



Report on the workshop:

Scotland's peat bogs - rural community perceptions on Lewis

Anja Byg, Klaus Glenk, Paula Novo and Carol Kyle



July 2015







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Executive summary

This document reports on the process and the outcomes of the workshop 'Scotland's peat bogs: what do you think about them?' held in South Galson, Isle of Lewis, on the 8th of July of 2015 by researchers from the Scottish Rural College and The James Hutton Institute. The aim of the workshop was to gather views from people living in close proximity to peatlands in Scotland. It was part of a larger ongoing research project which is designed to further the understanding of how people perceive and use peatlands. The project aims to help with targeting restoration efforts by clarifying benefits as well as dis-benefits that are connected with different restoration options and to inform the development of the National Peatland Plan.

The workshop was attended by 14 participants from different age groups and backgrounds. Some were native to Lewis while others had only recently moved here, but all of them currently live on the Isle of Lewis. The workshop consisted of a series of different activities including individual, break-out group and plenary group activities, in which the uses, activities, benefits and conflicts around peatlands in Scotland were discussed as well as the participants' personal experiences and memories associated with peatlands. In addition, the importance of different peatland uses and benefits, and participants' preferences for future states of peatlands and for potential restoration locations were also discussed.

People's personal stories and memories of peatlands very often centred around peat cutting. The stories brought to light the rich traditions as well as meanings associated with peat cutting and other local uses. These are central to what was seen as the unique community spirit still alive on Lewis where people help each other. Also, peat cutting was seen as an important part of the local heritage and tradition with specific Gaelic vocabulary, storytelling traditions and associated proverbs. Despite their cultural importance, both peat cutting and grazing are nowadays less commonly practised than previously. This was seen largely to be due to changes in lifestyle and agriculture.

In the activity on benefits, uses and disbenefits/conflicts associated with peatlands, participants listed a large number of benefits and uses while fewer disbenefits were listed. Most of the benefits and uses listed could be classified as 'cultural'. This may seem surprising given the emphasis in the stories on peat cutting and grazing which can be classified as 'provisioning' services. However, it fits with the cultural importance of these activities and illustrates that production activities and cultural activities and benefits cannot always be neatly separated. Disbenefits were mostly associated with the boggy and extensive nature of peatlands, which can cause humans, animals and machinery to get stuck or lost. Conflicts were seen to arise between local land uses and outside conservation interests, as well as amongst local people with regard to controversial uses such as wind farms.

Not surprisingly, when participants were asked to indicate which were the most important peatland benefits and uses, peat cutting and grazing were the most frequently selected uses, closely followed by related benefits such as the social or community aspects linked to peat cutting and the 'free' nature of peat as a source of fuel. However, activities and benefits not linked to production, such as wildlife, habitat, peace and solitude, space, walking and other recreational uses were also regarded as important. Not all uses were important to everyone, and some were contested such as renewables.





Also, some participants questioned the notion of peat as a 'free' fuel source given the large amount of time and effort that need to be invested in its extraction.

When participants were asked how large a share of Scotland's peatbogs they thought should be in each of three possible ecological states in the future, answers varied and all three states were preferred by some participants. However, nine out of the 14 participants preferred to see more than a third of all peatbogs in Status 2, which corresponds to an intermediate ecological condition. This state is associated with human uses such as grazing and small-scale peat cutting and it therefore seems to fit with the importance of these activities for the workshop participants. It is also noteworthy, though, that some participants felt that this was the natural state for Lewis peatlands.

In the last workshop exercise, participants were asked where they would prefer to see potential peatbog restoration projects to take place. There was agreement amongst participants that no restoration was needed on the Isle of Lewis. Many of the participants were hesitant to point to locations in other parts of Scotland as they felt they did not know enough about these places to make such a decision or because they thought that it should be up to the individual communities to decide whether or not peatland restoration should take place in their areas. Some people did not think peatland restoration should happen at all. General criteria which were mentioned for the selection of locations for restoration included the degree of degradation (i.e. focus on most degraded areas) and areas that are only sparsely populated and where restoration activities therefore would not be very likely to interfere with local land uses.

The content reported here corresponds exclusively to the outputs of this workshop, as an interim step of the research process and not as an end product. Therefore, it does not contain any policy recommendations.

Acknowledgements: This work has been funded by the Scottish Government's Rural Affairs and the Environment Portfolio Strategic Research Programme 2011–2016. We are very grateful to workshop participants for making this work possible and to the Galson Estate Trust who provided the venue. We are also grateful to Rebekka Artz from The James Hutton Institute and Andrew McBride from Scotland's Natural Heritage for their sustained support.





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Figure 1. View from Urras Oighreachd Ghabhsainn office (Galson Estate Trust) Isle of Lewis

1. Introduction

This document reports on the process and the outcomes of a workshop held on the Isle of Lewis in July 2015 under the heading 'Scotland's peat bogs – what do you think about them?' The workshop was organised and implemented by researchers from the Scottish Rural College and The James Hutton Institute.

The aim of the workshop was to gather views from members of the public living in close proximity to peatlands in Scotland. This is part of a larger research project which aims at furthering the understanding of how people perceive and use peatlands, so it can be used to inform policy and land management decisions in peatland landscapes.

The workshop was one of a series of events and tasks based around Scottish peat bogs carried out as part of the Scottish Government Rural Affairs and the Environment Portfolio Strategic Research Programme. Two workshops had been held previously in Aberdeen in north-east Scotland to elicit people's perceptions and opinions regarding peatlands. The workshop held on the Isle of Lewis repeated some of the exercises that had been conducted with the participants in Aberdeen, and added some other exercises and questions based on the experiences from the first two workshops. Reports on the first two workshops in Aberdeen can be accessed at http://www.hutton.ac.uk/research/workshops. While the participants in the Aberdeen workshops generally had no particular connection to peatlands, it was hoped that the workshop held on the Isle of Lewis would give an indication of the views of those people who live in closer proximity to peatlands and who still rely on peatlands as part of their livelihoods. Together, the three workshops thus capture a variety of different perspectives on Scotland's peatlands.

Findings from the workshop series are going to be fed back to Scottish Government and Scottish Natural Heritage to inform national policies and actions on peatlands. In addition, they are used to help design a survey for the estimation of the value of key ecosystem services provided by peatlands. The project is expected to help when targeting restoration efforts by clarifying benefits as well as disadvantages that are connected with different restoration options and to inform the development of the National Peatland Plan (http://www.snh.gov.uk/climate-change/what-snh-is-doing/peatland-action/national-peatland-plan/). This information can be used to prioritize





restoration actions (e.g. by focusing on areas in which greater social value is to be obtained from restoration), or carry out cost-benefit analysis of restoration actions. This valuation work builds upon previous work on developing a framework for valuing spatially targeted peatland restoration (Glenk et al. 2014; Martin-Ortega et al. 2014)¹, which concluded that little is known about the social welfare impacts of peatland restoration and in particular how to spatially target restoration activities to maximise net benefits from investments in restoration. This research tries to address these knowledge gaps and will provide information to support the prioritisation of restoration. Furthermore, it will contribute to a better understanding of public support for restoration efforts more generally especially where these are long-term changes.

The remainder of this document is organised as follows: in section 2, the specific aims of the workshop are presented. Section 3 describes the stakeholder recruitment process and a brief description of workshop participants. Section 4 describes the workshop process in detail, while section 5 contains the results. Section 6 summarizes the key messages that emerged from the workshop and section 7 briefly describes the next steps of the research process.

2. Specific aims of the workshop

The workshop had the following specific aims:

- Gain an initial, general understanding of the meanings, experiences and memories that peatlands hold for people living in or near peatland areas;
- Identify the activities and uses that take place in peatlands and how these are perceived by local people;
- Understand people's perceptions about the benefits provided by peatlands. These were also referred to as the 'good things' that peatland provide, including material and immaterial benefits;
- Understand people's perceptions about dis-benefits associated with peatlands. These were also referred to as the 'negative things' about peatlands, including bad things peatlands produce, bad thing that happen in peatlands, and conflicts that emerge around peatlands;
- From the benefits produced by peatlands and their uses, identify which ones are seen as the most important and why;
- Elicit people's opinions on what proportion of peatlands should be maintained in which states in the future;
- Get an indication of people's spatial preferences with regard to where potential peatland restoration should take place.

¹ Glenk, K., Schaafsma, M., Moxey, A., Martin-Ortega, J. & N. Hanley (2014). Valuing peatland restoration for spatially targeted ecosystem service delivery. Ecosystem Services 9, 20-33

Martin-Ortega, J., Allott, E.H., Glenk, K. & M. Schaafsma (2014). Valuing water quality improvements from peatland restoration: Evidence and challenges. Ecosystem Services 9, 34-43





3. Participant recruitment

The target audience for the workshop was the general public on the Isle of Lewis. Participants were recruited through social media, posters in public spaces in the local area (northern Lewis) and through ads in a local newspaper. Participants were offered a £20 incentive and a buffet supper.

A total of 14 participants attended the workshop. All of the participants live on the Isle of Lewis though the length of time they had lived in the area differed with some having moved there only recently while others had lived on the island since birth. While not intended to be representative of the overall Scottish population, a good range of age groups was attained. Most of the participants were crofters, and all had intimate knowledge of peatlands. In this respect the workshop participants differ from the general public in most parts of Scotland.

4. Workshop plan

The 3-hour workshop took place on the 8th of July 2015 at South Galson, in northern Lewis. It was organised as a series of different activities including individual, break-out group and plenary group activities.

Annex 1 includes the material presented at the workshop. The workshop was organized and delivered by four trained facilitators (the authors of this report).



Figure 2. Workshop participants during the introductory presentation

After a short introduction about the broad aims of the project and practical information about the evening, workshop participants were asked to, individually, think about stories or experiences of peatbogs. These could be personal memories or experiences, family, local stories, or myths related to peatbogs. Participants were given a few minutes to think about these and to jot down some key words about these. The stories were then shared in small groups of 3-4 people each attended by one of the facilitators. The aim of this activity was to gain an overview of the meanings and memories that peatlands carry for people who live in close proximity to these areas.





Next, one of the workshop facilitators presented a simple 'scientific' (neutral/objective) definition of peatlands and provided further details about variation (depending on the plants that grow on them, the colour and composition of the peat and the past and present human activities), locations (mostly Highlands and Islands, but also some in the Lowlands) and extent (almost one fifth of Scotland's area). A series of photos representing peatlands in different states was presented. Participants were then separated into three break-out groups and, with the aid of one facilitator per group, were asked to list: 1) what activities can be done in peatlands and what are peatlands used for; 2) what are the benefits (also referred to as 'good things') that peatlands provide us with including material benefits (e.g. things, products, objects, etc.) and immaterial benefits (e.g. experiences and feelings); and 3) what are the negative things about peatlands including bad things they produce, bad things that happen in peatlands and conflicts that emerge around peatlands. This activity was organised as a 'carousel', so that groups rotated among three 'stations' each dealing with one of the questions listed above, adding new ideas to those previously suggested by the other groups.

After the carousel exercise, participants were asked to look at the benefits and uses which had been identified in the carousel, and to highlight the three benefits or uses that they thought were most important to them, by placing a sticky dot next to these. After all participants had placed their sticky dots, the reasons for people's choices on the most relevant uses and benefits were discussed in plenary.

After a short coffee break, the workshop participants were presented with information on different states that peatbogs can be in and how these relate to uses and benefits in terms of biodiversity, water quality and carbon uptake and storage. The characteristics of the different states are summarised in Table 1. At the end of the presentation participants were provided with experts' estimates of the proportion of peatbogs which are currently thought to be in each state. They were then each given 10 sticky dots which they were asked to distribute amongst the different states to indicate what proportion they thought should be maintained in each state in the future.





Table 1. Description of peatland states.

Drawings

Description provided by Chair



In this condition, the water table is high, so water is visible on the surface, slowly flowing through larger and smaller pools. Peatlands in this condition are dominated by small grasses and especially the peat moss called Sphagnum that grows well in wet conditions, stores lots of water and makes the peatland appear in a typical red-greenbrown mosaic. A Peatland in this condition continues to grow - it adds further layers of peat. This means that it takes up more carbon from the atmosphere than it releases, it is a 'sink' for carbon, the carbon store grows. The additional amount of carbon stored increases as peat reduces the amount of carbon in the atmosphere, where it would otherwise contribute to climate change. Water that flows from peatlands in this state is usually clear and of good quality. This means less need for water treatment. The water quality is also good for fishing, especially of salmon and trout, downstream. Peatlands in this condition are home to various bird species. This includes various species of waterfowl and wading birds such as curlew, and predators such as hen harrier and red kite. Lizards are abundant, and so are insects such as moths, midges and dragonflies; some plant species such as the insect eating plant sundew are also abundant.



In peatlands in this condition, the water table has been lowered, often by creating channels through which the water can flow more easily. This drainage means that surface water is rarely visible, and that taller plants, like cotton grass, or small bushes like heather can grow, sometimes with smaller grasses and peat moss growing in between. Once the peatland is dry enough, it is possible to use it for grazing sheep, planting trees, or for grouse shooting. The dominant colours are often a faded green to light brown, with little contrast, although if heather is present and for the short time it is in bloom, its purple colour stands out. Often, small darker patches can be seen, arising from peat that is exposed alongside small gullies. These gullies continue to grow through the forces of wind and water. Sometimes peatland in this condition is burned regularly. This leaves patterns of burned and unburned land in the landscape, as here illustrated in the background. The vegetation is burned to create good feeding conditions for grouse and therefore good grouse shooting. Peatland in this condition does not grow any more, it does not add further layers of peat. Instead, it gradually shrinks and then releases slightly more carbon to the atmosphere than it takes up. This means that it becomes a moderate carbon 'source': the carbon store slowly diminishes. Water flowing from peatlands in this condition can be of lower quality. It can be slightly murky, especially after heavy rainfall. This can affect the fish population downstream thus affecting fishing activities, as well as increasing treatment costs for drinking water. Peatlands in this condition may still harbour some of the wildlife that is present in peatlands in good condition. However, it is less abundant and some species may not be found any more. This includes some lizards, insects and bird species. It is more likely that you will see managed species such as deer, sheep and grouse.



Peatlands in this condition have been drained for longer. The forces of water and wind have now exposed larger areas of peat, often forming deep gullies and drenches that sometimes go down to the rock surface, or isolated peat 'stacks'. Few plants grow on the areas that are exposed, while patches of grasses or heather are still found on islands in between. The exposed peat areas will become larger through the forces of wind and water, leaving less plant cover on the surface, and peat will continue to be lost until the rock surface emerges. A peatland in this condition loses carbon at a high rate. It has turned into a severe 'source' of carbon to the atmosphere, where it can contribute to climate change. Water that flows downstream from peatlands in this condition is often of bad quality. It is often murky and can be dark brown from organic components in the water. This can be worse after heavy rainfall events. The bad water quality will affect fish species downstream. It is not suitable for human consumption without a lot of treatment. Peatlands in this condition are home to little wildlife. Not many species can be found.





The final exercise aimed to elicit participants' opinions about where in Scotland potential peatland restoration projects should focus. Participants were introduced to the idea of restoration. Using the drawings of peatlands in different states, the facilitator explained that restoration can reverse degradation (see Annex 1: Workshop presentation' for further images used in the description of each of the three states), and highlighted the possibility of different intensities of restoration. As it is neither feasible nor necessarily desirable to carry out restoration everywhere, spatial prioritization is needed. The idea of a restoration plan was presented and an activity to explore spatial preferences about where restoration should take place followed. In the same three breakout groups as in the carousel activity, participants were given 3 sticky dots and invited to place them on a map showing Scotland's peatlands (Figure 3) to indicate where they would like to see restoration (no ranking involved). The opportunity to answer 'I don't know' or 'I don't care' was also offered. After placing the dots on the map, participants were asked to give reasons for their choices.



Figure 3. Map showing peatland areas of Scotland and the workshop locations





5. Workshop results

5.1. Peatland stories & experiences

Though participants' stories reflected their unique, personal experiences and backgrounds there were commonly recurring themes. Peat cutting was thus central to many of the accounts. These accounts emphasised the community ethos that was part of peat cutting, where people gathered to help each other, and older generations were assisted by the younger ones. Despite the fact that peat cutting was hard physical work, that had to take place even in bad weather and in the face of midge attacks, participants also emphasised the socialising that took place in the form of storytelling and picnics while waiting for tractors to return. The skills and knowledge required, which was also reflected in the Gaelic terms that are used to describe the process of peat cutting and the different tasks, was also discussed. The characteristic smell of peat fires was also mentioned as one of the things that people associated with peatlands and it was something that evoked many memories. Several participants also mentioned grazing as an important part of their interactions with peatbogs. The different plants and animals that are characteristic for peatbogs were also mentioned by several participants. These included rare species such as orchids, carnivorous plants, and eagles, but also more common species such as rabbits, heather and cotton grass, and 'nuisance' species such as geese which cause problems for crofters by eating the silage crop.



Figure 4. Workshop participants during group discussion

Participants also reflected on the changes that had taken place such as the actual cutting which is now more commonly done using tractors. Altogether, less peat is being cut now compared to previously, as peat is being replaced or supplemented by other heat sources (e.g., oil, coal or air pumps). This was linked to more general changes in people's way of living, with many more people now having '9 to 5' jobs and finding the cutting as well as use of peat too much of a hassle as it involves hard physical labour. In addition, wetter summers are making it harder to cut and dry the peat. The decline in peat cutting is visible in the landscape where old peat banks are falling into disuse, and several workshop participants remarked that this made them feel sad. This change also impacts the community spirit, storytelling and even the language with Gaelic words associated with the cutting in danger of being lost. The participants had also observed changes in the use of peatlands for grazing with less sheep and very few cattle being kept now. This impacted the landscape by changing the vegetation as well as the community spirit as fewer tasks are now carried





out together with others in the community. In some communities, there are generally fewer people now, with houses left abandoned. However, other communities are perceived to still be thriving but with more people commuting to Stornoway and /or working in off-farm jobs than working the land.

5.2. Activities, uses, benefits and dis-benefits

Benefits & products from peatlands

Workshop participants mentioned a wide range of benefits and good things that can be obtained from peatlands. One way of classifying services, products and associated benefits that people obtain from nature ('ecosystem services') is according to the following categories:

- Provisioning services: products such as food and materials obtained from ecosystems;
- Regulating services: ecosystem processes or outputs that are not consumed directly by people but which affect us through their impacts on the systems we depend on such as nutrient cycles in the soil, flood regulation, carbon storage;
- Cultural services: non-material services and benefits that people obtain from ecosystems.

Table 2 presents the benefits mentioned by the participants, grouped into the above categories.

| Provisioning services | Domestic heat Grazing Compost | |
|-----------------------|--|--|
| Regulating services | Insects – bird food (mentioned under uses) Flowers – for bees (mentioned under uses) Food chain for animals Habitat Reduced carbon footprint through using local peat as fuel source | |
| Cultural services | Health benefit – clean air (mentioned under uses), mental and physical Therapeutic effect Heather tasting lamb (mentioned under uses) Space Wildlife Historic record Landscape itself, ambience Preservation Social aspects: community life Walking, peace and solitude Recreational value The smell of peat fire Not commercial, domestic Peat is free Inspiration for artists and literature Intergeneration exchange and support, e.g. help elderly people Culture and language Storytelling | |

Table 2. Benefits & products from peatlands.





Under the provisioning category were benefits such as grazing and domestic heat which relate to particular uses of the area.

Benefits that we have classified as related to 'regulating services' concern processes in the environment, such as bees using the flowers and birds feeding on the insects found in peatlands, or the provision of habitat for animals and plants. Reduction of people's carbon footprint by using local peat as a renewable source of fuel was also mentioned.

The largest number of benefits can be seen to relate to cultural services. This included the sense of community, place and culture, but also recreational uses (by local people or tourists) for walking, fishing, stalking or shooting, or inspiration for artists. In addition, wildlife, health benefits and the historic record that peatlands provide were mentioned.

It is also interesting to highlight the connection between the different services. For example, use of peat for heating people's homes can be classified under provisioning services, but the participants also highlighted other benefits of this use which could be classified under regulating (reducing carbon footprint) or cultural services (e.g., social aspects, culture & language, smell of peat).

Uses and activities in peatlands

The uses and activities that are or can be carried out in peatlands according to workshop participants are presented next. We have divided them into productive activities (related to provisioning services) and cultural or recreational activities (related to cultural services) – Table 3. It should be noted that this distinction cannot be taken categorically since recreational activities can also be considered economic productive activities for those who e.g. work in tourism.

| Productive activities and uses | Grazing. Historically moorland used all year- grazing, peats etc. Now just grazing sheep, no cattle allowed on peatland Peat cutting Heather rope – heavy twine thatching Heather bunches – chimney cleaning Renewable energy Economic use Ages ago, peat used as walls/boundaries Dying wool Water mills Sheilings |
|---|---|
| Cultural and recreational activities and uses | Walking/ relaxing/ space all round Quad biking [not a popular suggestion with the rest of the group] Sporting – deer, grouse, black cock - For tourism and locals Photography/Shooting with a camera - For tourism and locals Stalking red deer (no roe on Lewis) Camping Archaeology: preserved villages, animals, pottery, etc. Fishing (brown trout) Walking – leisure. Mainly tourists, some locals. Funeral roads to burial grounds Tourism |





About equal numbers of activities and uses could be classified as productive and cultural/recreational. The productive uses both include 'major' activities such as grazing, peat cutting and renewables (i.e. wind farming) while others are more specialised and arguably minor (and sometimes historic) activities such as using heather bunches for chimney cleaning.

Some people felt that the more 'leisurely' activities were more the domain of the tourists while other locals said they appreciated them and took part in activities like fishing, or knew someone who did. Some activities and uses evoked mixed feelings, such as quad biking or renewables, which by some are regarded as a dis-benefit or cause of conflict.

Most of the activities and uses which participants mentioned take place nowadays like peat cutting, grazing, walking, sporting shoots, fishing, photography, and renewables. In addition some historical activities were mentioned such as using heather to make dyes and ropes and to sweep chimneys, the use of peat as walls and boundaries and long gone sheilings and water mills.



Figure 5. A peat bank on the Isle of Lewis

Peatlands' dis-benefits

Here we distinguish between dis-benefits (bad things) that participants associated with peatlands themselves and negative impacts from conflicts and problems arising around or in peatlands. In total, 14 'negative things' were identified (Table 4). Some relate to the nature of peatbogs such as being boggy which may result in cattle, sheep, tractors and people getting stuck. Due to the expanse of open space, sheep can roam and may even get lost, and are therefore more difficult to manage here. The lack of landmarks also makes it difficult for people to orientate in peatbogs especially when visibility is poor and they therefore risk getting lost. In addition, walking on peatlands is tiring due to the spongy ground. It was also mentioned that peatbogs may attract people suffering from depression who may wander out into them and get stuck or lost. In relation to farming, peatbogs





were seen as naturally poor grazing areas. However, the quality of grazing was also seen as being affected by under-grazing.

In terms of living nature, midges were seen as a nuisance. It was also mentioned that geese are attracted by peatlands and arrive in great numbers to nest, degrading the grazing by feeding on the peatland but also eating crops on neighbouring land.

A few aspects related specifically to how the land is used. Lack of peat cutting and grazing may have cultural implications through the decline of community spirit in the form of mutual help and shared work in relation to these activities.

There were also seen to be conflicts between local land managers and other interest groups. Laws and regulations were seen to be influenced by the interests of environmentalists to the disadvantage of local land uses such as grazing. Another source of conflict was related to different opinions regarding use of peatlands for wind farms or other commercial developments. Finally, cutting and using someone else's peat bank may also be a source of conflict. However, none of the participants could recall any specific occasions of this happening in the community.

| Dis-benefits associated with peatlands themselves | Cattle (or sheep) bogged down Tractors bogged down Poor grazing Hard to walk on – spongy. Walking on it is tiring. Difficult and even dangerous to cross (may get stuck) Midges – 'clouds in your face' Open expanse and barrier-free – sheep may roam and get lost Orientation difficult especially in misty weather – no landmark etc. that can be used for orientation Large amounts of geese nest in peatlands – deprive the land of its feeding potential |
|---|--|
| Conflicts and problems occurring in peatlands or in relation to peatlands | Laws and regulations driven by environmentalists (->Conflicts) cause under- grazing which is more detrimental than overgrazing Reportedly depressed people would walk in it, may get stuck or lost and die Lack of use Loss of community spirit due to lack of use (e.g. joint activities etc.) Conflicts: Misuse of land e.g. for wind farms and commercial developments Conflicts: cutting into someone else's peat bank |

Table 4. Bad things associated with and occurring in peatlands.







Figure 6. Wind turbines and forestry plantation on the Isle of Lewis

5.3. The most important benefits and uses of peatlands

From the lists of benefits and uses of peatlands, participants were asked to identify the three uses or benefits which they regarded as the most important ones by placing a sticky dot next to these. Table 5 shows which activities and uses were regarded as being amongst the most important ones and how many people had placed a dot next to each of these. Of all the activities and uses listed during the carrousel exercise, 15 were considered to be amongst the most important by at least some of the participants. Of these, ten could be classified as concerning cultural ecosystem services, while the rest could be classified as concerning provisioning ecosystem services. However, the two uses that were most often chosen as important both related to provisioning services.

| Benefit or use | No. of dots | Type of benefit/use |
|--|-------------|------------------------|
| Peat cutting | 9 | Provisioning |
| Grazing | 5 | Provisioning |
| Peat is free | 4 | Provisioning |
| Social aspects/Community life | 4 | Cultural |
| Wildlife | 3 | Cultural |
| Habitat | 3 | Regulating |
| Recreation | 2 | Cultural |
| Culture & language | 2 | Cultural |
| Walking, peace and solitude | 2 | Cultural |
| Heather tasting lamb | 2 | Cultural/ Provisioning |
| Space | 2 | Cultural |
| Story telling | 1 | Cultural |
| Inter-generation support/help elderly people | 1 | Cultural |
| Economic use | 1 | Provisioning |
| Renewables | 1 | Provisioning |

Table 5. Most important benefits & uses





After each person had placed his or her dots, it was discussed in plenary why these uses or benefits were important to the workshop participants. The discussion showed that many of the benefits and uses were connected and that it does not always make sense to try to make a clear distinction between provisioning and cultural ecosystem services.

Peat cutting was considered important by most of the workshop participants. The reasons given included practical reasons, such as the fact that peat serves as a low-cost fuel source, as well as more intangible benefits such as bringing the community together. This reflected similar points raised during the peat stories and the carousel exercise itself. Participants also remarked on the fact that fewer people are nowadays cutting peat compared to the past. However, it was also remarked that this might change again in the future, and that it is something that people can always go back to should the price of alternative energy sources increase.



Figure 7. A stack of cut peats

Connected to the importance of peat cutting was also the perception of *peat as a 'free' source of fuel.* However, this was a view which was not shared equally amongst all the workshop participants. As one participant pointed out, cutting peat is very labour intensive and if the cost of labour were taken into account peat would be a very expensive source of fuel. However, economics were a consideration for some as it was mentioned that peat cutting had increased when oil prices had risen. Nevertheless, the amount of hard physical work required was perceived as one of the reasons why there is less peat cutting nowadays, together with other reasons such as changes in work ethics (people find it too hard), changes in lifestyles (9-to-5 jobs), and generally wetter summers.

Peat cutting was also associated with non-tangible benefits such as *inter-generation support* in the form of young people helping older people and *social aspects and community life*. Workshop participants emphasised that people were dependent on each other for the peat cutting, and that this had engendered a strong community spirit and ethos of younger people helping older ones.

Peat cutting was also related to *culture and language*. Concerning the latter, participants said that keeping the tradition of peat cutting alive meant that the Gaelic words that were used in connection with peat cutting were also kept alive. These words were not only used by Gaelic speakers, but also





by non-Gaelic speakers. However, as peat cutting becomes less common the words are also used less frequently and may risk being lost. Other important cultural aspects which were associated with peatbogs more generally consisted of storytelling, writing and inspiration for artists.

Grazing was considered important because animals grazing out on peatland were less likely to suffer from diseases compared to animals grazing in enclosures. When talking about grazing, the workshop participants focussed on the changes in grazing practices from cattle to sheep and more recently, a reduction in sheep numbers, which, like the increasing use of enclosed areas rather than leaving the sheep on the peatlands is connected to the shift towards faster growing more commercial breeds. The reasons for most of these changes were the economic pressures that farmers and crofters face.

Wildlife and *habitat* were also considered to be important aspects of peat bogs, both for people living in the area as well as in a global perspective. This was not only in relation to iconic species such as Golden Eagle, but also in relation to the whole suite of different and maybe less charismatic or eye catching species, many of which were said to be dependent on the peat bogs. However, participants also pointed out that aspects of wildlife and habitat were more important in places where there were designated nature reserves such as on the Uists.



Figure 8. Sundew and Hen Harrier, iconic species found on peatland

Recreation, walking, peace and solitude and *space* could be important in different ways. Partly, these were seen to be important for tourists, especially people from cities. Tourism in turn generates income for the local people, e.g. through B&Bs. However, the wide open spaces and views were also said to be important to some local people though it was acknowledged that this varies depending on personal preferences.





The discussion around renewables centred on wind turbines, which were seen to have both advantages and disadvantages, and to divide opinions amongst local people. Advantages included the economic benefits they could bring local communities, while disadvantages were their visual impact on the landscape and that they broke up a way of life. However, the disadvantages were seen to depend on where in the landscape wind turbines were placed. By placing wind turbines in less visible places and on land which was not being used for other purposes, disadvantages could be minimised while economic benefits to the communities could still be gained.



Figure 9. Workshop participants during one of the individual activities

5.4. Proportion of peatland which should be kept in each state

When asked about their preferences regarding how much of Scotland's peatlands should be kept in different states in the future, participants' opinions differed widely. Table 6 shows three stylised states that peatlands can be in and some of their characteristics, participants' preferences and experts' estimation of the current distribution. From an ecological perspective, State 1 reflects what scientists consider to be good *ecological* status, State 2 intermediate *ecological* status, and State 3 bad *ecological* status.

Most participants thought that the largest proportion of peatbogs should be kept in state 2. The reasons for this were that peatbogs in this state were most usable for humans. Some participants also felt that this state was the natural state for peatbogs on Lewis to be in as the conditions on Lewis are very different from the mainland highlands (flatter terrain, natural drainage through streams and rivers, more rain). Other participants thought that more peatbogs should be kept in the first state. Reasons given were that this state had more flora and fauna and that maintaining peatlands in this state would give the peatland a rest. On average, participants wanted to keep least peatland in state 3. However, a few participants had placed most of their dots under this state. The discussion showed that this was not necessarily a preference, but that it was seen as an inevitable but also reversible outcome. One positive aspect mentioned about peatlands in this state was that it was easier to walk through and thus afforded more opportunities for exploring the landscape.





Table 6. The proportion of peatlands that should be kept in each state.

The different states peatlands can be in (top row), the proportion which participants thought should be kept in each state (expressed as %), the average of participants' preference, and how much of Scotland's peatbogs experts think are currently found in each state.

| | Status 1 | Status 2 | Status 3 |
|---------------------------|----------|----------|----------|
| | | | |
| | 20 | 60 | 20 |
| | 20 | 80 | 0 |
| | 20 | 30 | 50 |
| | 20 | 70 | 10 |
| | 30 | 70 | 0 |
| | 30 | 30 | 40 |
| Darticinante/ professores | 30 | 60 | 10 |
| Participants preferences | 30 | 20 | 50 |
| | 40 | 30 | 30 |
| | 50 | 30 | 20 |
| | 50 | 40 | 10 |
| | 50 | 50 | 0 |
| | 60 | 40 | 0 |
| | 60 | 30 | 10 |
| Average | 36.4 | 45.7 | 17.9 |
| Experts' estimate | 30 | 50 | 20 |

5.5. Spatial priorities for potential peatland restoration projects

The exercise on the spatial prioritization of peatland restoration offered interesting insights about the restoration preferences of people living close to peatland areas. Initially, all participants were quite uncertain and hesitant to place any dots on the map of Scotland. One of the groups also questioned to what extent it was appropriate for them to decide where restoration should happen in other areas of Scotland as this should be the decision of the respective communities. In this group a new category indicating 'communities should decide' was created so that participants could place their dots in this box. Some participants also felt they did not know enough, either on peatland restoration or regarding the geography of Scotland, to make informed decisions, while others did not see restoration as a worthwhile activity and thus placed the dots in the 'don't care' box. Interestingly, most participants agreed on the fact that there was no need for peatland restoration on Lewis itself. In one of the groups, a major difference that was highlighted was that the Outer Hebrides receive a higher volume of rain compared to the mainland and they have natural drainage in the form of streams and rivers. Thus, there was agreement that restoration on Lewis was not felt to be necessary was that land managers in Lewis already care about peatlands, but also that interventions





were seen as potentially disruptive and entailing danger of unforeseen damage. One of the groups indicated that there is already plenty of peat in Lewis and that they need it for fuel and grazing, linking both activities to their local culture.



Figure 10. 3 maps with locations of preference for peatland restoration as produced by the three break-out groups.

The Flow Country was amongst the preferred locations for most of those participants who chose a location on the map, although, as mentioned, most were quite hesitant and reluctant to place their dots on the maps. In addition, some participants placed their dots under the categories 'don't know' and 'don't care'. Some also seemed to place their dots more or less randomly on the map (in the parts of the map they could most easily reach from where they were sitting) without a clear explanation for their preference.

The main reasons given for those who did decide on particular locations can be summarized as follows:

- Sparsely populated areas where restoration wouldn't conflict with people's uses of peatlands.
- Areas that need preservation either to prevent further degradation, or following the development of wind farms or the removal of large commercial forests where peatland are likely to be severely degraded [the Flow country]

In comparison to the results from the same spatial prioritisation exercise in one of the Aberdeen workshops, the above results indicate that restoration preferences in areas where peatlands provide a wide range of ecosystem services, in many cases also linked to the identity of the place, differ from those who do not make an active use of peatlands or do not live close to peatland areas.





6. Key messages emerging from the workshop

The workshop showed that peatlands continue to be very important to local communities on Lewis. Not only do they provide fuel and grazing, but activities such as peat cutting and the associated Gaelic vocabulary are important parts of the cultural heritage and are connected to other traditions such as storytelling. In addition, peat cutting illustrates the community spirit that participants felt is an important part of life in the area. Nevertheless, peat cutting and grazing are nowadays less widespread than in the past largely due to changes in people's life styles as well as due to changes in sheep breeds.

Workshop participants also valued peatlands for the wildlife and scenery and other cultural services they provide, both to local people and to tourists who come to visit Lewis; the latter in turn benefit local tourism businesses such as B&B's. At the same time, though, participants also thought that other people may view peatlands as bleak or boring, and they also mentioned a number of disbenefits or negative things associated with peatlands. Many of these were associated with the danger of animals and tractors getting bogged down, or people getting lost in peatlands. Some peatland uses such as establishing wind farms divided people's opinions and were seen to have both advantages and disadvantages.

The workshop also showed that most participants preferred the majority of peatlands to be in what we here called 'Status 2' which represents an intermediate ecological status. This corresponds to peatlands which are in active use for activities such as grazing or peat cutting. Under-utilisation was seen to be as much of a problem as over-utilisation. This again emphasises the importance of these activities in the area. Some participants also thought that status 2 was a natural state for Lewis peatlands to be in and they emphasised differences from most other Scottish peatlands due to the higher amounts of rainfall and the flat terrain. Accordingly, the participants did not perceive any need for peatland restoration activities on Lewis. However, it should also be noted that there was large variation in how much peatland the participants thought should be in each state with some preferring more peatlands to be in either state 1 or state 3 reflecting diversity in the participants' preferences.

For other parts of Scotland, participants emphasised the importance of involving local communities in decisions about any proposed restoration activities, as well as taking into account the degree of degradation and where restoration activities would be least likely to interfere with established uses such as grazing and peat cutting. That is, restoration should preferably take place in less densely populated areas.





7. <u>Next steps</u>

This report has been circulated to all workshop participants for information and it will be used by the researchers to design the rest of the research activities. Notably, the information reported here will inform the design a questionnaire to be used in a survey in which preferences and values associated with peatlands by the population of Scotland will be collected and analysed in a quantitative way.

The final outputs of the research will be used to produce scientific publications contributing to the scientific literature on the social values and perceptions of ecosystems. In addition, they will be sent to the Scottish Government and other relevant stakeholders, including regulating agency, NGOs, etc., to inform decision-making regarding peatlands in Scotland.

For more information on the content of this report or the research plans, please contact Carol Kyle at <u>carol.kyle@hutton.ac.uk</u>.



Figure 11. One of the ancient Standing Stones at Calanais, Lewis





Annex 1: Workshop presentation



Agenda

- 6.45: Welcome & introductions
- 7.00: Small group activity
- 7.30: Carousel activity
- 8.05: Coffee break
- 8.20: Individual activity
- 8.50: Small group activity
- 9.05: Plenary
- 9:20: Wrap up & close































































Let's think about....

Activities and uses

- What activities can be done in peatlands?
- What are peatlands used for?
- What good things (benefits) peatlands provide use with?
 - Material benefits (things, products, objects, etc.)
 - Immaterial benefits (experiences, feelings, etc.)
- What are the **negative things** about peatlands?
 - Bad things they produce
 - Bad things that happen in peatlands
 - Conflicts that emerge around peatlands





What are the most important uses & good things?

- 3 sticky dots per person
- Place next to the benefits or uses you think are most important
- Why do you think these are most important?

Many peatlands have changed over time

- Our past and present use and management of peatlands has affected many of them
- How does this change look like?

































































































Stabilising bare peat













How long does it take?

- Full recovery can take decades
- Improvements start shortly after
- Clearly visible after 3-5 years
- Peatlands under restoration cannot be used for grazing, tree planting, cutting or grouse shooting
- These activities continue to happen elsewhere

















