

An aerial photograph of a forest landscape. A path of stacked logs runs diagonally from the top right towards the bottom left. The forest is dense with tall, thin trees. The ground is covered in green moss and small plants. The sky is overcast.

Wood Pellet

Damage

How renewable energy subsidies fuel the biodiversity and climate crises

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New research by the Centre for Research on Multinational Corporations (SOMO), commissioned by Greenpeace Netherlands, shows how burning wood as “renewable bioenergy” is not as sustainable as the EU’s climate and energy policies assert it to be. The report looks at the forests of Estonia – one of the EU’s top wood pellet producers – as a case study. The researchers checked Estonian wood pellet production methods against the Dutch sustainability criteria for biomass, which are among the most comprehensive in the EU. The study found that even the Dutch sustainability criteria fail to protect critical habitats like high-conservation-value forests and peatlands and ensure that renewable energy production in the Netherlands isn’t complicit in this destruction. The destruction of these ecosystems for wood pellet production, and the intensification of logging, threaten biodiversity and undermine the ability of the forests to act as carbon sinks.

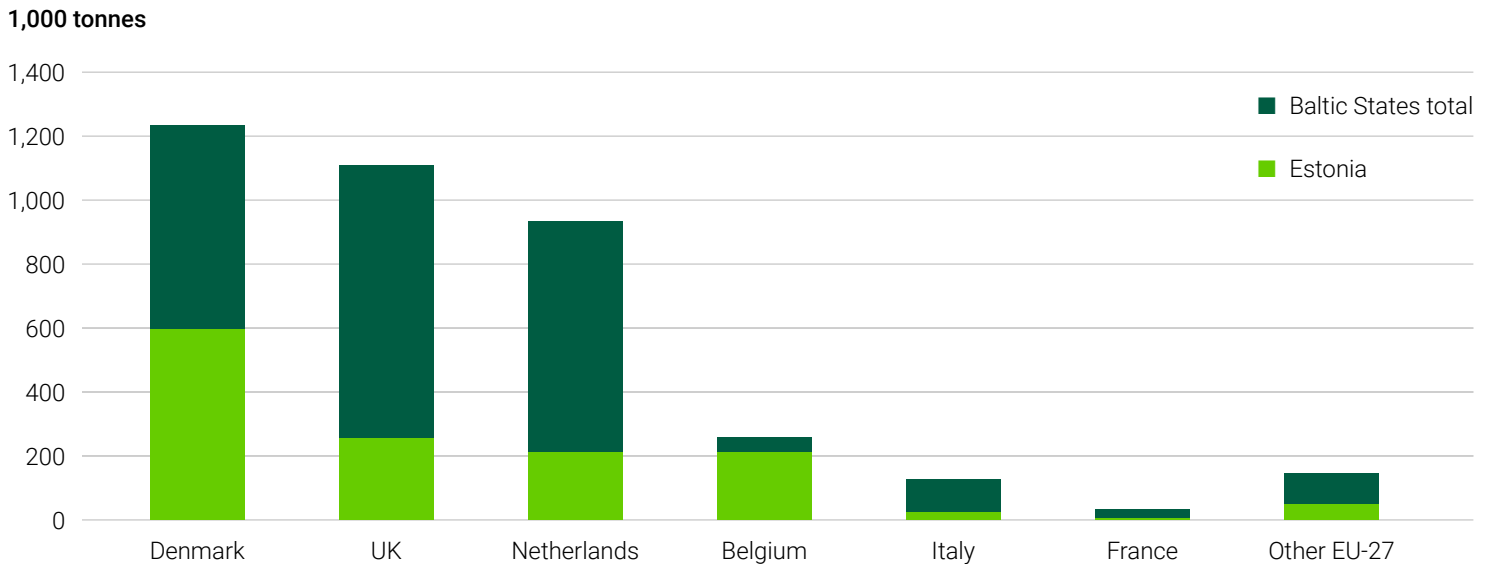
Wood pellet companies are destroying and degrading forests despite EU and national sustainability requirements for the use of wood for energy, and accelerated by renewable energy subsidies in the Netherlands and elsewhere in the EU. As EU countries are increasingly burning wood for heat and electricity, this can end up releasing even more greenhouse gas emissions than the fossil fuels they are supposed to replace. This new evidence shows once more why it’s crucial that the EU stops counting the burning of forests as renewable energy.

The European bioenergy boom

The burning of wood makes up a massive 35% of what the EU counts as its renewable energy mix – heating and electricity generation. When counting the burning of biomass from other sources, the share increases to 60%. According to the European Commission’s own Joint Research Centre, over the past couple of decades, the use of wood in the EU has been growing, as well as the share of that wood that gets burned for heat and electricity. In 2015, over 60% of the wood used in the EU was already being burned for heating and electricity generation.

This rise in demand for wood to burn for heat and power has had a huge impact on European wood markets and on logging. Forest-rich Baltic countries like Estonia have seen the emergence of a whole new industry producing wood pellets for energy use, mainly for export to other EU countries that encourage their use with renewable energy subsidies. Estonia is now the second largest exporter of wood pellets for energy production in the EU. Estonia primarily exports to Denmark, the UK, the Netherlands, Belgium and Italy (figure 1) where pellets regularly get burned in massive power plants, often co-fired with coal.

Figure 1. Key EU-27 + UK importers of wood pellets from Baltic states



Source: Eurostat (2021), "EU trade since 1988 by HS2,4,6 an CN8 (DS-645593)", viewed in March 2021.

There are policies on both the EU and national level with the stated aim to ensure the 'sustainability' of this growing use of wood energy.

In the EU, the criteria for woody biomass were first [introduced in 2018](#) as part of the EU's Renewable Energy Directive. In the Netherlands, where public subsidies for co-firing of wood in coal power plants has been a particular [topic of controversy](#), additional efforts were made to find agreement on tighter biomass sustainability criteria between energy companies, NGOs and the government. This effort resulted in the [Sustainable Biomass Covenant](#) signed in 2015 and tied to the Dutch [renewable energy subsidy scheme SDE+](#).

The false green cover of 'sustainability criteria'

The new field research conducted by the [The Centre for Research on Multinational Corporations \(SOMO\)](#) and published by Greenpeace Netherlands took a close look at the implementation of the Dutch SDE+ biomass sustainability scheme in Estonia, a key supplier of wood pellets to the Netherlands.


The criteria investigated on the ground focus especially on protecting forested peatlands, forest biodiversity, threatened species and habitats, watersheds and soils. The EU's Renewable Energy Directive (RED) has several similar criteria for woody biomass, or is considering new such criteria, but usually defined with less precision and detail.



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Table 1. Summarises the key findings of the analysis, showing how most of the Dutch sustainability criteria are repeatedly breached in pellet production in Estonia, so fail to protect the forests from the damaging impacts of growing wood use for energy.

The research also found that Graanul Invest, Europe’s biggest pellet producer, headquartered in Estonia, is directly linked to these harmful logging practices. Their wood likely ends up burned in energy plants across the EU, qualifying for renewable energy subsidies and counted towards European renewable energy targets.



Neither the more stringent Dutch SDE+ criteria nor the more loosely defined EU criteria have been able to prevent these damaging logging practices driven by rising demand for wood to burn.

Dutch SDE+ criteria	EU RED criteria	Implementation & assessment
<p>Criterion 7.1. requires that “sites with high conservation value and representative areas of forest types occurring within the forest management unit are mapped, inventoried, protected and, if possible, enhanced”, with additional more detailed indicators.</p>	<p>No such criteria in the current RED but documents leaked in June 2021 reveal that the Commission is considering introducing new criteria to rule out biomass from “primary forests” and other forests “where there is no clearly visible indication of human activity and the ecological processes are not significantly disturbed”.</p>	<p>Despite this criteria, valuable parts of old-growth forests, habitats of threatened species like three-toed woodpecker, and habitats inside protected areas still get logged and damaged in Estonia, in some cases directly by the pellet company Graanul Invest.</p> <p>Such valuable forests and habitats would neither be protected as “primary forests” which are only a marginal fraction of the EU’s forests, estimated to cover only 3% of the forest area.</p>
<p>Criteria 8.1 and 8.2 require that both soil quality and water balance and quality get “maintained and if necessary improved” in the forest where biomass is sourced, with additional more detailed indicators.</p>	<p>Current RED only requires that countries or regions where biomass is sourced have rules in place to ensure “harvesting is carried out considering maintenance of soil quality”.</p>	<p>Investigations show that at least 54 kilometers of waterway banks were clear-cut over a period of five years on land currently belonging to subsidiaries of Graanul Invest. Clear cuts and logging machinery on these sensitive and species-rich zones drives nutrient run-off into waterways and damages the soils and vegetation.</p> <p>The practical implementation and impact of the EU criteria is unknown and hasn’t really been challenged.</p>
<p>Criterion 3.1 requires that biomass is not sourced from peatlands (areas classified as such in 2008) to ensure peatlands don’t get drained for biomass production, with additional more detailed indicators.</p>	<p>No such criteria in the current RED but documents leaked in June 2021 reveal that the Commission is considering new criteria to rule out “raw material obtained from land that was peatland in January 2008”, similar to the Dutch criteria.</p>	<p>Investigations on the lands of the Estonian state forest company RMK show regular re-drainage of peatland forests, which includes clearing service roads and widening ditches, all further degrading the peatlands.</p> <p>RMK is a regular supplier of wood for Graanul Invest and there are no safeguards in place to ensure wood from these peatlands doesn’t end up in pellet production.</p>



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Renewable' energy but no emission reductions?

Growing demand for wood energy has also led to increases and intensification of forest harvesting, which not only adds to the pressure on biodiversity but also reduces the ability of forests to help in the fight against climate breakdown absorbing and storing carbon.

In Estonia, forest logging intensity has increased almost threefold during the last decade. More than half of the annual volume of wood logged in Estonia between 2015 and 2018 was burned for energy. There was steep growth in the production of pellets for export, making the pellet industry's contribution to the intensification of logging undeniable. This trend is not limited only to Estonia, as a recent study published in the [science journal Nature](#) shows that, across Europe, the amount of wood removed from forests increased by 69% in the period 2016-18 compared to 2011-14, partly thanks to growing demand for wood for energy production.

These steep increases in logging diminish the carbon sink potential of forests. In Estonia, the [government's own reporting](#) confirms that, under the current policies, the carbon absorption of the country's

forests in 2035 will be less than half of what it was in 2015. Similarly, across the EU, the [European Commission](#) has estimated that carbon sequestration by land and forests will diminish from an average of 300 MtCO₂-eq annually since 1990, to only about 225 MtCO₂-eq by 2030 – a drop of 25%.

No matter what the sustainability criteria, the enormous and growing demand for wood to burn for energy is driving intensification of logging, increasing greenhouse gas emissions and further deteriorating European forests. Harvesting more trees today puts more carbon in the atmosphere now, and lessens the ability of forests to absorb it. Given the current urgency of the climate crisis, we don't have the luxury of time to wait for those trees to grow back.

Stopping fake renewables

The EU's renewable energy targets and the policies set by national governments to meet those targets are the main drivers of the growing use of wood for energy. It is crucial that, as the EU revises its climate and energy rules for 2030, a new approach is taken to limit the use of wood and other biomass for energy.

This research and the experience with the Dutch SDE+ criteria confirm what hundreds of scientists have already told European decision makers: it is not sufficient to merely add criteria only on where and how forests are harvested, or to add a few protected areas from which the sourcing of biomass is not permitted.

The EU must increase its overall targets for emission cuts by 2030 and take a new approach to forests and wood use in its new climate and energy legislation by:

- No longer counting wood extracted directly from forests (primary biomass) and burned for energy as “renewable energy”.
- Only supporting the burning of residues from wood products manufacturing and postconsumer wood (secondary woody biomass) if it cannot be turned into material products.
- Adopting new higher targets for carbon absorption and climate change mitigation in the land and forest sectors (LULUCF), without using these sectors to offset greenhouse gas pollution in other sectors.

Sources

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