

# Mountain Pastures on Peatlands

Online Workshop for peatland actors in the Alps

08.02.2022

Report



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## 1. Introduction

Within the project „Alpine Peatlands and Climate Protection”, a workshop about “Mountain Pastures on Peatlands” was held on 08.02.2022 via Zoom.

A total of 36 peatland actors from five Alpine countries (France, Germany, Italy, Slovenia, and Switzerland) were discussing from a rather practical point of view different aspects regarding grazing on mountain peatlands. They shared their expertise and experience, discussed the problems in different regions, and shared possible solutions benefitting peatlands, climate, and farmers.

The workshop aimed to discuss the question of whether mountain pastures on peatlands are rather a threat or a chance for peatland, to foster international knowledge exchange, and to create a network among Alpine peatland actors.

## 2. Background

The project "Alpine Peatlands and Climate Protection" is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. It consists of four modules that focus on:

- testing methods to fill gaps about peatland area and status,
- investigating the possibilities of climate protection through adapted land-use management using grazing of Alpine peatlands as an example,
- enhancing the knowledge exchange among peatland actors across the Alps, and
- developing a methodology for the estimation of climate protection potential through peatland protection measures in the Alps.

The project started in July 2021 and will run until October 2022. The University of Applied Science Weihenstephan-Triesdorf (project leader: Matthias Drösler) cooperates with several partners in different Alpine countries, i.e. Angelika Abderhalden (Fundaziun Pro Terra Engiadina), Clemens Geitner and Martin Rutzinger (University of Innsbruck), Stephan Glazel (University of Vienna), Stefan Zerbe (Free University of Bolzano - Bozen) and Florian Siegert (RSS GmbH), in order to achieve the project aims.

"Alpine Peatlands and Climate Protection" evolved from the former projects "Peatlands in the Alps" (2020-2021, funded by the Bavarian Ministry of Environment and the EUSALP AG7 project "Impuls4Action" funded by ARPAF. Within “Peatlands in the Alps” several workshops were held to discuss with Alpine peatland actors the need for action in Alpine-wide peatland protection. In these workshops, the issue of grazing on mountain pastures was identified as a challenge that is very specific for mountain areas in general and the Alps in particular, that can be faced with quite different management options, and that still has considerable knowledge gaps. Thus, we decided to devote at least three workshops to this topic to allow in-depth discussions. The results of the second workshop are presented below.

## 3. Agenda

The workshop started with the presentation of the project "Alpine Peatlands and Climate Protection”. Afterward, all participants could introduce themselves briefly and some decided to present more of their work by showing some slides. After the break, two presentations on challenges and solutions in different Alpine regions were given followed by a discussion with

all participants. All discussions were accompanied by interactive Q&A sessions. At the end of the workshop, Angelika Abderhalden (host; Pro Terra Engiadina) gave a short synthesis.

**Table 1: Brief workshop agenda**

| Time          | Agenda item  |
|---------------|--|
| 13:30 – 14:00 | Welcoming and short presentation of the project “Alpine Peatlands and Climate Protection”          |
| 14:00 – 14:30 | Introduction round   |
| 14:30 – 15:05 | Short presentations and discussion   |
| 15:05 – 15:15 | Break  |
| 15:15 – 16:00 | Presentation by Julie Boserup and discussion: challenges and solutions from Switzerland            |
| 16:00 – 16:40 | Presentation by Ulrike Gamper and Cesare Lasen and discussion: challenges and solutions from Italy |
| 16:40 – 17:00 | Synthesis and closing words  |

## 4. Workshop procedure

### 4.1. Welcoming and introduction

After the technical introduction by the Elisabeth Schaber (host; University of Applied Science Weihenstephan-Triesdorf (HSWT)), Sylvia Holzträger (host; HSWT) officially opened the workshop and started with a brief presentation of the current project "Alpine Peatlands and Climate Protection" – in the framework of which the workshop is carried out (see chapter 2). She also showed examples of quite different management strategies of mountain pastures on peatland from various regions in the Alps.

Further, the interactive online tool AhaSlides was introduced to the participants. It allows the participants to answer questions and show real-time results in the workshop. Answers and predefined questions were provided in three different languages, which is a big advantage of this format in a multi-lingual workshop. To get used to the tool and also to get an overview of the backgrounds of the participants, three initial questions were asked, which are shown together with the responses in Figures Figure 1, Figure 2, and Figure 3.

Although not all of the participants answered the first two questions, it already showed that a considerable share couldn't assign themselves to one of the given types of working organizations. The remaining respondents are working in protected area management, nature conservation areas, or NGOs. Interestingly, more than half of the respondents answered that they have started to work with peatlands only in the last five years. It can be assumed that the topic has gained importance in the past few years.

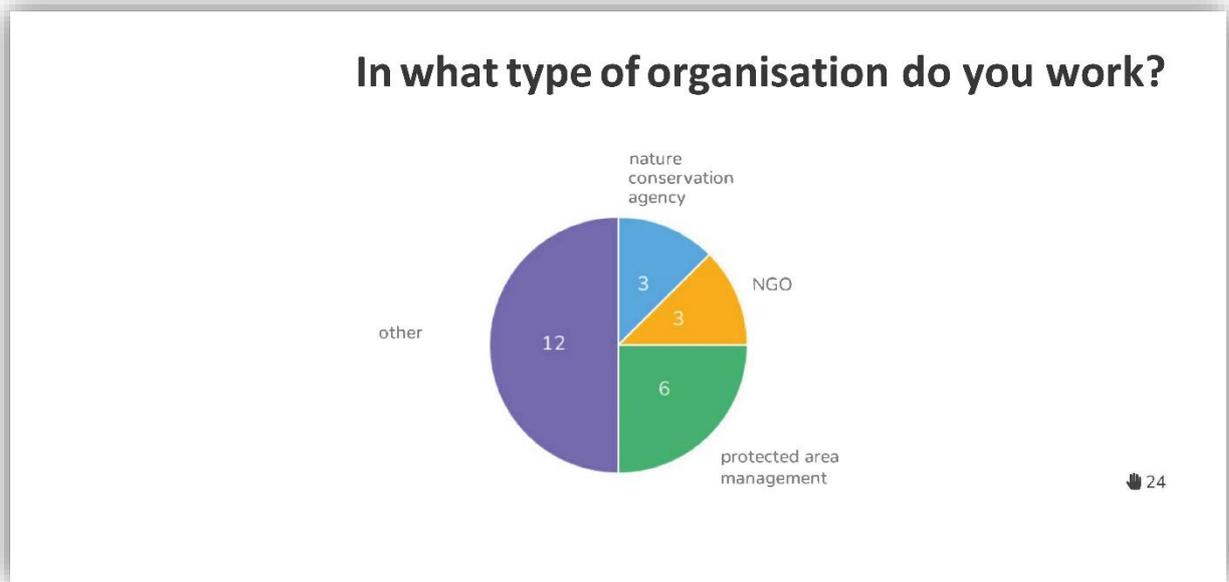


Figure 1: Type of working organization

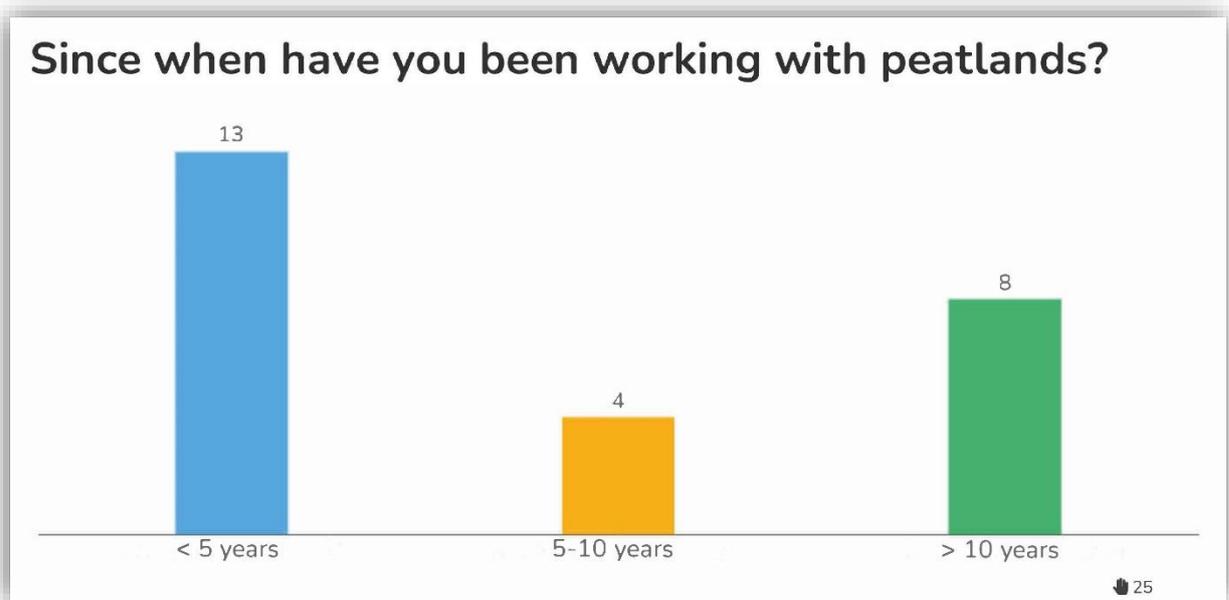


Figure 2: Years of peatland related working experience

## Where (region / province / canton) do you work with peatlands?



Figure 3: Working region

To not only have an overview of the participants' backgrounds but also to learn more about the individuals, all participants and hosts could then introduce themselves in an introductory round in which each had 60 seconds to answer the following three questions:

- Who am I?
- Where do I work?
- How is my work related to grazing on mountain pastures on peatland?

The introduction session helped all participants to get a brief idea of who else is taking part in the workshop and who has which expertise or thematic focus. It also showed how diverse peatland-related work in the Alps is – even if specified on the grazing topic. The participants are dealing with aspects reaching from grassland (pasture and meadow) management on peatlands incl. subsidies for farmers, explicit plans for the conservation of wetlands and more general protected area management, management of alpine grazing areas and ecological restoration of wetlands and peatlands over biodiversity enhancement and observation, flora mapping, hydrology of peatlands and water management for communities, climate protection and climate change effects on ecosystems and biodiversity to ecosystem services of (grazed) peatlands and the balancing of different interests.

The introduction also complemented the answers regarding the working organization from the live survey shown in Figure 1. People that chose the category “other” are mostly working in research institutions or private companies (e.g. planning/engineering office).

## 4.2.Short presentations

In this block, Sylvia Holzträger (host), as well as two participants (Hermann Dodier and Audrey Pagano), used the opportunity to briefly present their work and/or findings using some slides.

The first presentation by the host Sylvia Holzträger from the University of Applied Science Weihenstephan-Triesdorf. She presented the results of two Bachelor theses that were done at the HSWT investigating grazing management on different types of mires (fen-mire complex, sloping spring fen, raised bog, blanket bog) in varying degradation statuses in two different mountain pasture areas in Bavaria (Germany). The peatland grazing management differed in several aspects. Different breeds of cattle but also horses were used with different stocking rates and fencing systems. Also, the main aims of grazing management varied from biodiversity enhancement and peatland restoration to classic production of agricultural products. It can be summarized, that intensive grazing without specific fencing or vast areas outside the peatlands for the animals to go, leads to massive destruction of peatlands, whereas extensive grazing can even enhance biodiversity without considerably damaging peatlands.

Sylvia Holzträger also presented a summary of the discussion results from a former scientific-orientated workshop, in which the researchers also dealt with the issue of grazing on mountain peatlands. In this workshop, research gaps, management options, and communication strategies were discussed.

The following discussion focussed on the characteristics of grazing animals and their impact on peatlands. It was mentioned that horses have a very different behaviour – spending rather more time in peatlands – in comparison to cattle. Regarding cattle, the continuous increase of weight per unit has been observable over the past decades, which leads to more peatland degradation due to trampling. Apart from the weight, also the form of the hooves plays a role. Other aspects that were discussed regarded the animal trails in the pasture area as well as the duration that they have access to peatlands. As a direct consequence of grazing, the change of peatland hydrology and mineralization of the upper peat layer was stated.

In a second presentation Audrey Pagano (CEN Isère – Le Conservatoire d’Espaces Naturels d’Isère) and Hermann Dodier (FAI – Fédération des Alpes de l’Isère) presented their joint project about pastoral management on peatlands. The aim is to find management strategies to preserve the functionality of peatlands with the associated biodiversity while also meeting the needs of mountain pasturing. Thereby, three mountain pastures are monitored twice a year for two years. First results reveal the importance to tailor the management to the characteristics of the mires and the pasture areas. Further, the peatland-specific grazing management should not degrade other alpine environments that are part of the pastoral unit. Targeted fencing and the development of watering areas are useful tools. Further dialogues between actors are essential as well as financial incentives and human resources.

The work presented clearly showed that more areas in the Alps should be compared. However, in the discussion, Hermann Dodier stated that the data for direct comparison of different regions and systems of pastures are missing. He also pointed out the necessity to generate more knowledge about the ecological impact of grazing on the different peatlands.

### 4.3. Presentations on challenges and solutions from different regions

Julie Boserup showed us an example of extensive grazing of a peatland in **Switzerland** how a project to restore peatland vegetation via grazing is done successfully, and what the central points to keep in mind are. In the beginning, she mentioned that mowing is the best method

for agricultural use of peatlands. It is often believed that grazing is the best thing but the intensity is here crucial. What is working, is to have a good grazing concept and management. Mowing has a different impact on flora as grazing but it is also possible to enhance biodiversity when there is a good grazing concept. It has to be considered that methods in grazing are different which was pointed out in examples in *Magnocaricion* in Switzerland and France.

The example Julie Boserup showed, is a formerly drained bog, with now fen vegetation due to drainage. The bog was rewetted and a grazing concept was developed in order to restore the bog vegetation. Julie Boserup pointed out the importance of some principles if one wants to start a grazing project on peatlands for restoration. She explained that it is important to look in detail at the project side: What are the physical characteristics (e.g. slope, peat degradation, vegetation) and what are the needs of the grazing animals and the local farmer? Then it is important to clarify the aims that should be achieved via grazing. In the shown example, they want to reduce shrub density and restore the bog vegetation. But there are further points to take into account for a successful grazing project as the behaviour and needs of the animals can have side effects. It is important to include “non-wetland” areas, so the cattle can rest outside of the peatland. It is also important to observe the cattle and how they move within the pasture, what trails they can use and what new trails can be developed. It is also crucial to have places for drinking water for the animals in less sensitive areas, if possible outside the peatlands, as they will be affected by lots of trampling. Julie Boserup also points out the importance to choose the right animals (and breed) for a project (in the shown case “Highland cattle”) and the right animal density. She explained that the commonly used “livestock unit” is not working in extensive grazing in mountain areas and how it can be calculated better. Next to the animals, it is very important to find the right farmer and keep a good contact as it will be him/her who will check on the cattle, adapt management if necessary, and identify problems. She also made clear that monitoring the grazing effects and flexibility to adapt the management concept depending on the findings is crucial for long-term success.

Following the excellent talk, in the discussion was clarified why goats are not used for peatland grazing, even though they are known to be lightweight and known effective against shrubs in other areas: they do not eat other peatland species like sedges.

Ulrike Gamper and Cesare Lasen presented an overview of the situation of peatlands in mountain pastures in **Italy**. Ulrike Gamper described the circumstances in South Tyrol including its peatland inventory, the legal framework, and existing incentives for peatland protection or restoration. Cesare Lasen showed the reality of grazed mountain peatlands in other Italian provinces and regions, i.e. the Dolomites area in Northeast Italy (Belluno province and Friuli Venezia Giulia region).

Ulrike Gamper pointed out the aspect that it is important to take inventory of peatlands in order to protect them. She explained the existing peatland inventory in South Tyrol and how the known peatlands are protected. She especially pointed out a law to protect waterbodies established in 2016 and the protection under the Natura 2000 regalement. Ulrike Gamper demonstrated that different peatland types have different needs and therefore need different management or restoration actions. She explained the different management options and the respective incentives for implementing these measures. One example is litter mowing from autumn to early spring, an adapted peatland use, from which especially fen flora and specialized birds can benefit. However, Ulrike Gamper also showed problems, e.g. or bush encroachment or trampling in alpine bogs due to grazing.

In the second part of the presentation, Cesare Lasen pointed out the importance of the social and economic situation in the different Italian provinces and regions (e.g. Belluno) and its

influence on the protection and use of peatlands. In South Tyrol, agriculture plays a bigger role, more peatland knowledge is available, guidelines, obligations, and controls are more extended, and financial incentives are higher compared to the other Italian provinces and regions in the Alps. Therefore, there is easier in South Tyrol to improve peatland management and implement best practices. It is important to co-work with farmers to avoid losing more of the peatlands. Cesare Lasen stated that each peatland is unique and there are no general recipes for their restoration or protection. He also showed examples of the peatlands in the Italian Dolomites and their specifics. Further, he explained that grazing can be a threat to peatlands, especially in dry summers, like for example in 2018, when cattle go into the peatlands for water. But extensive pastures normally show no problems for the peatlands, but if damage is observed, there is a need for management up to even enclosure. Cesare Lasen also showed further threats peatlands in the Alps are facing, such as getting destroyed by constructions for tourism such as parking areas or artificial water reservoirs for skiing, but also drainage to increase production and water extraction for cattle. He also mentioned the good experience of mowing to reduce bush encroachment and restore fen biodiversity. He concluded that we have to work together to protect pristine peatlands but also the already damaged or changed ones. Last but not least, the positive influence by involving voluntaries for different protection and maintaining issues for enhancing biodiversity of peatlands should not be underestimated.

All presentations (short and long) were sent to the workshop participants alongside this workshop report via email.

## 5. Workshop results

Apart from the vivid discussions following the presentations, the main results were gained with the AhaSlides tool throughout the workshop.

In the following, all questions and respective results are presented.

In the first block, participants answered questions about their **reason(s) why the workshop topic is of relevance** for them (Figure 4), about their **interest in projects related to the workshop topic** (Figure 5), and the biggest **threats that peatlands** in the regions of the participants **are facing** (Figure 6).

The second block dealt with the **development of the mountain pasture management** in general (abandonment vs. intensification) (Figure 7), the **effects of grazing on mountain peatlands** (Figure 8), as well as the **problems and challenges that arise when peatlands, which are degraded by grazing, are restored** (Figure 9).

Most of the participants said that grazing is important for them as it supports and maintains biodiversity. But on the same side, there was also a lot of feedback that peatlands are negatively affected by grazing (see Figure 4).

Figure 5 shows the interest of the participants to engage themselves in a project on grazing management. They could indicate the intensity of their interest according to the focus of such a fictive project on a scale from 1 to 5 (x-axis) The y-axis shows the number of responses according to their agreement on the interest for the two different project focusses. The participants are generally interested in grazing management projects. Here, both aims, i.e. the

enhancement or introduction of grazing to enhance biodiversity as well as the reduction of grazing to protect peatlands seem to be similarly interesting to the participants. Whereas the mean value is higher for the enhancement of grazing for biodiversity, more respondents showed their agreement (values 4 and 5) to a project about peatland protection by reducing grazing (see Figure 5: Interest in and focus of future grazing projects

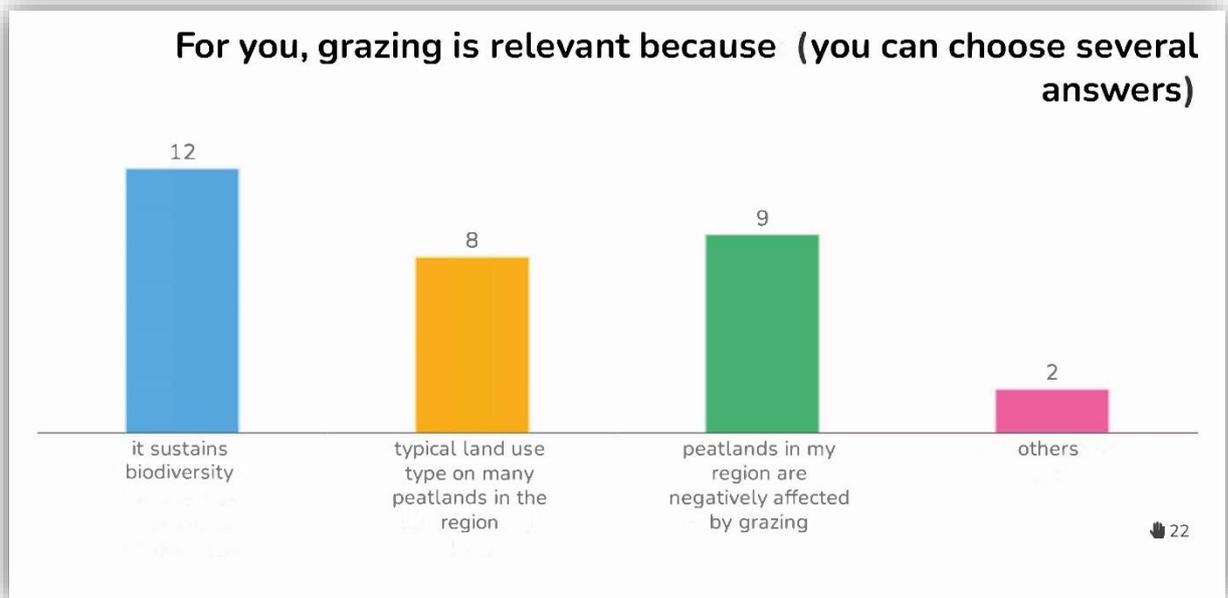


Figure 4: Reasons for the relevance of grazing

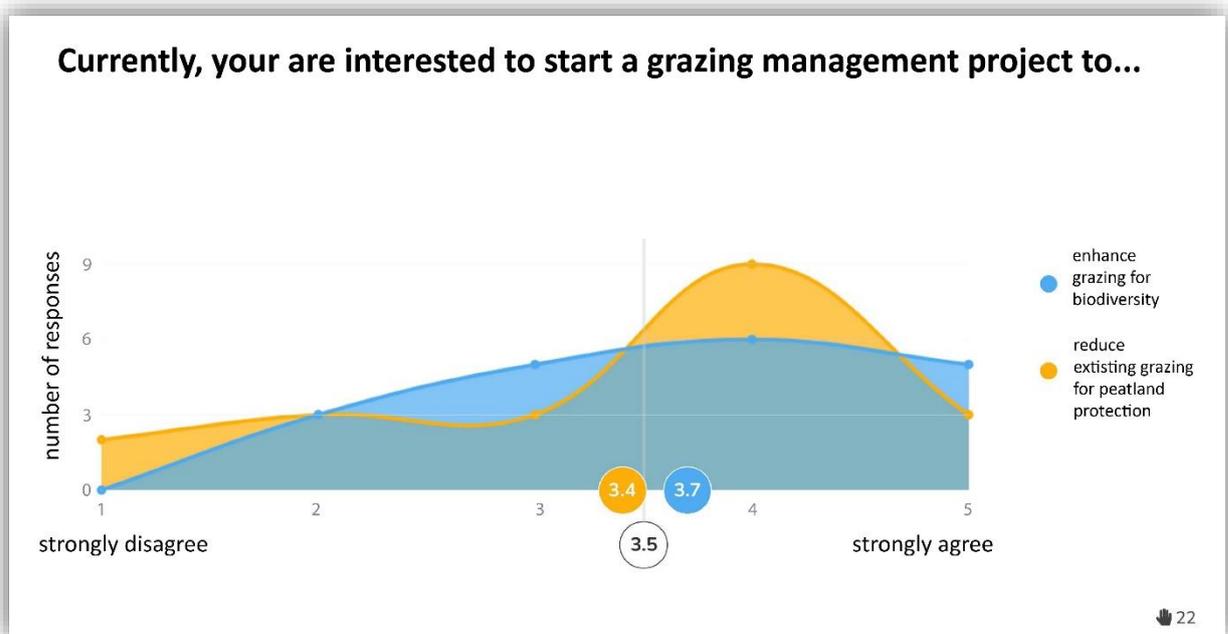


Figure 5: Interest in and focus of future grazing projects

The question of the main problems/threats for (mountain) peatlands were answered that the loss of biodiversity and drainage are the most important occurring problems (see Figure 6).

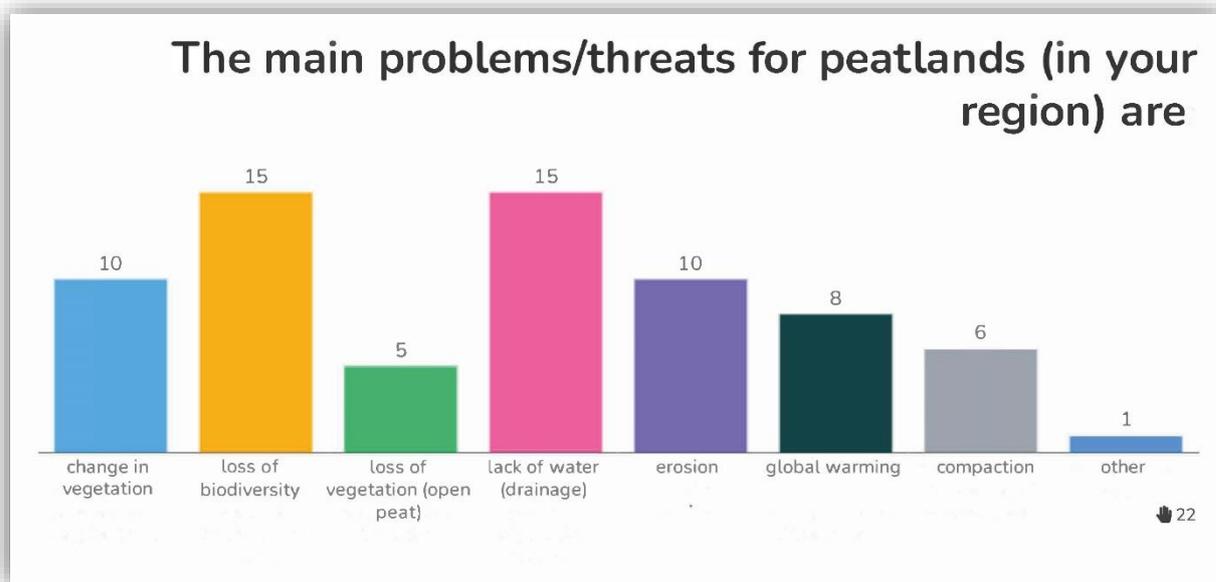


Figure 6: Problems and threats for peatlands

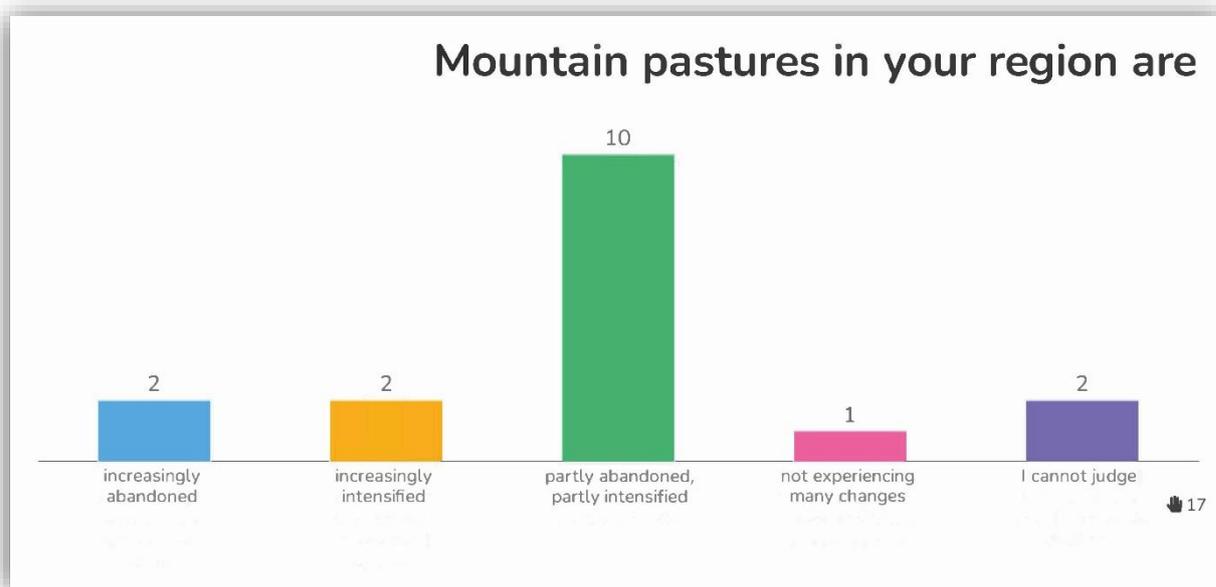


Figure 7: Tendency of pasture management development

Interestingly, mountain pastures in the regions of the participants seem to underly strong changes. Either individual mountain pasture areas are increasingly abandoned or increasingly intensified. According to the respondents, in most regions both cases are common. But it is getting clear that only a minor number of mountain pastures are managed similarly to the previous decades (see Figure 7).

The observable developments of peatlands in mountain pasture areas are depicted in Figure 8. The outstanding result is, that only one response stated that such peatlands in his or her region are rather intact. The threat by drainage was mentioned most often, followed by (negative) effects of bush encroachment and the threat by other human activities (see Figure 8).

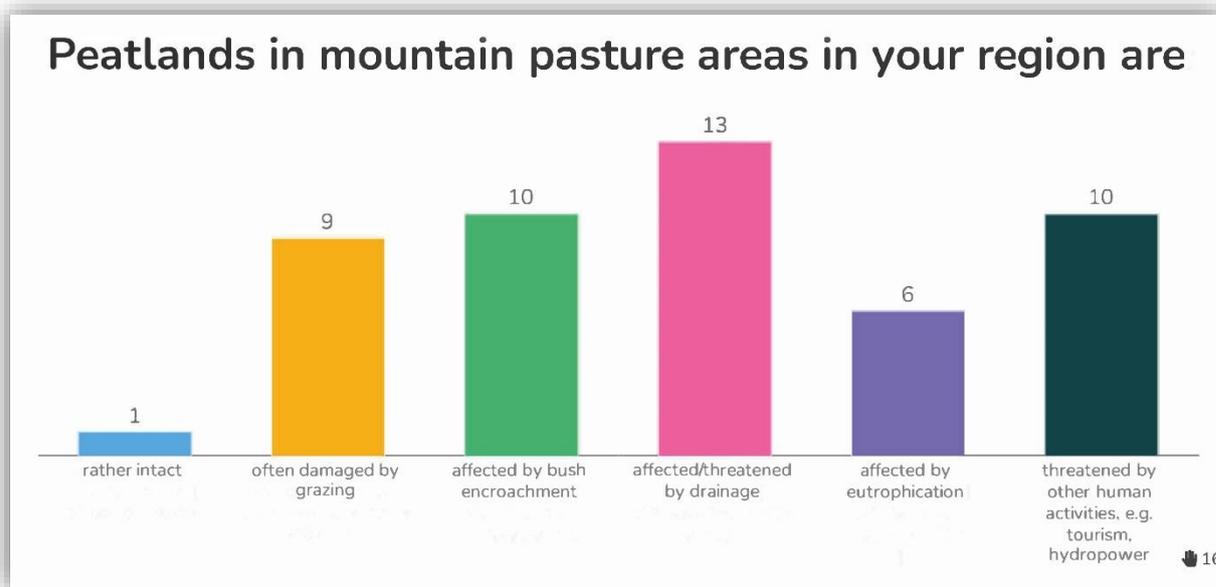


Figure 8: Development of peatlands in mountain pasture areas

As the biggest problems regarding the restoration of degraded peatlands due to grazing the lack of knowledge and the lack of funding seem to be the most important issues (see Figure 9).

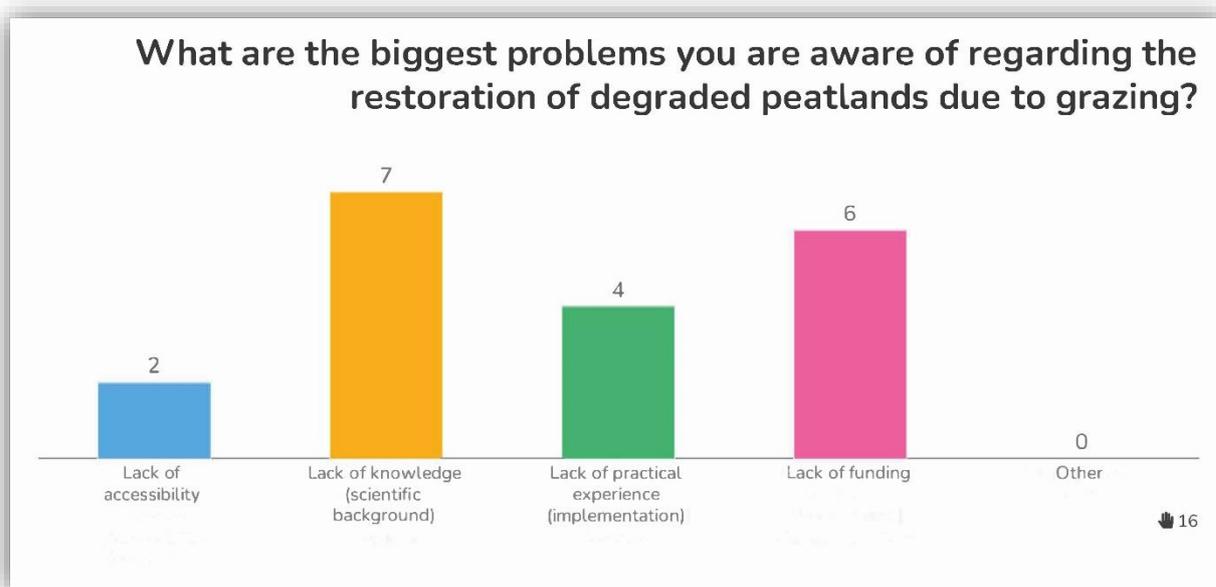


Figure 9: Restoration challenges



## 4. Conclusion

An online workshop cannot replace its equivalent in presence. However, it also holds advantages, since it is easier for experts that are based across the Alpine arc (and beyond) to take part in such an exchange event. Due to the high number of registrations, the need for knowledge exchange among peatland actors became once more clear.

The narrow thematic focus of the workshop helped to discuss many specific aspects of grazing on mountain peatlands. It was a great benefit that the workshop was held in three languages, as non-English speaking persons could contribute and gain knowledge in their mother tongue. However, the translation needed some extra time and in some cases, the precision suffered due to the abundance of technical terms, which slightly hampered the discussions.

Interesting work was presented on grazing in different areas of the Alps. The problems do not seem to be the same everywhere. The main topics discussed were the influence of weight, animal species or breeds, and grazing duration. It became obvious that there is still a need for research in this area. So far, no general recipe for the best strategy is existing. Management needs to be tailored according to local environmental characteristics, especially considering peatland type, soil properties, and vegetation. Furthermore, it became clear that land-use changes in the Alps lead to either abandonment or intensification of mountain pastures. Extensive grazing that either benefits the biodiversity of peatlands or at least does not harm them becomes increasingly rare. It was also mentioned that mowing is more beneficial (and less destructive) compared to grazing, and the other way round as well, which shows that the participants had quite different opinions on the issue. Thus, further research and observation from practitioners are surely needed.

We heard a lot about different projects, saw impressive pictures of damaged peatlands but also good implementation measures to avoid this damages such as fencing and installing cattle troughs. The importance of monitoring (e.g. soil and vegetation, movement and weight of grazing animals, grazing duration) was mentioned in several speeches. Also, it was stated that the contacts and involvement of landowners and farmers are vital.

It also became clear that most peatlands are not seen in a natural state. There are problems like drainage and loss of biodiversity observed all over the Alps. Restoration of these peatlands is important to keep their unique flora and fauna, but also to protect their peat body and therefore avoid carbon emissions. Even though it was not a big part of the workshop, it became clear that peatland restoration is still hampering because of a lack of knowledge and funding.

The workshop showed that there is a variety of peatland actors from different fields working on mountain peatlands, often affected by grazing. The exchange of knowledge, experience, and views is very helpful to understand the different challenges for the peatlands, the different aims, and their respective solutions.

By sharing this workshop report including all held presentations, the participants have the opportunity to recapitalize the workshop and have the opportunity to engage in further exchange with one another.