Extended abstract No. 368

WHAT SUSTAINABLE DEVELOPMENT MEANS FOR PEAT

Magnus Brandel

MbenergistrategiAB, Pyrolavägen 13, 181 60 LIDIINGÖ, Sweden
Mobile phone +46 70 657 1589, Magnus.brandel@mbstrategi.se

SUMMARY

The aim of this presentation is to give some comments on peat reflected by the discussion about sustainability based on the *Brundtland report* 1987. The scope covers some examples of the "balancing aspects" important in determining whether peat is sustainable or not as well as saying something about the framework conditions for this. The study shows that the definition of sustainability changes over time, and between aspects and countries. The conclusion provides some examples on the presumably important question which of determining whether peat is sustainable or not.

KEY WORDS: ecosystem services, sustainable, bioeconomy, balancing, implementation

BACKGROUND

Brundtland (1987) defined sustainable development as a development which takes care of humankind's needs without jeopardizing the possibility of future generations to survive. Sustainable development means balancing economic, social and ecological considerations. Sustainable development is not a fixed goal in itself but more something to strive for. According to *Lafferty and Meadowcroft* (2000) any assessment of the future of sustainable development must take into consideration three dominant features of the idea: that it involves (1) goals and values which are at once normative and relatively vague with respect to specific policy prescriptions; (2) a programme which has arisen external to normal national policy arenas and (3) a political commitment which – largely due to the first two characteristics – is relatively "soft" as a mandate for change. Both economic growth and environmental protection are essential for sustainable development, but those authors emphasize that sustainable development also implies that not all of the environment should be conserved and that not all patterns of growth are desirable.

Another important issue is that sustainable development targets the *needs* of humankind and can therefore be characterized as an anthropocentric approach (focused on needs of humankind). This is the same approach as *Clark and Joosten* (2002): "The challenge is to develop mechanism that can balance the conflicting demands on the global peatlands heritage to ensure its continued wise use to meet the needs of humankind".

National decisions about sustainable development must be in accordance with legislation decided by national parliaments and international conventions. In most cases the international conventions are implemented in national legislation. Also decisions taken by other national and regional state organizations and by municipalities must be taken into consideration. A lot

of decisions are based on proposals from industry. Industry's role is to focus and interpret what sustainable development means for the industry. An example of this is *EPAGMA* (2009) and *IPS* (2010). In Europe, membership of the EU means that more stringent EU rules have been implemented in national legislation which means that national Governments are more tied to EU directives etc.

Due to the fact that decision making is based on legislation political decision depends on the conditions of politics. According to *Lundgren* (1996) politics is not science. Politics is governed by rules and norms other than science. Politics means compromise between different interests aiming at keeping nations together. Politics means making not necessarily the right decision, but making a decision. A good decision is first of all a decision that can be implemented.

One could conclude that there are no fixed conditions that allow for industrial peat harvesting to be accepted as sustainable – it depends on political decisions based on the situation in different countries as well as in the EU and IPCC. *Lafferty and Meadowcroft* (2000) show that development of a strategy for sustainable development in high consumption societies is influenced by a balance of factors such as environment, economy, social aspects and trade which may differ a lot over time.

STATEMENTS ABOUT PEAT

Different aspects on peat and sustainability have been discussed from a sustainability perspective. The European Commission *press release EU-commission* (February 2000) concluded that when the Commission did not allow that peat should been included in a project about European standards for bioenergy, it stated that peat is not a biofuel. Peatlands are protected under the Habitats Directive and Commission policy is to not promote the extraction of peat in Europe. Nevertheless, countries where peat extraction is sustainable may desire to produce national standards. The Commission concluded that as the natural conditions of peat are not the same in all countries of the EU, the Commission considers the preparation of European standards as a potential conflict with its policy on nature conservation.

Crill P, Hargreaves, K and Korhola A (2000) - which was financed by Finnish Government - found that peat could be classified as a *biomass fuel* to distinguish peat from *biofuels* such as wood and from *fossil* fuels such as coal. Unlike *fossil fuels* but similar to *biofuels*, *biomass fuels* are renewable. Due to the long time span required for building up a harvestable peat deposit, in comparison to wood biomass, peat can be regarded as a *slowly renewable fuel* only.

The *Swedish Government Energy Bill* (2009) stated that the Swedish energy policy based on ecological sustainability, security of supply and economic competition could contain peat, although only in a limited amount.

The EU Council decision of 4th February 2011stated that the *Energy 2050* strategy should contribute to promoting a more energy and resource efficient, sustainable, low carbon, secure, interconnected and competitive Europe, for the benefit of all consumers. Whereas the strategy should contain a *low carbon* policy perspective, it was explained that *low carbon* does not exclude energy technologies that have *low carbon emissions* while using carbon-based fuel.

To summarize

- Due to the potential conflict with the Habitats Directive peat was not classified as a biofuel by *EU-commission* (2000). The Commission was, however, aware that the judgement about peat as a sustainable source could differ between countries.

- The consequences of *Crill P, Hargreaves, K and Korhola A* (2000) is an abandonment of the strict division between fossil and renewable fuels by integrating time in the analysis and concluding that peat is a slowly renewable biomass fuel.

- The *Swedish Government* (2009) recognised peat as part of a sustainable energy system but did not say anything about peat itself.

- The *European council* (2011) has left to one side the dichotomy between renewable and fossil fuels and is nowadays talking about *low carbon* as an overall goal for energy policy. For example, fossil fuel such as coal used in conjunction with Carbon Capture Technology could be equivalent to renewables. In principle this could also be relevant for peat.

SOME ASPECTS OF SUSTAINABLE PEAT

A more and more focused question that arises is **how to use services and products in a more efficient way**. This is a new aspect on utilization of resources. *Clarke and Joosten* (2002), *EPAGMA* (2009) and *IPS* (2010) did not take into consideration the aspect of efficient use of peat resources. Today the question of *use* in a sustainable way seems as important as the question of peat production itself. There is a tendency today to accept horticultural but not energy peat. This could be translated to an acceptance for peat production *as such* only if products are used for horticultural use. The acceptance of peat production as sustainable seems therefore to some extent dependent on the legitimacy of peat use.

Throughout the EU, and in particular in countries like Sweden, Finland, Germany, Ireland and The Netherlands, there are a lot of interested parties looking for the possibility to use more biobased products such as biomass for uses other than energy production: *European Commission* (February 2012). Using biomass in sectors other than energy could mean higher value chains than just burning. Biobased products are products that are wholly or partly derived from materials of biological origin, excluding materials embedded in geological formations and/or fossilized. A sustainable management of natural resources means that the EU needs to increase progress in producing "*more with less*".

In the horticulture sector peat is used in an efficient way when peat is mixed with compost and other material. However, we cannot replace peat with other substrates but the goal is to use horticultural peat even more efficiently than today. The same situation obtains for peat used for litter which is an excellent material often used together with other woodbased products. It could mean higher value in a value chain in line with the guidelines for a biobased economy. Peat could therefore be characterized as an extender or booster used together with other products. In countries such as Sweden and Finland the situation is similar to energy peat – the best way to use peat is together with woodfuel and therefore achieve a more efficient combustion – *produce more with less*. This fact was observed by the European Commission

when they accepted the Swedish Parliament's decision on the green certificate for peat in Sweden.

Ecosystem services – The *TEEB* (2010) report that was initiated by G8 and five major developing economies focused on the global economic benefit of biological biodiversity, the cost of the loss of biodiversity and the failure to take protective measures versus the cost of effective conservation. TEEB makes the case for integrating the economics of biodiversity and ecosystem services in decision making. Examples of ecosystem services are recreation, water regulation and carbon storages and also food, fibre and fuel. One may conclude that peat is an example of an ecosystem service from wetlands.

Balancing different interests has been a red thread for peat congresses for twenty years **–** studying earlier themes of IPS peat congresses is illuminating: 1992 *Peat in nature and industry – a matter of balance,* 2000 *Sustaining of peatlands*, 2004 *Wise use of peatlands,* 2008 *After wise use* and 2012 *Peatlands in balance.* The development over time has gone from taking into consideration first local, then regional and finally, global interests. This is also in line with the discussion above about ecosystem services. More and more balance and even sustainability will focus on ecosystem services.

In Sweden as well as Finland, Germany and the Baltic states there have been guidelines or legislation **not to use pristine peatlands and instead use ditched peatlands or agriculture affected peatlands**. *IPS* (2008) concluded that using peatlands that are large greenhouse gas sources, the climate impact of peat utilization chain can be significantly reduced. Examples of such peat resources are cultivated peatlands and forestry-drained peatlands. One problem is however that even pristine peatlands can emit a lot of greenhouse gases such as methane which is more aggressive than carbon dioxide. There are no solutions today to mitigate those greenhouse gases. On the other hand, the use of ditched peatlands already emitting greenhouse gases in order to create sinks out of sources without causing problem for biodiversity could be a win-win situation for society. In this context even the restoration of peatlands is important. The problem of pristine peatlands that emit a lot of greenhouse gases remains to be solved in a sustainable way.

CONCLUSIONS

Peat should be characterized as a biomass due to the fact that it is an ecosystem service derived from wetlands slowly renewable in accordance with *Crill P, Hargreaves, K and Korhola A.* (2000). It does not mean that peat harvesting *per se* is sustainable. It needs to achieve sustainability criteria in the same way as pertains to biofuels and bioenergy. The following aspects are important points in determining whether peat is sustainable or not:

- The use of peat need to be more efficient – it is important to create new value chains for peat preferably together with wood biomass – *use more with less*.

- The definition of sustainable production and use of peat differs between countries and over time. One important question is whether peat is an abundant resource or not and what the alternatives to peat are.

- It is important to fully take into consideration the discussion about ecosystem services and the balance between different interests. Global considerations such as global climate change are today increasingly important when balancing different interests.

REFERENCES

Brundtland Commission (1987): *Our common future*

Clarke and Joosten: *Wise use of Mires and Peatlands* (Sarajärvi 2003)

Crill P, Hargreaves, K and Korhola A,: The role of peat in Finnish Greenhouse Gas Balance, Ministry of Trade and Industry Finland, Studies and reports 10/2000

EU Commission (Brussels, 13.2.2012 COM (2012) 60 final): *Innovation for Sustainable Growth: A bioeconomy for Europe.*

Lafferty and Meadowcroft (New York 2000): *Implementing Sustainable Development Strategies and Initiatives in High Consumtions Societies*

Lundgren m.fl. (Lund 1996): *Att veta och att lära*

International Peat Society (IPS) (Saarajärvi 2008): *Peatlands and Climate Change* (Maria Strack ed.)

TEEB (2010): *The economics of Ecosystems and Biodiversity Report for business – Executive summary*, UNEP etc.

IPS (2010) *Strategy for responsible peatland management* (eds.) D. Clarke and J. Rieley.

Joosten, H. and Clarke, D. (Saarijärvi, Finland 2002): *Wise use of mires and peatlands – Background and principles including a framework for decision-making*.

European Peat and Growing Media Association EPAGMA (2009): *Code of practice for responsible peatland management.*