austria.⁷¹ Damüls plunged into a crisis as illustrated by the following excerpt from a letter written by the mayor of Damüls on January 6th, 1934 to the minister of trade and commerce: »Damüls war immer bereits zur Gänze von Deutschen besucht aber durch die 1000 M. Sperre kommt die Gemeinde Damüls die 4 Gasthöfe die Lohnfurwerksbesitzer [sic!] deren zwei sind, dan [sic!] auch noch viele Private schwer

⁶⁶ VLA, Sammlung FV 29, FV Statistik 1930/31-1937/38.

⁶⁷ Gross, *Wie das 1950er Syndrom*, 2012, 41.

⁶⁸ Urry, *The Tourist Gaze*, 1995, 131-132.

⁶⁹ Ibid.

⁷⁰ URL: <http://measuringworth.com/exchangeglobal/> (20/5/2013).

⁷¹ Otruba, Gustav. 1983. *A. Hitlers »Tausend-Mark-Sperre« und die Folgen für Österreichs Fremdenverkehr (1933-1938)*. Linzer Schriften zur Sozial- u. Wirtschaftsgeschichte 9. Linz, 10-11.

zu Schaden und ihre Existenzen schwer betrot [sic!] wo nicht ganz ruiniert werden, den [sic!] durch den steten Zuwachs der Fremden in den letzten Jahren wurde und musste viel verbessert werden bei jedem Geschäfte so dass mann [sic!] dadurch Schulden machen musste in der Hoffnung durch den regen Fremdenverkehr alsbald wieder entlastet zu werden.«⁷² Damüls, the mayor writes, depended on German tourists. The inhabitants had restructured tourism infrastructure according to the needs of these guests. Many entrepreneurs went into debt, expecting stable and growing incomes to pay the loans back. The 1000 RM sanction threatened their livelihood; some, the mayor holds, would become insolvent.

All over Austria, thousands of deeply indebted tourism entrepreneurs pleaded the ministry of trade and commerce for aid. In 1933 and 1934, the ministry carried out a »Hotelsanierungsaktion« (hotel refurbishment action) to secure businesses from insolvency. All hotels and guesthouses in Damüls apart from »Berggasthof Walisgaden« received aid. Hans Strasshofer, the owner, participated in illegal, national-socialist propaganda campaigns and was thus excluded.⁷³ When the »1000-Reichsmark-Sperre« was lifted in 1936, tourists from Germany came back to Damüls, but the numbers of 1932 were not reached again.⁷⁴ From 1940 on, Damüls participated in the national socialistic regional development program »Das schöne Dorf« (The beautiful village), a state-orchestrated strategy of economic growth. The program aimed to restructure villages according to national socialist ideals of modernity and to serve as a role model for other villages after the war. »Das schöne Dorf« was selected by means of shape and type of village, key statistical figures, maps, and the condition of infrastructure, but also by the loyalty to national socialist ideology of village leaders. »Ortsgruppenleiter« (leader of the local national socialist group) Leo Breuss, who owned the guesthouse »Adler« was a promising candidate for the campaign. Furthermore, provincial authorities supposed that Damüls had a huge touristic potential, which was not yet fully exploited. To stimulate tourism in Damüls, two ski lifts opening the terrain of »Uga Alpe« and »Oberdamüls« should be built. New infrastructure was considered the utmost expression of modernity and a necessity to improve the village's attraction for tourists to compete successfully with the Arlberg region. Regional authorities, national socialist regional developers and local tourism entrepreneurs agreed to split costs and to build ski lifts as soon as possible. However, when German national economy shifted towards war at the turn of 1941 to 1942, modernization efforts came to a sudden halt.⁷⁵

The most profound change national socialist regional development brought to Damüls was the erection of a power grid from »Großes Walsertal« to the village. Until then, the power station of Damüls, erected by Alois Madlener, had only supplied guesthouses. Prior to 1944, farmers had no access to electricity. In March 1943, the necessary power poles were delivered. Forced laborers from Eastern Europe carried out excavation work for the power grid. At the end of September 1943, the »Aufbaugenossenschaft« (building cooperation) announced that the prisoner's camp and the hotel »Faschina« had successfully been connected to the power grid.⁷⁶ The infrastructure made possible by the reckless exploitation of forced laborers built the foundation of the post-war reconstruction of Damüls when National Socialism collapsed in 1945.

TAMING ALPINE HYDROLOGY TO SECURE ROAD BUILDING

After WWII, the road to Damüls was badly damaged. In June 1950, authorities decided that motorized vehicles were to be banned from using the road, with the exception of motorbikes and post busses.⁷⁷ No maintenance work had been carried out between 1938 and 1945, so roadside ditches were covered with mud from slope slumps and the surface of the road had been washed away completely. During the winter months, Damüls was accessible solely by sledge or on skis. In 1956, the road was re-opened for vehicles under three tons. The tourism board complained about the situation and its impact on hotels and

⁷² Archiv der Republik (AdR), BMfHuV Sch. 1586, Zl. 121.153-14/1934.

⁷³ AdR – Bestandsgruppe 02 – BKA 147, Zl. 1.563/38.

⁷⁴ VLA Sammlung FV 29, FV Statistik 1930/31– 1937/38.

⁷⁵ Gross, *Wie das 1950er Syndrom*, 2012, 45.

⁷⁶ VLA Landratsamt Bludenz 5, Zl. VI-268/2-43.

⁷⁷ Ibid.

guesthouses. According to the department for road construction of the provincial government, ATS 23 Million would have been needed to improve the entire road, a sum way beyond the means of the province. But all actors considered the road to Damüls as vital for a shift of the local economy from a less productive development path with primarily subsistence-based agriculture to a profitable tourism center. So, by defining smaller sub-projects, the provincial government enabled the piecemeal building.⁷⁸

The modernization of the road to Damüls caused a series of conflicts and required great patience of farmers in the village. When the first road to Damüls was built in 1892, the authorities had negotiated contracts with the mountain pasture-association and landowners for free supply of construction timber. When the road was extended in 1953, this contract was still valid. Construction work, however, had changed considerably between 1892 and 1953. Large amounts of timber were needed to improve the road for the demands of motorized traffic. This proved unbearable for affected landowners.⁷⁹ Already in 1950, the mountain pasture association started to resist, because road building not only demanded too much timber, but also damaged their land in many ways. Building companies cut down trees randomly and used timber for scaffolds and form boards. Rocks were blasted regardless of side-effects. Waste was thrown into ravines by construction workers, damaging tree barks and juvenile trees.⁸⁰ The course of the road itself was set without negotiations with the land owners. The mountain pasture association was forced to cede an area of fertile grassland four meters broad and 300 meters long for road building.⁸¹ Constructing a road to Damüls had priority over agricultural land use because it was considered a prerequisite for the development of tourism. The operation was a threat to local ecosystems and their integrity, a veritable sustainability challenge. But environmental concerns played no role in the process.

Construction and use of the road were a massive intervention into agrarian livelihoods. In the late 1950s, cars had to stop several times to open and close cattle gates on the road to Damüls, a great inconvenience for drivers. In 1960, road police demanded the removal of two cattle gates. But these gates were part of a complex system of collectively erected and maintained fences, keeping together cattle and preventing cattle losses. When the cattle gates were removed, the users of »Argenalp« had to fence their land. The fencing cost (ca ATS 20.000) was one reason the Alp association took the case to court. They argued that the provincial government of Vorarlberg spent large sums on tourist attractions all over the province, but was unwilling to support alpine agriculture, even though farmers provided agricultural landscapes, a central resource for tourism. Like in many other instances, modern mass mobilization caused hidden costs for inhabitants, which led to conflicts without easy solutions.⁸²

Heavy building vehicles had ruined pipelines for sewage water several times, resulting in streams of wastewater pouring out over villagers' land and even into their homes.⁸³ Due to such complications, road building was unpopular in Damüls. The village priest complained in a furious letter to the road building authorities that the construction workers should be more respectful of property rights.⁸⁴ He also pointed – as would be seen soon, correctly – to the long-term problem of erosion, citing precipitation analyses that showed that Damüls was one of the rainiest villages in the Alps, putting it at high erosion risk.⁸⁵

Building work was hardly completed when the first landslides, mudflows and drawdowns of soil occurred near the new road. Villagers blamed road building authorities and construction workers for the problems.⁸⁶ A further unintended side effect of road building became visible in the district »Uga« in 1962. Terrain surrounding »Berghotel Madlener« was wet and prone to downhill motion. It had been drained in 1940, but the road building had damaged the drainage. When the owner of the »Berghotel

⁷⁸ Ibid.

⁷⁹ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/3.

⁸⁰ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/3-49.

⁸¹ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/27

⁸² VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/1.

⁸³ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/33.

⁸⁴ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/7.

⁸⁵ Ibid.

⁸⁶ Ibid.

Madlener« deposited builder's waste west of the Hotel, the area started moving. Not just the hotel, but also farmhouses and the newly built road were threatened. Inhabitants of Damüls erected wooden shoring as a short-term measure, but a long-term solution for the problem was required. Water from the sidelong cuts of the road construction regularly flooded meadows, paths and parking lots.⁸⁷ In 1964, the provincial government decided to tame the »destructive water body«⁸⁸ of Damüls with concrete pipelines. Figure 5 depicts these building measures.

In the end, the project proved considerably more complex than originally envisaged because shallow ground water was widespread all over the area.⁸⁹

The huge pile of archival records of the road construction administration makes clear that building the road to Damüls was intimately tied to taming high alpine water bodies. Road construction was a massive intervention into the hydrological regime. Countless creeks rushed down the steep gradient crossing the course of the road. Wherever possible, engineers tried to span watercourses by bridges or tunneling of creeks.⁹⁰ Very often, however, water did not reach the soil surface but seeped below ground to the valley plain, causing mud flows and slope slumps. Along the Damüls road, engineers aimed to drain the ground, altering subsurface hydrology profoundly. The environmental history of the road shows that it is a bigger intervention than meets the eye. Maintaining a road under such conditions requires the regular investment of money and energy, taking a maintenance toll as long as the road is to be kept in working order. The destabilization of mountain ecosystems is a threat to sustainability caused by tourism.

Road construction to Damüls reveals how »nature« was »targeted and transformed by the twin pressures of science and capital«⁹¹ but, following Prudham, it can also be considered as a »response to new opportunities and constraints from a dialectical conversation between social and environmental change.«⁹² Road construction plans for Damüls had existed as early as the beginning of the 20th century. The knowledge- and capital-demanding Alpine topography and hydrology had thwarted realization of the plans. Although national socialist regional development programs envisioned high-flying plans for peripheral villages, they failed in terms of road building in Damüls.⁹³ The so-called 1950s syndrome,



Figure 5: Picture Postcard of drainage at the Damüls road close to »Berghotel Madlener«, (sent July 9th, 1969) Publisher Foto Branz, Lustenau. With permission of Vorarlberger Landesbibliothek.

⁸⁷ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/5–62.

⁸⁸ Ibid.

⁸⁹ VLA, LWBA Zl. 5221-12/9.14.

⁹⁰ VLA Abt. VIc, Landesstraßen II. Ordnung, Au-Damüls 1947–1953, Zl. 62.119/46.

⁹¹ Prudham, *Taming trees*, 2002, 638.

⁹² Ibid.

⁹³ Gehrler, Herbert. 1986. *Der Ausbau der Straßen Vorarlbergs für den motorisierten Verkehr von den 30er Jahren bis 1983*. Amt der Vorarlberger Landesregierung. Bregenz, 87.

the availability of relatively cheap fossil fuels, did not only make individual mobility affordable for the majority of the population but also decreased building costs.⁹⁴ Lower energy prices in combination with the distribution of energy-demanding building technology and generous reconstruction aid provided by national and provincial governments enabled countless road projects all over the Alps.⁹⁵ Tourism entrepreneurs in Damüls depended on individual tourist coming by car. In order to support them, commonly utilized farming property was permanently superimposed with roads. »Nature« was converted into »automobility-scapes«. The state backed this transformation, as tourism had by then become the higher-valued property regime. Environmental consequences did not figure in their considerations.

CREATING THE BEAUTIFUL LANDSCAPES OF WINTER SPORT: DAMÜLS SINCE 1945

The use of cars for winter tourism and the growth of individual mobility set novel standards in tourism after 1945. The spatial limitations of railways associated with a channeling of the tourist gaze along rail tracks were lifted. The advent of mobility infrastructure for cars together with a novel intensity of marketing strategies fueled tourism. Images of even the remotest place in the Alps became widely available. Tourists seek nature, but »natural environments are in fact environments entangled with culture, politics, technology, and other human activities across time and space.«⁹⁶ As agro-ecosystems were transformed for the sake of winter tourism, it began to threaten the pretension tourism rested on: the beautiful landscapes tourists seek. Damüls is a case in point for this development.

In response to changing means of travel and the popularization of winter tourism, the socio-economic structure of the village shifted from agriculture to services. In the beginning of the postwar era, Damüls was an agricultural village. In 1951, 75,8 percent of inhabitants had derived their main income from agriculture, 8,6 percent from the secondary sector (mainly construction work for road building) and 16,6 percent from tourism. The socio-economic composition of the population drastically changed in the next 50 years. In 2001, barely 7,0 percent of its inhabitants drew their main income from agriculture, while none of the farmers was able to sustain a livelihood solely from agriculture. All farmers were part-time tourism entrepreneurs. 83 percent of the inhabitants were connected to the tertiary sector, mainly tourism. Of the remaining 10 percent, most commuted to factories in the valleys.⁹⁷ As would be expected, the number of cattle went down from 345 in 1951 to 115 in 2001.⁹⁸ Overnight stays rose from 10.000 in 1950/51 to 120.784 in 2001.⁹⁹ In 1950/51, this amounted to 47 overnight stays per inhabitant as compared to 366 in 2001. The development of tourism taxed public infrastructure. Water supply and sewers, garbage disposal, power- and food supply had to deliver double capacities during the season, massive investments were necessary and a massive challenge to the local ecosystems resulted.¹⁰⁰

Most tourists came to Damüls for skiing. Agro-ecosystems were accordingly transformed into winter sport landscapes. While agricultural land use had dominated daily life in Damüls in the 1950s, it later turned into a mere seasonal addition to the dominating tourism sector. Diffusion of winter tourism land use practices had begun when the first T-bar lift was built by Leo Breuss, Remigius Rützler, Alois Bischof, Franz Doming and Bernhard Moosbrugger in 1948. In 1951, the T-bar lift was taken over by Alfred Lingenhöle, a businessman from the provincial capital Bregenz. Lingenhöle had planned to buy

⁹⁴ Pfister, Christian. 1994. *Das 1950er Syndrom. Die Epochenschwelle der Mensch-Umwelt-Beziehung zwischen Industriegesellschaft und Konsumgesellschaft*. In: GAIA 3/2, 80.

⁹⁵ Bittermann, Wolfgang. 1995. *Von der Landschaftsnutzung zum Landschaftsverbrauch*. In: Sieder, Reinhard et al. 1995. *Österreich 1945-1995. Gesellschaft - Politik - Kultur*. Österr. Texte zur Gesellschaftskritik 60. Wien, 636-638.

⁹⁶ Jorgensen, Finn Arne et al. 2013. *Entangled Environments: Historians and Nature in the Nordic Countries*. In: *Historisk tidsskrift*, 10.

⁹⁷ Amt der Vorarlberger Landesregierung. Landesstelle für Statistik (1945-2005). *Vorarlberger Wirtschafts- und Sozialstatistik*. Jg. 1-61.

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

¹⁰⁰ URL: <http://http://www.statistik.at/blickgem/blick1/g80209.pdf> (7/5/2013).



Figure 6: Picture postcard »Schlepplift 1800«, Publisher Foto Risch-Lau. With permission of Vorarlberger Landesbibliothek.

building ground for a weekend cottage. Close to the church, he found a plot owned by the association of alpine meadow users, »Alpgemeinschaft Oberdamüls«. The association agreed to sell the property under the condition that Lingenhölle would run the T-bar lift.¹⁰¹ Soon, a second T-Bar lift was added to the enterprise.¹⁰² Both T-bar lifts were replaced by a state-of-the-art T-bar lift called »Höhe 1800« (denoting its height of 1800 meters) in 1957. This lift was a major tourist attraction in Damüls for years. Images of it were widely distributed by picture postcards and tourism advertising brochures. Figure 6 is a typical example depicting the T-bar lift »Höhe 1800«:

The photograph depicts the ski lift from a vantage point above it, the usual perspective of romantic landscape painting, which made power claims of the nobility over their acreage visible.¹⁰³ The bird's eye view, typical for the tourist gaze, suggests a sense of sublimity and domination to the beholder. The infrastructure depicted in the photograph served two functions. It offered inhabitants the possibility to identify with modernity and to distance themselves from their agrarian past, which became increasingly associated with fear of demise.¹⁰⁴ Shortly after the T-bar lift was put into operation, a series of new hotels and guesthouses was established and the population began to grow considerably, for the first time since 1880.¹⁰⁵ At the same time, the representation of Damüls in the media transformed. For decades, the village had been perceived as part of a crisis region. With the winter tourism boom, its image changed. Damüls became a role model for the successful commodification of »nature«, a winter tourism hotspot, surrounded by less productive farming communities.

Capital investments, science based transport technology and energy inputs were integrated by the founders of the ski lift cooperation to transform collectively utilized grassland into a playground for urban skiers. These novel infrastructures created another feedback loop which accelerated the popularization of skiing. For inhabitants and tourists alike, photographs such as Figure 6 served as instruction manuals for modern skiing.¹⁰⁶ Downhill skiing had little in common with the traditional »cross country skiing« [skilaulen] of the interwar years. On lifts, skiers floated uphill, physically disburdened of the ascent, and then rushed downhill [skifahren]. Skiers gained downhill skills much faster than before.¹⁰⁷ This in turn

¹⁰¹ Gross, *Wie das 1950er Syndrom*, 2012, 46.

¹⁰² *Ibid.*, 47.

¹⁰³ WINIWARTER, Verena. 2001. *Buying a dream come true*. In: *Rethinking History* 5/3, 451–454.

¹⁰⁴ Gross, *Wie das 1950er Syndrom*, 2012, 53.

¹⁰⁵ *Ibid.*

¹⁰⁶ WINIWARTER, *Buying*, 2001, 421-454.

¹⁰⁷ Gross, *Wie das 1950er Syndrom*, 2012, 123-125.

led to the popularization of skiing in society but also to a redefinition of the meaning of mountains. Formerly perceived as semi-spiritual spaces, they became a mere backdrop of leisure society. The growth and change of skiing practices had repositioned the mountains in the mental topography of humans.¹⁰⁸

Tourists were and are consumers of visual sensations but they also consume body sensation, especially in the case of winter tourism. As early as the 1920s, bodily perception of skiers was a widespread topic in popular media.¹⁰⁹ Ski lifts were inserted into the up- and downhill circuits of skiers. They compressed the space and time of uphill movement, comparable to the effect of railways in the 19th century.¹¹⁰ Furthermore, ski lifts remodeled the landscape perception of passengers. Skiers literally floated uphill while gazing on pristine, snowy mountains. With time, tourists became used to the vertical perambulation of the landscape in Damüls.

Why should a tourist come to Damüls in the end of the 1950s if other winter sport destinations (e.g. Lech am Arlberg) provided more sensations with several lifts?¹¹¹ Tourists are novelty-seekers, this drove ski lift operators into regularly providing novel ski lifts (thus novel body and landscape sensations) to prevail in the increasing competition between the tourist destinations of the Alps.

The first chair lift on the Alpe Uga was erected in 1960, opening a terrain that provided extraordinary landscape sensations to skiers. The building of a chair lift was very expensive, so the ski lift corporation applied for a reconstruction loan at the Ministry of Trade and Reconstruction, which was at the time administrating funds from the European Recovery Program, commonly known as Marshall Plan. The corporation received ATS 1,7 Million for the project in 1961.¹¹² The chair lift on Alpe Uga allowed downhill skiers access to slopes that had been popular with back country skiers already in the 1920s for their outstanding winter landscapes. But Alpe Uga was not only known for its beautiful landscape but also for its harsh snow and wind conditions. The majority of leisure skiers were not able to cope with the rough, wind-blown snow on steep side of the mountain. The chair lift was economically unviable and ski lift operators were threatened by insolvency. Intensification was again the solution: A snow groomer solved the problem by transforming the uneven snow cover into a smooth ski slope. Economic returns for the ski lift operators increased after its purchase in 1967.¹¹³ The snow groomer was named »Lisele« (the diminutive of the female name Elisabeth, often used for cows). It was immediately used not only on slopes but also in tourism advertising, as can be seen in Figure 7.

The snow groomer as advertising agent conveys images of modernity, safety and accessibility. Leisure skiing in Damüls was advertised to a paying, often urban audience with no previous experience of winter in the Alps. The image of the groomer in Figure 7 and others in which it figured prominently, suggested that ski lift operators mastered high alpine nature. It released skiing from topographical and snow cover uncertainties. Snow groomers and their com-



Figure 7: Snow groomer. *Pistenraupe*. In: *Werbeprospekt »Damüls, die Sonnenterasse in Vorarlberg...«* (ca. 1968), pub. by Verkehrsverein Damüls; in possession of Damüls – Faschina Tourismus, Kirchdorf 138, Damüls.

¹⁰⁸ Rigele, Georg. 2000. *Sommeralpen - Winteralpen. Veränderungen im Alpen durch Bergstraßen, Seilbahnen und Schilifte in Österreich*. In: *Umweltgeschichte. Zum historischen Verhältnis von Gesellschaft und Natur*. Schriften des Instituts für Österreichkunde 63. Wien, 140-145.

¹⁰⁹ Gross, *Wie das 1950er Syndrom*, 2012, 81-91.

¹¹⁰ Schivelbusch, Wolfgang. 1944. *Geschichte der Eisenbahnreise. Zur Industrialisierung von Raum und Zeit im 19. Jahrhundert*. München/Wien, 36-28.

¹¹¹ Gross, Robert. 2012. *Die Modernisierung der Vorarlberger Alpen durch Seilbahnen, Schlepp- und Sessellifte*. In: *Montfort 2*, 13-25.

¹¹² AdR, BMfV/Präs. 667 ERP Kredite. Listen nach Bundesländer 1964-66.

¹¹³ Gross, *Wie das 1950er Syndrom*, 2012, 53.

mercialization as tourist attractions should make the skiing experience predictable and therefore stabilize its profitability.¹¹⁴

The image does not show the ecological side effects of snow groomers. Groomers created stable ski slopes resistant to weather fluctuations and the force of thousands of steel edged skiers swinging downhill per day. The compacted snow would melt later and shorten the already short growing season, diminishing agricultural returns.

Ski lift operators usually did not own the slopes to which they provided access. The mountain sides remained in the possession of local landowners. The slopes were still, if less and less intensively, used for agriculture. The novel utilization of grassland as downhill slopes of ski lifts increased conflicts between landholders and ski lift operators in mountainous regions in Damüls and elsewhere in Austria. Originally, land owners were able to prohibit access to their land by law but also by the erection of fences, hedges and other obstacles.¹¹⁵ But the tourism board and interest groups lobbied for access, arguing that the wealth of the inhabitants, the future development of Alpine communities and the performance of the national economy would be endangered. Regional governments responded to the issue by enacting an unprecedented limitation of property rights, the »Sportgesetz 1968« [act on sports]. According to tourism actors, land owners should be kept from blocking the development and maintenance of ski slope networks.¹¹⁶ With the new law, the provincial government prioritized the needs of lift operators. Owners were obliged to seasonally remove fences needed for using the slopes as pasture and the use of fertilizers was prohibited. The cost for the removal and re-erection of the fences was originally to be borne by the landowners; this was later changed due to widespread protest. Snow groomers, as principle means to optimize the usability of slopes for skiers were granted permission to operate on private lands.¹¹⁷ The »Sportgesetz 1968« clearly reflects a shift of priorities but also of power due to the touristic commodification of the Alps. Affected farmers in Damüls see the act until this day as one of the greatest errors of the provincial government. Farmers felt disarmed by a law that constrained them to accept the majority of capital-driven interventions on their land.¹¹⁸ The Sportgesetz is clearly unsustainable, as it does not respect the socio-cultural authenticity of the local communities, endangers their cultural heritage and traditional values and does not provide fairly distributed socio-economic benefits to all stakeholders. The consequences soon became visible.

Changing snow management due to the intensification of tourism reached a critical point in the 1970s, when farmers noticed damages on their grassland. Spring snowmelt occurred later where the snow had been compacted, which hampered the germination of early flowering plants. This resulted in changes of species composition. When groomer operators were not careful, their heavy vehicles also damaged the turf. Farmers realized that ski slope management reduced their hay harvest. They counteracted harvest losses and the belated snowmelt with novel forms of grassland management. »Thomasmehl«, a budget, black powder, a byproduct of ironmaking, rich in the plant nutrient phosphate — but also, unfortunately, in toxic heavy metals — was the substance of choice to get rid of the snow and to induce higher growth rates on damaged grassland. Farmers used »Thomasmehl« until 1995, when its use was restricted by law. Heavy-metal free dark rock meal replaced it.¹¹⁹

The integration of mechanized snow management practices was just the beginning of the increasing technological transformation of landscapes in Damüls. In 1980, five ski lifts with a transport capacity of 5000 riders per hour serviced the area. In 1987, two further lifts were added. Between 1984 and 1996, the ski lift operator mainly enlarged transport capacities of the existing ski lifts, but then the first chair lift carrying four skiers per chair was built. In the year 2000, a massive change occurred, when Damüls and the neighboring village Mellau joined into one network of slopes and lifts. For this, the ski lift operator

¹¹⁴ Ibid., 55.

¹¹⁵ Vorarlberger Sportgesetz, LGBl.Nr. 9/1968.

¹¹⁶ VLA PrsG 1968, 19, Sportgesetz I. Teil, Zl. 306/70/1968.

¹¹⁷ VLA PrsG 1968, 19, Sportgesetz I. Teil, Zl. 306/21/1966.

¹¹⁸ Authors interview with a farmer. Anonymized by request of the interviewed person, Damüls, 4/4/2009.

¹¹⁹ Ibid., 55-57.

built three new chair lifts, a ski tunnel and a series of avalanche barriers. Again, this came at the expense of Alpine nature. Many trees were felled. Cliffs were blasted to construct ski slopes. The resulting area, one large entertainment park accessible to skiers, was the third biggest ski arena within the province with a transport capacity of 20.000 riders per hour in 2010.¹²⁰

Again, side effects are to be noted. The area treated by snow groomers expanded between 1970 and 2010 from 19,8 to 74,3 hectares. The ratio between increased transport capacity of ski lifts and development of ski slopes decoupled during the decades from 1970 and 2010. While transport capacity rose 9,2 fold, ski slope area grew »only« 2,8 fold, leading to more congestion on downhill rides, a phenomenon noted all over the alps.¹²¹

Slope area had become a scarce resource. It became imperative to keep it in good skiing condition for the entire season. The tourist enterprises of Damüls reacted with the installation and systematic expansion of a snow system in Damüls in 1991. Since the mid-1980s ski lift operators all over the Alps had been confronted with growing global competition and unusually mild winters. The decline of snow-covered periods increased the vulnerability of the industry. In most winter sport destinations, both the communities and many individual businesses were indebted. When tourist numbers in Damüls declined in the winter season 1989/90 by about 66 percent (compared to 1988/89) the ski lift operator incurred an economic loss of about ATS 14 Million (approximately € 1 Million) in just one year. The installation of a snow system in 1991 should combat this detrimental situation.¹²² Water for artificial snow for 11 percent of the slope area came from the alpine creek Argenbach, which was integrated into a technostructure, a network of pumps, hydrants, piping and snow cannons. Although it had been turned into an organic machine, it had its limits.¹²³ Within two decades, the area under artificial snow increased to 80 percent of the total slope area (2010). The necessary amount of water by far outstripped the capacity of the small creek Argenbach. Thus, a freshwater storage pond became necessary. It was dug on the Alpe Uga, creating a long-lasting environmental legacy of snow making in Damüls. A second legacy is more diffuse but very profound. Artificial snow is expensive. Therefore, bumpy parts of the slopes were straightened for two reasons; to keep it from accumulating in recesses, and to avoid excessive exposure to sun, which might result in earlier melting. Soil was moved from the bumps to troughs, and then the bared spots were re-vegetated with seeds preferably resembling the local flora.¹²⁴ In the late 1990s, the ski lift cooperation realized that this technique was not just ineffective with regard to the intended effect, but on the contrary, increased erosion. In response, they improved techniques, cut turf bricks when removing bumps, stored them during the excavation work and as a last step, replaced them.¹²⁵ The result of this intervention on Alpine nature was a straightened slope, perfectly fitted to the needs of efficient snow management. Local plant biodiversity was conserved not for its intrinsic value but because it is the most effective means of preventing erosion. Stability of the remodeled terrain is a concern of ski lift operators, and they turn to nature as means to prevent the erosion their actions make probable.

CONCLUSION

Historians have long tended to neglect the entanglement of landscape and social change, of the interplay between nature and society. Historiography largely ignored that human beings are part of the ecological web of life and depend on other species. In Damüls, inhabitants built networks consisting of potato, cattle, grassland, forests and wooden farmhouses, cow barns and haystacks to mediate environmental fluctuations. When the valleys were industrialized, Damüls nearly vanished as a permanent settlement area. Tourism was the solution to compensate income losses in agriculture. In the beginning, the construc-

¹²⁰ Ibid., 58.

¹²¹ Ibid., 63.

¹²² Ibid.

¹²³ White, Richard. 1995. *The Organic Machine. The Remaking of the Columbia River*. New York.

¹²⁴ Gross, *Wie das 1950er Syndrom*, 2012, 59-64.

¹²⁵ Ibid.

tion of tourism infrastructure was restricted by a lack of local capital and energy. Backed by state power, capital poured into the community in later decades. While the hotel refurbishment action and the national socialist regional development program had limited effects on the transformation of the community, unprecedented acceleration took place after 1945. After six decades of economic growth, Damüls was ranked as one of the five richest communities (in terms of financial power) in Austria at the beginning of the 21st century.¹²⁶ But growth left deep traces in both physical and social realms. Traditional land use and property patterns were transformed by ski lift operators and the regional government. »Nature« perception became dominated by commodification processes of land and its people – the tourist gaze, guiding not only tourist perception but also their practices. The topography itself was increasingly spanned by a network of ski lifts, ski slopes, roads, and hotels, fueled by energy produced elsewhere. Their purpose was to increase the economic performance of Damüls as a tourism economy.

What are the consequences of winter tourism for the future sustainable development of the community? As we have tried to point out, subsistence-oriented Damüls met the criteria of sustainable agricultural livelihoods for a long time. Its integration into the fossil-fuel based larger economy of the province led to a population decrease that in turn, led to labor scarcity and the demise of the subsistence pattern. Winter tourism became the new livelihood basis. The ensuing tourist boom does not meet the criteria for sustainable tourism, as it entailed massive, long lasting interventions into alpine ecosystems and threatened the cultural heritage of alpine agriculture.

As environmental historians, we see the possibilities of future sustainable development depending on actors' understanding of the past. We know that cultures of recollection frame our horizon of experience. We know that the cognitive act of perception of the present depends on past experiences.

If we understand sustainable development as a regulatory idea, a concept used to project from the present into a desirable future, visions about desirable futures are needed. Too often, however, stakeholders make decisions to maximise the short term profit on the basis of contemporary knowledge while ignoring or discounting long term consequences.¹²⁷ Historical narratives are an important contribution to the knowledge base for future decisions, bearing the potential to widen the framing for desirable futures beyond the usual 'technical adaptation to climate change' so typical for current discussions about winter tourism policy.

Framing the environmental history of Damüls as a history of commodification of Alpine »nature« reveals a basic feature of such economies. David Harvey argues that »some sort of »outside« is necessary for the stabilization of capitalism [...], it] can either make use of some pre-existing outside [...] or it can actively manufacture it.«¹²⁸ Focusing on tourism development in Damüls illustrates that »the outside« of tourism originally was »nature« transformed by agriculture. While tourism can be considered as a »niche activity« in the first half of the 20th century, counterbalanced by a powerful farming sector, tourism actors integrated more and more aspects of »the outside« into its utilization processes. Even the hay harvests and dairy farming are nowadays considered as management activities to maintain »beautiful landscapes«. Furthermore, plant biodiversity, hydrology, land property, topography gradients and soils became commodified. Winter seasons no longer follow the timing of »nature«.¹²⁹ Rather, they are »opened« by a push on the button of the snow-system. Local stakeholders worked incessantly against local limitations by technology and capital but also against growing competition. The ski lifts and snow-systems in Damüls turned the wheel of local development away from its agricultural roots, challenging efforts of sustainable development by creating technological systems with their inherent need of energy and their transformative interventions into local ecosystems and social systems alike. Damüls as an agricultural village allowed a meagre livelihood for its inhabitants, which became increasingly challenged during moderniza-

¹²⁶ URL: <http://www.gemeindebund.at/rcms/upload/news/RankingdreihstenGdesterreichs.pdf?PHPSESSID=a3ce71d382> (2/1/14).

¹²⁷ Haberl, Helmut et al. 2013. *Long-Term Socio-Ecological Research (LTSER). An Emerging Field of Research*. In: Singh, Jit Simron. 2013. *Long Term Socio-Ecological Research. Studies in Society, Nature Interactions Across Spatial and Temporal Scales*, Dordrecht, 30-31.; Winiwarter, Verena and Knoll, Martin. 2007. *Umweltgeschichte. Eine Einführung*. Köln, 312.

¹²⁸ Harvey, *Imperialism*, 2003, 141.

¹²⁹ Prudham, *Taming trees*, 2002, 641-642.

tion and industrialization of the valleys. But one can safely assume that a net yield of solar energy was created, as otherwise, Damüls' agriculture would not have been feasible on the longer term. The tourism destination Damüls, however, depends heavily on the provision of energy and capital brought in by visitors from afar. Therefore, a sustainable future based on winter tourism seems hardly possible for Alpine communities such as Damüls. Its history of commodification of Alpine »nature« is a cautionary tale of side-effects, feedback loops, technological and social lock-ins, showing the challenge of creating sustainable livelihoods in fragile Alpine settings. Tourists are novelty seekers when it comes to slopes. This has led to a more and more intense use of fragile land in the past. It could also be the road to a sustainable future, if new, gentler ways of experiencing winter landscapes became popular. Demographic change in Europe increases the challenge, as the young and middle-aged are getting relatively fewer. A sustainable society needs to decrease its use of fossil fuels. Which kind of resource-conscious bodily pleasure gentle both to the tourist and to the local and global ecosystem could be advertised and popularized to make Alpine winter tourism more sustainable? Looking at history helps to see that things might be different in the future, as they were different in the past.

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SAŽETAK

Svake zime, na stotine tisuća skijaša posjeti alpska naselja, kako bi doživjelo i osjetilo alpski krajolik. Na primjeru mjesta Damüls, dobro poznatog skijališta u zapadnoj austrijskoj pokrajini Vorarlberg, možemo pokazati kako je razvoj zimskog turizma doveo do ogromnog ekonomskog rasta, ali i ogromnog utjecaja na alpski krajolik. Cilj nam je ispričati povijest okoliša Damülsa kroz zadnjih dvjesto godina, analizirajući strategije komodifikacije »prirode« i imovinskih prava. Članak istražuje kako su se stanovnici nosili sa promjenom ekoloških i ekonomskih uvjeta u predindustrijsko doba. Stanovnici su živjeli uz ograničene resurse, tipične za agrarno društvo. Kada su industrijalizirane doline, Damüls je gotovo nestao kao stalno naselje. Tada su turisti zakoračili na scenu, pokrenuvši kotač lokalnog razvoja u drugom smjeru u nekoliko koraka. U devetnaestom stoljeću su putopisci i fotografi uveli su Damüls u mentalnu topografiju tragača za urbanom zabavom. Razvilo se romantični turistički pogled na Damüls. Od 1930-ih naovamo, savezne vlasti su otkrile ekonomsku moć turizma za poboljšanje nacionalne trgovinske bilance i potaknule transformaciju i razvoj turizma. Iako je međuratnom razdoblju utjecaj turizma bio skroman zbog ograničenog kapitala i dostupnosti energije, ta ograničenja su ukinuta kad je stigao sindrom 1950-tih. Ovaj treći korak karakterizirao je masivni građevinski rast, utječući i na naslijeđenu imovinu i nekretnine samog mjesta. Namnožile su se žičare, hoteli, ceste, a kasnije i sustavi za snijeg i skijališta, omogućavajući udoban i lagan pristup visokim alpskim krajolicima. Održavanje ove infrastrukture zahtijeva energiju i kapitalna ulaganja, ali i uzima danak održivosti. Agrarni Damüls proizvodi vrlo skromne viškove hrane, ovisno o raspoloživoj proizvodnji. Turistički Damüls zato guta energiju u pružanju usluga turistima, kako bi donio mnogo veći gospodarski dobitak. Održiva budućnost alpskih naselja zahtijeva nove oblike upravljanja alpskom prirodom i okolišem.

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