

Swiss Moorland Landscapes and the Significance of Economic and Technological Change. Origins, Threats and New Patterns of Use

Switzerland has 91 “moorland landscapes of national significance and remarkable beauty”, the only landscape type to enjoy constitutional protection (since 1987). According to the official definition of the Swiss *Nature and Cultural Heritage Protection Act* (NHG) “a moorland landscape [is] (...) a near-natural landscape that is strongly characterised by moors. Its moor-free sections are closely interrelated with the moors in an ecological, visual, cultural or historical sense” (Article 23b §1 NHG). According to this definition, moorland landscapes do not consist solely of moors (which usually account for only a small proportion of a moorland landscape), but also moor-free sections, which are usually strongly influenced by man. The protected moorland landscapes are therefore not natural landscapes, but *near-natural* cultural landscapes, more or less strongly influenced by man. In spite of their protection under the constitution, their preservation, which is also the preservation of visual, cultural and historical values, is by no means secure: over-use, under-use, insufficient maintenance of buildings as well as the sum of small, damaging interventions constitute a looming threat on moorland landscapes¹.

The Swiss view of a moorland landscape as a near-natural cultural landscape is a unique expression of a holistic perception, in that the combination of natural, near-natural and cultural elements is perceived and acknowledged as aesthetically attractive. This specific perception fuels the attempt to preserve these landscapes with the aid of legal measures, and shapes a corresponding research perspective on moorland landscapes as cultural landscapes that have long been influenced and used by man. The character of the moorland landscapes of national significance has, for the most part, been shaped by centuries of human use, especially for agriculture and forestry, and the respective infrastructure.

This holistic understanding of moorland landscapes contrasts with biological or landscape ecology definitions, according to which several interrelated moor biotopes form a moorland landscape². This approach studies the biological and ecological functions of moorland landscapes, especially as habitats for flora and fauna. Accordingly this

viewpoint only includes some of the aspects that make moorland landscapes nationally protected objects in Switzerland.

As our research shows, Swiss moorland landscapes are important to society in many ways. A distinction can be made between material and non-material aspects of their significance³: moorland landscapes are used in farming and forestry, for hunting, for military purposes and for tourism. They serve as locations for infrastructure, such as paths and roads, buildings and electricity lines (material significance). They also have a symbolic or non-material significance: they serve as sources of inspiration and knowledge (*e.g.* literature, art, research), also having an important emotional and aesthetic role (*e.g.* recreation, leisure).

There are different driving forces behind this wide range of significance that moorland landscapes have for man. This study focuses on the economic and technological driving forces that shaped the moorland landscapes in the past and the ones that are active today, the ones that are a potential threat to them, at the same time helping to secure them. One of the aims of this study is to identify these driving forces. Adapted economic and technological innovations and new forms of use that contribute to the preservation of moorland landscapes will also be examined. The statements made in this study refer to Swiss moorland landscapes in general or, especially in the discussion of the typically natural, near-natural and cultural elements, to the local and regional level, based on the example of the UNESCO Biosphere Entlebuch (UBE) (**fig. 1**).

The origins of Swiss moorland landscapes – economic and technological driving forces

If we ignore the classical natural factors in the emergence of every type of landscape, the natural origins of most Swiss moorland landscapes mostly belong to the period since the end of the last Ice Age, about 10,000 years ago. As the glaciers retreated they left many hollows and impermeable soils behind. Moors developed in damp locations over thou-

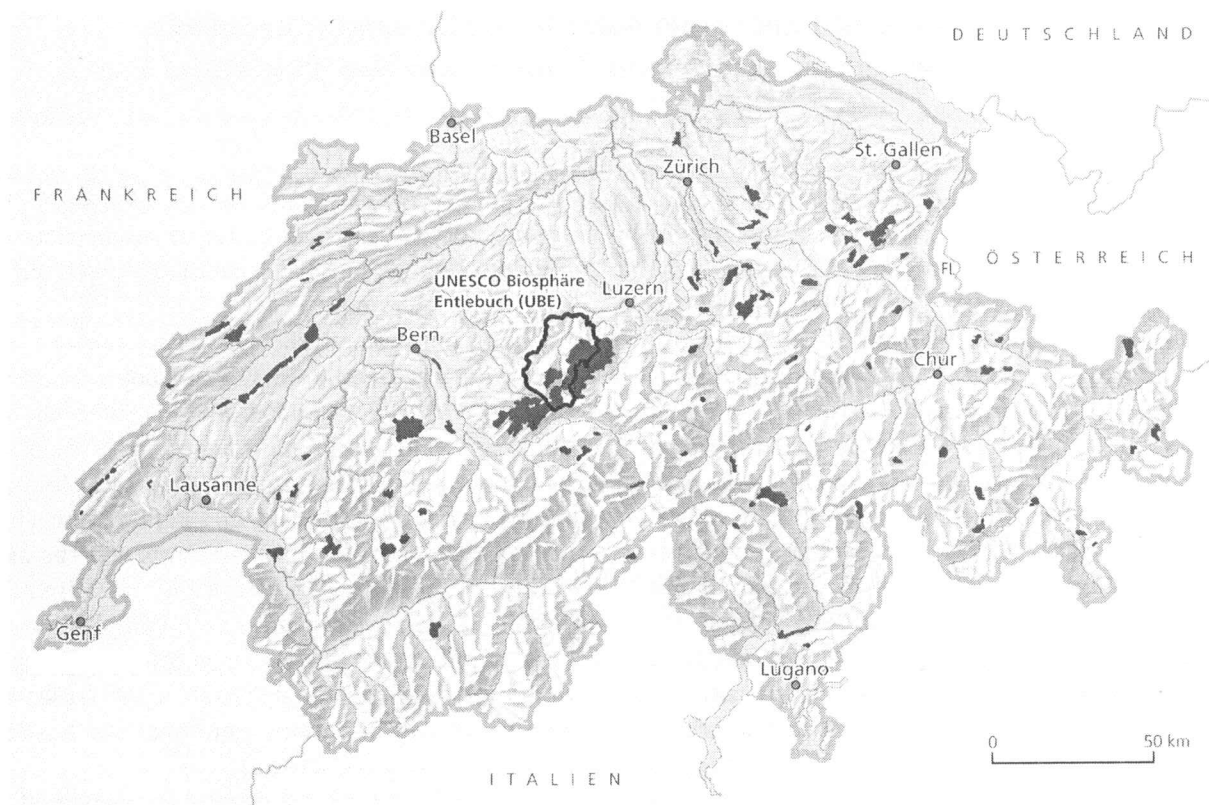


Fig. 1: Protected moorland landscapes of national significance in Switzerland and the location of the UNESCO Biosphere Entlebuch (UBE) (Cartography: R. Tillmann).

sands of years, and with them natural moorland landscapes. When the first large-scale forest clearing began in the lowlands and some valleys *ca.* 3,000 years ago, and the soils were increasingly used as pastures and meadows, extensive man-made fens developed. This process of fen creation continued into the 19th century and meant that, until the period of major improvements (from the mid-19th century on), a large proportion of the productive land in Switzerland consisted of natural or culturally formed moorland landscapes⁴.

An example of the late origins of fens, in particular, and moorland landscapes as defined in Swiss law, in general, is the deforestation for the acquisition of firewood for glass-making and charcoal production that took place from the 1720s to the 1860s, and the subsequent use of these areas as pastures and meadows in the Flüeli-Sörenberg area of the UBE (fig. 2). This affected the two largest moorland landscapes in Switzerland. The cultural influence on these moorland landscapes is correspondingly recent, from 150 to just under 300 years old (fig. 3). The other parts of the moorland landscapes in Entle-

buch are also relatively young. Comprehensive settlement of the UBE began about 800 years ago and was only completed in the 18th and 19th centuries. The moorland landscapes in Entlebuch, which are all strongly culturally influenced, have a correspondingly short history.

The demand for wood for energy and as a building material, as well as the demand for land for pastures and meadows, were the main economic driving forces for the development of culturally formed moorland landscapes in Switzerland as late as the 19th century. The contemporary state of technology in agriculture and forestry has led to the development of many moors and prevented existing moors from being destroyed.

Damage and destruction of moorland landscapes from the 18th century until the development of moor protection measures

While various human uses made a major contribution to the creation and spread of moorland

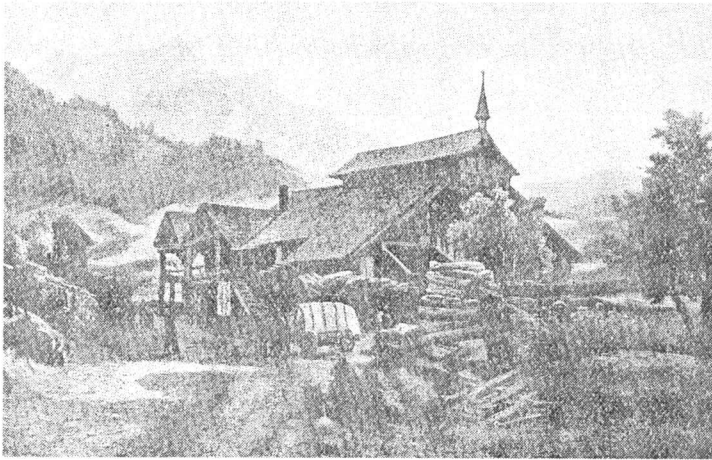


Fig. 2: Former glassworks at Thorbach near Flühli. Drawing made between 1837 and 1869 (from: Emmenegger 1930, p. 108).



Fig. 3: Moorland landscape of Glaubenberg. In the foreground: Sörenbärgli, which originated after deforestation to produce firewood for glassworks (Photograph: Th. Hammer).

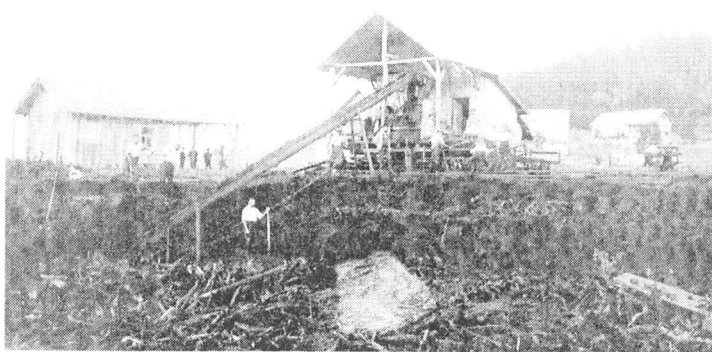


Fig. 4: Peat harvesting in Mettelimoos in the UBE. Photograph of 1918 (from: Huber 1994, p. 81). In 1918/19 alone, ca. 6,300 t. of peat were harvested in Mettelimoos.

landscapes well into the 19th century, other uses, such as the harvesting of fuel from moors and improvement, led to the damaging and even destruction of entire moorland landscapes, starting as early as the 18th century. With regard to economic and technological driving forces, four significant, overlapping phases can be distinguished. Firstly, the harvesting of peat from bogs as a source of energy (*ca.* 18th to mid-20th century), secondly, the phase of major improvements (mid-19th to mid-20th century), thirdly, the phase of mechanisation and motorisation of agriculture and production-oriented agricultural policy (since *ca.* the mid-20th century) and, fourthly, the phase of accelerated settlement and infrastructural development since the middle of the 20th century.

The phase of peat harvesting from bogs for energy production

The destruction of central elements of Swiss moorland landscapes, *i.e.* the bogs, began in the 18th century, especially in densely settled and increasingly deforested areas⁵: Population growth, and later, industrialisation, led to a scarcity of the most important fuel of the time, wood. Although the use of coal became more widespread, this remained relatively expensive, especially for the rural population. In the late 19th and early 20th century, the harvesting, drying, storage and sale of peat developed from a subsistence activity to a trade (**fig. 4**). For a long time, dried peat was “the coal of poor families”.

Because of the growing scarcity of wood as a source of energy in the first half of the 20th century, new technological possibilities (*e.g.* excavators, rail transport) and governmental subsidies for peat harvesting, the destruction of the bogs and moorland landscapes accelerated, especially in the Jura and the Swiss plateau (Mittelland)⁶. Commercial and industrial peat harvesting led to the creation of roads, harvesting installations and buildings, so that some parts of the moorland landscapes had quite a different appearance from today.

After the Second World War and with



Fig. 5: Peat scar in Mettilmoos, UBE. Peat harvesting changed the landscape dramatically in many places. Today only peat scars or isolated surviving turf sheds are still visible (Photograph: Th. Hammer).

the advent of mineral oil products as the main source of energy, peat energy production became less important. Peat industry declined and ultimately vanished. Harvesting installations and buildings were dismantled, and peat scars and unnatural surface forms are the last remaining landscape evidence of peat harvesting (**fig. 5**).

The phase of major improvements

While peat harvesting affected the bogs in particular and only caused landscape change in specific locations, major improvement measures in Switzerland from the 19th to the mid-20th century led to a large-scale, extensive transformation of natural moorland landscapes. During this period most rivers in the lowlands, in the river deltas and in the valleys were canalised, thus draining the large natural moorland landscapes. The successful correction of the river course in the Linth Plain with the construction of the Linth Canal between Lake Walen and Lake Zürich, in 1807-1816, served as a model for many large-scale projects.

The draining of valley floors, as well as the drainage and reclamation of pasture and arable land began to be practised on a large scale. Similar meas-

ures were undertaken in the side valleys. As a result almost all of the natural moorland landscapes in Switzerland vanished. Only a few small natural moorland landscapes on lake margins, in river deltas and floodplains and some isolated moor biotopes remain.

This situation dramatically altered the Swiss moorland landscapes. The natural moorland landscapes in the lowlands and valleys virtually disappeared. What remained were the culturally formed moorland landscapes, especially in hilly areas and the Alpine foreland. The improvement measures affected the plains and lowlands, and not the hilly regions.

Some of the most important driving forces of the improvement measures were the scarcity of arable and pasture land, food, and space for settlement and infrastructure for the growing and increasingly prosperous population. Thanks to the combination of technological driving forces (*e.g.* steam engines, railways, excavators) and political driving forces (*e.g.* federal and cantonal subsidies), the landscapes in the valleys, plains and river deltas took on an entirely new character. After thousands of years of natural development, determined by nat-

ural rhythms, they changed rapidly, within the space of a few decades. It was particularly the elimination of natural rhythms that had a central political motive: improvement was meant to limit natural hazards, such as flooding, and to fight epidemics, in order to secure and expand the basis of livelihood for the Swiss population.

One example of the large-scale projects is the correction of the Jura watercourses between 1868 und 1973⁷. This altered the so-called three-lake region around Lakes Biel, Murten and Neuchâtel (the Three Lakes) on an extensive scale, affecting several hundred square kilometres. The correction of the Jura watercourses, the largest improvement project in Switzerland, involved the reduction of river levels and groundwater levels, the alignment of the levels of the three lakes, the construction of river canals and weirs, a system of drainage channels, and the reclamation of land for arable and pastoral farming as well as for settlement and infrastructure. The combination of drainage, soil improvement measures, amalgamation of farms and estates, mechanisation and motorisation, and the use of artificial fertilisers meant that the largest and most natural moorland landscapes in Switzerland were transformed into a very modern, intensively cultivated agricultural landscape within about a hundred years. What was formerly the largest continuous moor area in Switzerland is now the country's largest vegetable-growing area.

The phase of agricultural mechanisation and motorisation and production-oriented agricultural policy

Production-oriented agricultural policy was initiated during the Second World War and expanded during the 1950s and 1960s. Only in combination with this agricultural policy did the improvements described above make widespread mechanisation, motorisation and intensification in agriculture possible, not only in the Swiss plateau (Mittelland) and in the valleys, but also in areas that were marginal in agricultural terms and not affected by improvements. The intensification of agriculture also began to have an impact in the Jura and the Alpine foreland, *i.e.* areas with culturally formed moorland landscapes: buying-in extra feed, straw, fertilisers, pesticides and insecticides as well as the use of fertilisers and pesticides caused livestock numbers and the productivity of meadows, pastures and arable land to increase. Roads and infrastructural buildings were

expanded and improved, drainage measures were carried out (especially close to farms and on easily accessible fields), and intensive agriculture was also introduced in mountainous moor areas. The intensification of farming began to change the moorland landscapes and to threaten the remaining moors.

However, the production-oriented agricultural policy also led to greater extensiveness in some areas of farming. On some inaccessible, low-yielding land there was a decline in extensive forms of production, as well as maintenance work, which led to the development of incipient scrub and forest encroachment on the fens, as well as other types of landscape. Overall the agricultural policy of the time, which was motivated by the general boom in industry and the service sector, created a threat to the remaining moorland landscapes in Switzerland.

The reforms in agricultural policy since 1991, with the introduction of ecological direct payments, are intended to redress this threat, among other things: ecologically valuable and unproductive areas – which include the man-made fens – are to be used extensively, maintained and preserved with the aid of direct payments, and thus removed from the reach of market pressure for intensification or extension.

The phase of accelerated development of settlement and infrastructure since the mid-20th century

The fourth important phase in the damaging and destruction of Swiss moorland landscapes is associated with the expansion of settlement and infrastructure in rural areas since the mid-20th century. The overall economic upheaval after the Second World War changed more than agriculture. New land-use forms appeared in rural areas. The most important new, developing land-use, leisure and recreation, finds its expression in the rapidly growing tourist economy. Hiking, skiing and demand for newer outdoor activities, such as biking and snowshoe hiking, led to the expansion and intensification of settlement and infrastructure, especially in moorland landscapes: the construction of second homes, the improvement of existing roads and paths and the construction of new routes, the development of ski-lifts, chair lifts and cable railways, telephone and electricity lines, tourist huts, picnic areas and smaller infrastructural installations, such as all types of signposts, led to changes in the moorland landscapes.

One indicator that the moorland landscapes outside the areas where major improvements took



Fig. 6: Example of a natural element: Bog at Wagliseiboden, Habkern-Sörenberg moorland landscape, UBE (Photograph: D. Raemy).



Fig. 7: Example of a near-natural element with traditional cultural elements: litter meadows in the Klein Entlen moorland landscape (UBE) with disintegrating litter sheds for litter storage, UBE (Photograph: R. Meili).



Fig. 8: Example of modern cultural elements: Stäldili inn in the moorland landscape of Glaubenberg with access road, UBE (Photograph: Th. Hammer).

place in the 1950s-1970s have changed dramatically, can be found in the grounds for the non-inclusion of 238 landscapes in the inventory of moorland landscapes of national significance. Following stringent analysis and evaluation of the original 329 potential moorland landscapes of national significance, only 91 landscapes (with a total surface of 926 km² or 2.2% of the surface of Switzerland) were included in the inventory. The main reasons for rejection have to do with the intensification of agriculture and the development of settlements and infrastructure in the moorland landscapes.

Certain preliminary conclusions can be drawn: within about one hundred years, major improvements, the intensification of agriculture and the expansion of settlements and infrastructure meant that while in the mid-19th century moorland landscapes covered a quarter to a third of the surface of Switzerland⁸, by the end of the 1980s only *ca.* 2.2% of the country was covered by the remaining moorland landscapes, *i.e.* at that time, they represented only 7-9% of the original surface.

Elements that are worth protecting according to the conservation laws of moorland landscapes

Since improvement measures, the intensification of agriculture and the changes in settlement and infrastructure particularly affected the Swiss plateau (Mittelland), the valley floors and areas visited by tourists, moorland landscapes in the rural, thinly populated and inaccessible hills of the Jura and the Alpine foreland were most frequently preserved in the sense of the legal definition of moorland landscapes that are worth protecting. These are also the areas that were included in extensive agriculture at a relatively late stage, often only in the context of the population growth in the 18th and 19th centuries. Thus many of the protected moorland landscapes, together with the elements they contain that are considered to be worth preserving, are fairly young. A typical example of this development is provided by the moorland landscapes in the UBE.

Moorland landscapes of national significance contain three distinguishing groups of elements: natural, near-natural and cultural.

- **Natural elements** are those elements that were created without the influence of man, *e.g.* natural fens, bogs, rock formations, sur-

face forms and natural watercourses/water bodies (fig. 6).

- **Near-natural elements** include pastures, meadows, timber forests, hedges, fruit trees and fens created and maintained by human influence. Typically, near-natural elements were created by human uses and continue to exist because of maintenance measures. However, natural processes continue to have central significance for the condition of these elements (fig. 7).

- Natural processes also affect the third group of elements, **cultural elements**, but these natural processes are not utilised; on the contrary, as far as it is possible, they are suppressed (e.g. prevention of the natural erosion of paths). Paths, roads, telephone and electricity lines, agricultural buildings, such as hay barns and houses, as well as tourist facilities such as restaurants and hostels, and/or military infrastructure are cultural elements to be found in many Swiss moorland landscapes (fig. 8).

However, not all natural, near-natural and cultural elements of Swiss moorland landscapes benefit from protection. Only the elements that contribute to the desired character of the landscape in question do. In principle all moors of national significance are protected. All other important elements that are worth preserving are listed in the inventory description for each moorland landscape.

Threats to the moorland landscapes since the beginning of their legal protection

The acceptance of the petition for the protection of moorland landscapes of national significance in 1987 does not, however, mean that moorland landscapes can also be preserved in their entire, historically evolved individuality. The current threat to the moorland landscapes is no longer due to large-scale infrastructural projects, or a marked intensification of agriculture, but to the *sum of many looming changes*⁹. This includes selective and gradual changes in agricultural and forestry uses, as well as slight over- or under-use of fens, the decay of historical buildings and fencing, extensions to and new uses of existing

buildings, infrastructural improvements (e.g. paths, roads, skiing facilities) and many small-scale, often unconscious interventions, such as the filling-in of dolines or the levelling of rough areas. There are also external effects, such as the use of fertilisers outside the moors, which can adversely affect the moors through run-off, or long-term effects of interventions in the past, e.g. drainage measures. Traditional cultural elements, such as the haystacks, which were formerly raised in order to store litter, are only used as museum pieces today (fig. 9).

Comprehensive evaluation commissioned by the federal authority responsible for moors 20 years after the introduction of moor and moorland landscape protection confirmed these general trends¹⁰. Although moor area loss (bogs, transitional moors and fens) was practically stopped (there was a decline of only 1% between 1987 and 2007), the qualitative decline of moors continued, especially because of drying out (due to drainage ditches and pipes that failed to be dismantled), scrub encroachment and reversion to forest, as well as fertiliser input from neighbouring fields. As a result of further drying out, around 10% of the area of bogs was lost. These are now reclassified as fens. Experts consider more than half of the newly erected buildings and circa two thirds of the newly made paths and roads to be detrimental to conservation aims.

It is quite a challenge to recognise and prevent the insidious changes that threaten the character of a moorland landscape. One possibility is to encourage technological and economic innovations that contribute to the preservation of the moorland landscapes.

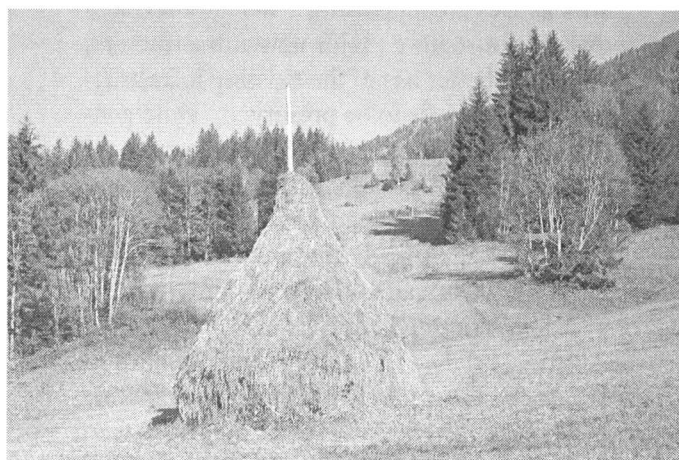


Fig. 9: Haystack near Sörenbärgli in the moorland landscape of Glaubenberg (Photograph: Th. Hammer).

Technological and economic innovation as an opportunity for the preservation of moorland landscapes

On the one hand, moorland landscapes are threatened by technological and economic change. On the other hand, technological and economic innovations can also help to preserve moorland landscapes and, with them, cultural heritage. The findings of the research project show that it is possible to differentiate between the material and non-material significance of moorland landscapes, as mentioned in the introduction, and these types of significance can point to potential for technological and economic innovations¹¹: namely (a) the production of goods, (b) land-use, (c) emotional significance and (d) spiritual inspiration and insight, which can all contribute, directly or indirectly, to the preservation of moorland landscapes:

(a) In moorland landscapes, many agricultural and forestry products are created, which not only generate income but also make an essential contribution to the maintenance of what is usually an indispensable land use. Technological improvements (*e.g.* adjustment of mowing machines to avoid producing scars on fens), the production of high quality goods (*e.g.* cheese, fruit products such as schnapps) and direct marketing of these products can help to promote specialised uses and thus to preserve the moorland landscapes.

(b) There is a degree of change taking place in land use. Agricultural and military uses are declining, while leisure and recreational uses are increasing. There are services that do not require major new infrastructure, that make better use of the existing infrastructure that deserves to be preserved, while generating extra income for the people running them. They can also contribute to the preservation of moorland landscapes. Examples include moorland landscape paths, field trips, farm holidays (agro-tourism) and training weeks in moorland landscapes.

(c) At the same time the emotional significance of moorland landscapes is changing. Until recently, moorland landscapes were seen as worthless landscapes, sometimes inspiring fear and unease. Today, however, they are increasingly perceived as valuable landscapes

in terms of ecology, aesthetics and cultural heritage¹². This new perception influences recreational and educational tourism in the broadest sense, as well as the conservation of cultural landscapes and their exploitation; so much more so as different groups in the population see the moorland landscapes as an important part of their cultural heritage, defining their identity.

(d) Last but not least, moorland landscapes are sources of inspiration and insight. Art and culture in the landscape (*e.g.* land art/art in nature, cultural routes/paths) and educational tourism facilities can also contribute to the preservation of moorland landscapes.

As the only systematically protected cultural landscapes in Switzerland, moorland landscapes are an interesting and recognised element of Swiss cultural heritage. Technological and economic innovations, if specially adapted, are not only possible, but essential. Extensive forms of land use and maintenance, as well as the natural, near-natural and cultural elements that are considered to be worth preserving are to be saved and used in the future. There are also other areas where innovations that are meant to fulfil the aims of moorland landscape conservation are conceivable: *e.g.* innovations in institutional regulations, which are described in a separate report¹³ and are not discussed here.

After the retreat of the glaciers *ca.* 10,000 years ago, extensive moorland landscapes developed in Switzerland on the Swiss Plateau, in river deltas and in the valleys. In the course of large-scale improvements in the 19th and 20th centuries, the majority of these moorland landscapes were utilised for agriculture and settlement. That is why there are no natural, primeval moorland landscapes left in these areas. The marginal hilly regions on the Jura and the Alpine foreland were not severely affected by these changes, as they were settled and subjected to extensive farming relatively late. This extensive agricultural use shaped the character of the Swiss moorland landscapes with their natural, near-natural and cultural elements that are worth preserving, which have been protected since 1987. These are remnants of those landscapes that partly survived the intensification of farming as a result of the industrially oriented agricultural policy since the 1950s.

The protected moorland landscapes are near-natural cultural landscapes and provide historical evidence of technologically and economically outdated land-use forms from the 18th to mid-20th centuries. Since the reorientation of agricultural policy towards more extensive methods (including encouragement of near-natural and organic forms of production) in the early 1990s, hopes for the preservation of the moorland landscapes are being placed in agricultural policy for the first time ever. However, this alone is not sufficient to preserve the traditional moorland

landscapes.

The diverse changes in the significance of these landscapes for the population provide starting points for the preservation and further development of moorland landscapes using new, extensive land-use forms. Their symbolic, aesthetic and regenerative significance is growing, with an increasing possibility of exploiting these aspects economically. Agro-tourism, educational tourism and health facilities, as well as high-quality local produce can contribute to the preservation of moorland landscapes.

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Notes

¹ Urs Hintermann, "Inventar der Moorlandschaften von besonderer Schönheit und von nationaler Bedeutung", *Schlussbericht. Schriftenreihe Umwelt*, 168, Bern, BUWAL, Bundesamt für Umwelt, Wald und Landschaft, 1992, pp. 143-146; Gregor Klaus, (ed.), *Zustand und Entwicklung der Moore in der Schweiz. Ergebnisse der Erfolgskontrolle Moorschutz, Umwelt-Zustand*, 730, Bern, BAFU, Bundesamt für Umwelt, 2007, pp. 34-58.

² Michael Succow, *Landschaftsökologische Moorkunde*, Berlin/Stuttgart, Gebrüder Borntraeger, 1988, p. 124.

³ Thomas Hammer, Marion Leng, "Moorlandschaften – Bedeutungswandel naturnaher Kulturlandschaften. Am Beispiel der UNESCO Biosphäre Entlebuch (UBE), Schweiz", *Allgemeine Ökologie zur Diskussion gestellt*, 10, Bern, Schriftenreihe der Interfakultären Koordinationsstelle für Allgemeine Ökologie (IKAÖ), Universität Bern, 2008.

⁴ Reto Locher, *Die Moorlandschaften der Schweiz*, Bern, BUWAL, Bundesamt für Umwelt, Wald und Landschaft, 1992/2, pp. 28-30.

⁵ *Ibid.*, pp. 30-33.

⁶ Eugen Probst, Hans Schmidlin, Nathanael Zimmerli, *Die Torfausbeutung in der Schweiz in den Jahren 1917-1921*, 4 Vols., Bern, 1923.

⁷ Hans-Rudolf Egli, Hans Weiss (eds.), *Das Grosse Moos. Vom Sumpfbereich zur modernen Agrarlandschaft*, Bern, GIUB, Geographisches Institut der Universität Bern, 2006; Matthias Nast, *überflutet – überlebt – überlistet. Die Geschichte der Juragewässerkorrekturen*, Nidau, Verein Schlossmuseum, 2006.

⁸ Reto Locher, *Die Moorlandschaften der Schweiz, op. cit.*, pp. 16-17.

⁹ Urs Hintermann, "Inventar der Moorlandschaften von besonderer Schönheit und von nationaler Bedeutung", *loc. cit.*, pp. 144-146.

¹⁰ Gregor Klaus (ed.), *Zustand und Entwicklung der Moore in der Schweiz. Ergebnisse der Erfolgskontrolle Moorschutz, Umwelt-Zustand*, 730, Bern, BAFU, Bundesamt für Umwelt, 2007.

¹¹ Thomas Hammer, Marion Leng, "Moorlandschaften – Bedeutungswandel naturnaher Kulturlandschaften. Am Beispiel der UNESCO Biosphäre Entlebuch (UBE), Schweiz", *loc. cit.*

¹² Alois Von Wyl, *Moor Landschaften – ein kulturelles Erbe*, Schüpffheim, Druckerei Schüpffheim, 1997.

¹³ Thomas Hammer, David Raemy, "Moorlandschaften – Nutzungs-, Schutz- und Konfliktregelungen. Am Beispiel der UNESCO Biosphäre Entlebuch (UBE), Schweiz", *Allgemeine Ökologie zur Diskussion gestellt*, 11, Bern, Schriftenreihe der Interfakultären Koordinationsstelle für Allgemeine Ökologie (IKAÖ), Universität Bern, 2008.

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COST is supported
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Framework Programme

Patrimoine, Images, Mémoire des paysages européens

Heritage, Images, Memory of European Landscapes

Paysages d'aujourd'hui / paysages d'autrefois, c'est à démêler leurs imbrications mouvantes que ce livre veut entraîner le lecteur, au cœur de grands enjeux de société dont témoigne ce patrimoine culturel que sont les paysages européens.

À travers le large panel sélectionné par les chercheurs, c'est la longue mémoire enfouie de l'histoire de l'Europe qui émerge dans les variations de la gamme profuse d'images et de représentations qui surgissent.

Les quelque 30 cas présentés illustrent aussi la pluralité des approches mises en œuvre dans des démarches de recherche et d'analyse devenues désormais inséparables des politiques de protection et de sauvegarde du patrimoine environnemental et paysager comme des pratiques de valorisation de ce bien culturel commun et non renouvelable.

How can we tell apart the shifting, interlocking patterns of the landscapes past or present – this is the challenge of this book taking the reader to the heart of the various societies of this cultural heritage that we call the European landscapes.

Across the broad panel selected by the researchers it is the long-trailing memory of European history itself that emerges in the profuse scope of images and representations.

By presenting some thirty cases the book displays the plurality of approaches undertaken in the research and analysis that has come to be part and parcel of the protection and safeguarding policies for the environmental and landscape heritage as well as the valorization practices of this common cultural non-renewable asset.

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Photographies et illustrations / photographs and illustrations : auteurs / authors.
Maquette de couverture / cover design : Lactitia Vitaux.

Collection *Histoire, Textes, Sociétés*
dirigée par Monique Clavel-Lévêque et Laure Lévêque



ISBN : 978-2-296-10887-5

47 €

© L'Harmattan, 2009
5-7, rue de l'École polytechnique, 75005 Paris

<http://www.librairieharmattan.com>
diffusion.harmattan@wanadoo.fr
harmattan1@wanadoo.fr

ISBN : 978-2-296-10887-5
EAN : 9782296108875