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**Higher Education Taking Action towards the Sustainable Development Goals:  
Perspectives from Asia and Europe**

Opinion | Jürgen Hendrik Voitka  
**Estonia – 50 shales of green**

Estonia is dubbed one of the greenest countries in the world with 51% of the country covered with forests, 22% covered with swamps and bogs, a lot of different animal species, large lakes, tight nature conservation policies and integration of technology. At the same time, Estonia is the third largest emitter of greenhouse gases per capita in the EU, mostly due to burning oil shale as the main energy resource. Ash and other residue from burning fossil fuels have a negative impact on the local environment – eutrophication of bogs, deadly air pollution, receding groundwater, to name a few. So how is it that Estonia seems so green, yet pollutes so much?

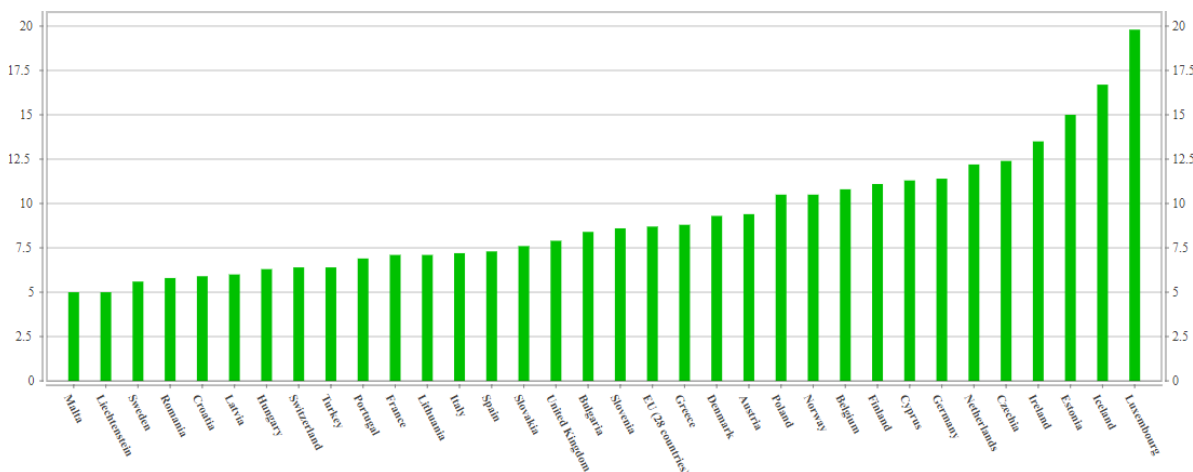


Photo 1: Greenhouse emissions per capita, 2016 Eurostat. Estonia is the third on the right.

The answer is not that simple. Estonia is situated geographically on the east coast of the Baltic Sea – northernmost of the Baltic states, across the gulf from Finland and sharing a bit of its borders with Russia. During the Soviet Union, Estonia was occupied, like most of Russia’s neighbors. Due to the cheap and moderately effective oil shale mines in North-Eastern Estonia, the Soviet Union started to exploit the sites in the 1970s. Upon further research, scientist

discovered there is a lot of oil shale even deeper underground, together with phosphorite. The mining started to increase even further, reaching its peak in 1980.



Photo 2: Phosphorite findings in Estonia, 1997.

In the 1980s, the Soviet Union planned to mine further underground, to reach phosphorite and mine it. Doing so would have had a huge negative impact on the environment. Estonians started a sizeable rebellion against the plan, named the War of Phosphorite, with protests, demonstrations, media outputs and more. In 1987, the plan was frozen and forgotten – a win for the environment.

Nowadays the oil shale industry is still going strong, with about  $\frac{3}{4}$  of the country's energy coming from oil shale. Estonia has followed the EU renewable energy directive, which required 20% of the country's energy to come from renewables. The governments over the last years have shown no interest in further expanding the renewable energy field due to other political issues.



Photo 3: Oil shale ash mountains in Ida-Virumaa. By Siiri Velling, 2006.

Oil shale is one of the dirtiest coal types known to man and, at the same time, with a very low calorific value. Burning oil shale and then having a measly 20% renewable share doesn't add up to a very green energy policy.

Nature conservationists and activists have been pushing the local governments to add more and more nature reserves near industrial zones to prevent the miners to expand to new regions and further destroy the nature. As a result, Estonia has one of the highest nature reserve areas in Europe in percentage compared to the country's total area.

Estonia boasts green forests and diverse biotopes, but at the same time is a disgrace to the whole continent with its backwards energy policies. Continuing with oil shale and not investing in green energy is tearing the country apart with nature conservationists on one side and the oil shale industry and its supporters on the other. Without getting rid of fossil fuels from the country's energy consumption, there is no moving forward for Estonia.