

## RECENT DEBATE ON PEAT EXPLOITATION IN FINLAND

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### SUMMARY

Peat is a domestic source of energy corresponding to about 6% of energy production in Finland. It is important especially in producing heat for towns and cities. On the other hand, fuel peat utilization corresponds to about 20% of CO<sub>2</sub> emissions from energy production, which accelerates climate change. Even though only about 2% of the mire area of Finland is used for peat mining, the impacts on biodiversity and locally on water quality are considerable, as well as on recreation. Therefore a strategy for mires and peatlands was prepared in 2011 under the leadership of the Ministry for Agriculture and Forestry. Various ministries and institutes as well as stakeholders were involved. Nature conservationists have criticized the strategy, and during the latest year the debate has been very intensive.

**KEY WORDS:** Mire strategy, fuel peat, biodiversity, climate change, water quality

### INTRODUCTION

The topic of this paper is a public debate over peat exploitation in Finland, especially on the basis of its treatment in the National Strategy for the Sustainable and Responsible Use of Mires and Peatlands in Finland released 16.2.2011 (<http://www.mmm.fi/fi/index/etusivu/ymparisto/suojaturvemaat.html>). The goal for this paper is to structure this public debate and identify and thematize the different arguments for and against peat exploitation on the basis of the strategy. The strategy, and mainly the debate over it, is the core focus, but this study can also be seen as a case study which allows some generalization about the utilization of ecosystem services. This is especially the case since the concept of ecosystem service was used as a baseline for the mire and peatland strategy. The use of the ecosystem service concept in the preparation of the strategy has been strongly criticized, since biodiversity was treated as a separate matter, not in connection with all other services, like it is recommended in the Millennium Ecosystem Assessment (2005), Lindholm (2011).

## MATERIAL AND METHODS

There is a lot of material easily available about the topic because of the conflicting nature of the mires and peatland discussion in Finland. A set of newspaper articles and other related texts were collected at the time of the strategy's planning process and after its publication. This data allows many analyses, but in this paper two distinct data groups were segregated from the data. First, those texts which directly targeted the strategy of mires and peatlands were identified. This data set contained 12 articles treating the strategy critically, six articles pointing out the utilization of mires and peatlands, and three articles treating both points of view. This focus resulted in data which did not contain any direct comments from lay people. Instead, ministries, regional government officials and nature conservation NGOs were the most common participants in the debate.

For this reason we segregated another set of data: randomly sampled opinion articles from national, regional and local newspapers, and internet discussions. These followed firstly a blog article of MEP Eija-Riitta Korhola in the internet newspaper Uusi Suomi, with the title Crusade Against Peat, in which she defended the use of peat for fuel; and secondly a news article on the website of Finland's main TV channel YLE1, where the Finnish government's Minister of the Environment Ville Niinistö stated that peat mining must be ended. Also a discussion chain following an article about the impacts of peat mining on watercourses in a local newspaper Suur-Keuruu was analysed. This data set contains altogether 96 critical comments against peat mining, 67 comments in favour of peat mining, and 6 comments seeing pros and cons in it.

This data was read and analysed with content analysis (Smith 2000, Hsieh & Shannon 2005). The arguments which were identified to illustrate the content were listed. In a second phase they were thematized into different argument groups.

## RESULTS

The main arguments in favour of peat mining given by the authorities include the importance of energy peat as a domestic fuel, which is continuously available, and independent of global market situations or international crises. It is also commonly stated that peat replaces coal and oil, and gives jobs to people in Finland. The peat industry states that it behaves in an environmentally responsible manner, e.g. in relation to biodiversity and discharges to watercourses. The industry also asserts that the activity is legal and based on guidelines given by political decision making. It is also frequently pointed out that peat mining in general needs environmental permitting contrary to e.g. forestry or agricultural use of mires and peatlands.

Critical comments on peat mining can be divided into four main categories. It is stated that developing mires for peat mining causes a loss in mire biodiversity, as well a reduction in the quality of waters near peat mining areas especially due to the leaching of organic solid substances and humus into rivers and lakes. An important argument is that using peat for energy causes big carbon emissions to the atmosphere and thus accelerates climate change. And finally, recreational values (hiking, picking berries, hunting etc.) are reduced.

In the discussion, argumentation on the impacts of peat mining on watercourses is typically controversial. Those in favour of peat mining state that the leaching of nutrients (nitrogen and

phosphorus) from peat mining areas is only in the order of 1% of the total nutrient load in waters. Very often they also point out that other ways of land use, like forestry and agriculture, cause bigger leaching into waters, and therefore the impacts of peat mining should not be mentioned.

Critical comments on the impacts on watercourses point out that peat mining is always local, and national mean values do not tell anything about the situation downstream from peat mining areas. They also emphasize the importance of organic solid substances filling riverbeds and lake bottoms, which is not fully taken into account in the environmental permitting process. These changes in the quality of watercourses have an influence

Controversy can also be seen in the impacts of peat mining on biodiversity. The peat sector argues that peat mining uses only 0,6% of the original mire area in Finland, and therefore biodiversity impacts cannot be significant. On the other hand, the critics have the opinion that peat mining in many areas is altering the last undrained large mires outside nature reserves. They are also worried about the connectivity of the natural mire network. An important critical point also is the fact that peat exploitation has altered around three times more mire area than is in active peat cutting at the moment. And that is about 15% of the technically exploitable mire area, which includes also nature reserves and mires which are economically too far away from the points where peat energy is produced. Thus, according to the critics, peat mining has affected some 30% of the available mire area.

Carbon emissions in connection with the use of fuel peat have been evaluated to be even bigger than when using coal for energy. However, many people have in these discussions used the term slowly renewable for peat, trying to convince others that it is less harmful from a climate change point of view to use peat than coal or oil. The peat critics, referring to new studies, emphasize that fuel peat taken from pristine mires is clearly the worst fuel from a climate change viewpoint, but using peatlands for agriculture or forestry could be less problematic.

Using mires for recreation has a long tradition. Picking cloudberries and cranberries is important for people, as well as hunting birds. About half of the ducks hunted in Finland are breeding in mires, and they are important habitats for tetraonid birds as well. Peat mining significantly reduces the possibilities for recreation, and people from southern Finland, where there are very few pristine mires, have especially criticized peat mining.

A common feature in the debate is that the arguments of different sides do not really meet. Each side repeats same arguments no matter what contradictory arguments have been presented. A typical example is the impacts of peat mining on watercourses. The peat sector uses national mean values to show that peat mining is not harmful for watercourses, and also it states that the water protection methodology has developed and is so good nowadays that water from a peat mining area is cleaner than the water coming into that area. The critics repeat that the impacts are local and that the water protection works only during low discharges. During summer rains causing flooding the particulate organic matter goes through the overflow fields and other constructions directly to watercourses. Despite the fact that there are examples supporting both views, the different sides of the debate have not found any kind of mutual understanding.

## CONCLUSION

Utilization and conservation of mires are in most cases controversial, and raise a lot of debate. The development of the strategy for mires and peatlands had a goal to accommodate different interests in such a way that contradictory positions would end. Unfortunately it was prepared in such a way that those different interests were treated separately, and the old barriers remained, as one can see from the debate. Actually, a renewed interest in criticizing peatland utilization, especially peat mining arose. It seems that the strategy failed in its goal.

Each interested party has remained with same opinions, and discussion where spatial and temporal scales of different sides do not meet, is not very fruitful. Unfortunately also misleading arguments are used, which decreases the possibilities for mutual understanding. The treatment of the issue on the basis of the ecosystem services concept has brought up values, which have not been institutionalized in legislation, which means that conflict is set to continue e.g. in the environmental permitting process. Another problem is that international treaties (e.g. on biodiversity and climate change) have not been integrated as parts of national planning.

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