

Climate change aspects within EIA proceedings

Estonia: Raudsaare Peat Extraction Site

Case Study

Justice and Environment 2012

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ESTONIA

Art. 3 (b) and Annex No. IV. of the Directive of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (EIA Directive - 2011/92/EU) laid down that environmental impact assessments shall identify, describe and assess in an appropriate manner direct and indirect effects on climate, and shall include a description of the aspects of the environment likely to be significantly affected by the proposed project, in particular – and inter alia - climatic factors, and the inter-relationship between all the factors mentioned therein. Climate relevant impact of a plan should be assessed but in practice it is very limited and formal without deeper evaluation.

1. Title of the case

Environmental Impact Assessment of Raudsaare Peat Extraction Site

2. Description of the project

2.1. Features of the project, location, likely environmental impacts etc.

The project analyzed in this case study concerns establishment of a new peat extraction site (Raudsaare) in the bog of Laukasoo. Laukasoo is a bog situated in eastern Estonia, roughly 20 km northeast of Tartu, second-biggest city in Estonia (ca 100 000 inhabitants). Raudsaare extraction site is located next to an existing peat extraction site on one hand, and next to a Natura 2000 site (Pähklisaare) on the other. The aim of the peat extraction activities is to supply central heating combustion plants situated in Tartu (including Anne heat and electricity co-generation plant opened in 2009).

According to the extraction permit issued for the project (which was based on EIA), area of extraction is 106.34 ha, average permitted annual amount of peat extraction is 11'000 tons, maximum amount 15'000 tons.

To carry out peat extraction activities, all vegetation on the area will be removed and the water table level reduced by irrigation. This would change the water regime on both the extraction area itself as well as in its close proximity (ca 100-150 m from the extraction site). Peat extraction and transport also creates emissions of solid particles (PM10) and noise (created by extraction machinery).

2.2. Does the project have likely harmful impacts on the environment, especially on climate?

Peat extraction would have a number of likely harmful impacts on the environment. These include the loss of habitats within the extraction area, change of water regime and related destruction/alteration of natural habitats in the close proximity of the extraction site, emissions of solid particles (PM10) and noise.

As regards climate, studies have shown that peat extraction leads to significant emissions of greenhouse gases (GHG) from the area of extraction. Natural bogs are net carbon sinks; extracted peat bogs on the other hand become sources of GHG emissions due to mineralization of the soil. Recently published studies¹ estimate that active and abandoned peat extraction areas in Estonia emit a total of 191'499 tons of CO₂ equivalent of GHG, whereas the same area in a natural state would accumulate a total of 24'405 tons of CO₂ equivalent of GHG. These emission levels created by peat extraction in Estonia are comparable with direct emissions from railway transport, residential sector or agriculture². In addition to it, peat is considered to be a non-renewable resource, therefore there are net CO₂ emissions related to burning it in combustion plants.

3. Applicable national regulation

3.1. Which are the main national provisions transposing the EIA Directive?

Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codified EIA Directive) is mainly transposed to the Estonian legal order by the Environmental Impact Assessment and Environmental Management System Act and Regulations issued in accordance with it. The regulation on EIA is concentrated in the Chapter 2, Division 1 of the Act (Sections 3 to 30).

3.2. Does the national regulation on EIA demand taking climate change aspects into consideration in the procedure?

According to the Section 20 (1)6) of the Environmental Impact Assessment and Environmental Management System Act, the EIA statement must include an analysis of potential environmental impact of the proposed activity and its actual alternatives, including impact on climate:

¹ See Salm, J.-O. Emission of greenhouse gases CO₂, CH₄, and N₂O from Estonian transitional fens and ombrotrophic bogs: the impact of different land-use practices for more details:

<http://dspace.utlib.ee/dspace/handle/10062/25471>

² According to the National Inventory of GHG 1990-2010 available at:

<http://www.envir.ee/orb.aw/class=file/action=preview/id=1184536/Eesti+riikliku+KHG+inventuuri+aruanne+1990-2010.zip>

Official translation of the provision:

(1) An expert or, under the supervision of the expert, an expert group shall prepare, on the basis of the approved environmental impact assessment programme, the environmental impact assessment report in which the expert or expert group:

*6) analyses the potential environmental impact of the proposed activity and its actual alternatives, including the indirect impact and combined impact with other types of activity to the state of the environment, including impact to the health, well-being and property of persons, to plants, animals, soil, landscape, mineral resources, quality of air and water, **climate**, to protected natural objects, including Natura 2000 sites, their purposes of protection and integrity, and to cultural heritage, and the interaction of the factors specified in this subsection;*

4. Description of the impact assessment procedure

4.1. Type of procedure, competent authorities, claimants and other participants involved

Environmental impact assessment was carried out to assess the impacts of the proposed activity. The developer (Tartu Jõujaam AS) wishing to extract peat from the Raudsaare site had first applied for an extraction permit already in 1995 but the proceedings were factually frozen until 2006. On 5 July 2006, the competent authority (at that time Environmental Authority of Tartu County) initiated the EIA proceedings.

Due to administrative restructuring, the name of the competent authority changed within the period of EIA proceedings (Environmental Authority of Tartu County was restructured into the Jõgeva-Tartu Region of Environmental Board).

The impact assessment was carried out by an expert group led by OÜ Eesti Geoloogiakeskus. In addition to the competent authority and the applicant Tartu Jõujaam AS, local landowners, National Nature Conservation Center (later restructured into Environmental Board), representatives of a political party Estonian Greens (*Erakond Eestimaa Rohelised*), Tartu Bureau of Land Improvement (administrative authority later restructured into Agricultural Board) took part in the procedure.

4.2. Does the project have likely harmful impacts on climate?

As brought out in paragraph 2.2. of this case study, extraction of peat has likely harmful impacts on climate which may be divided in two distinct categories:

- direct greenhouse gas (GHG) emissions resulting from the use of peat in combustion plants, as peat is considered to be a non-renewable resource;
- GHG emissions from the extraction and drainage area as a result of changed land use.

In the current case, both are relevant as the aim of peat extraction was to use it as a fuel in central heating combustion plants in Tartu.

4.3. Did the assessment meaningfully evaluate the likely impacts of the project on climate?

The assessment does not take likely impacts of the project on climate into account. In fact, no mention of impacts on the climate can be found in the assessment.

The assessment concentrates on three main issues: impact on water regime (and local wells), impact on protected habitats and species and impact on ambient air (emissions of noise and solid particles (PM10)).

4.4. Had the claimant or other participants stressed the priority of preventing climate change? If yes, had been these arguments taken into account?

During the public consultation of the EIA program, the locals submitted a letter (dated 16 October 2007) in which they, among other concerns, brought out that the CO₂ emissions from the extraction site would grow and emissions would also be created by burning the peat. This was used as an argument to support their view that the activity should not be carried out at all.

The developer (AS Tartu Jõujaam) replied to the local people with a letter, bringing out that EIA will deal with most of their concerns (naming impact on ground water and surface water, wells, flora and fauna). The issue of climate change, however, was not mentioned in this letter nor ever brought up again later in the proceedings by any of the parties to it.

5. Outcome of the proceedings / content of the final decision

The EIA statement was approved by the supervisory body – Environmental Board – on 1 April 2010. In the approved EIA statement, the area recommended for extraction was reduced to 125 ha (down 49% from the 244.3 ha applied for initially by the developer). Reduction of the area was mainly proposed to a) avoid damage to neighboring Natura 2000 area and b) create buffer zones between site and nearby houses to reduce air pollution and noise.

The extraction permit was issued on 7 June 2011. According to it the extraction area is 106.3 ha. Along with the reduction of area of extraction, the permitted amounts and rates of extraction were also reduced. The developer had initially applied for 786'000 tons to be extracted at a maximum rate of 29'000 tons/year. The permit allows the extraction of a total of 258'700 tons of peat at a maximum rate of 15'000 tons per year (avg 11'000 tons).

6. Obstacles/Challenges generated in this case

The studied case demonstrates clearly, that even though impact of a project on climate should be analyzed in its environmental impact assessment, this legal requirement is not fulfilled. Even in case of projects that are known to have a considerable effect on climate (like this one), the relevant impacts are not assessed, let alone properly. In the given case, even local residents brought out in the EIA program phase that the project might have climate-relevant impacts. This did not, however, lead to the impact of the project on climate being assessed.

Reasons for this happening are manifold:

- Firstly, the argument of CO₂ emissions was formulated not as something to be taken into account when assessing impacts but rather as a counterargument to the project as such. This made it easier for the preparer of EIA and for the authorities to disregard the argument.
- Secondly, the supervisor of the EIA proceedings failed to pay due attention to the argument and the fact that it was not properly responded to by the developer or EIA experts. Even if it was not formulated as a recommendation to the EIA program, the competent authority could have taken it into account and asked for these impacts to be additionally assessed.
- Thirdly and lastly, local residents themselves did not use this argument consistently, thereby making it even easier to be disregarded by the authorities and experts.

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