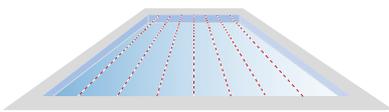


A briefing note by Fern, Birdlife Europe and Transport & Environment

# What impact has the Renewable Energy Directive had on EU forests?



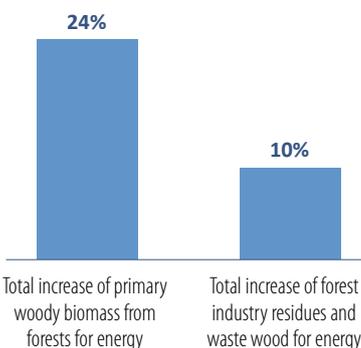
Wood use for energy increased by about **75 million cubic meters over the past five years.**



An equivalent of **30 000** Olympic swimming pools



Not only the wood for energy increased but the percentage of this that comes **directly from the forest** has increased by much more (+24%) than for forest industry residues (+10%).



**The EU Renewable Energy Directive was launched in 2009 to great fanfare and the promise that the EU would fulfil at least 20 per cent of its total energy needs with renewables. Few could have guessed that a policy intended to help the EU meet climate goals would lead to vast increases in the burning of wood, degrading forests in Europe and beyond.<sup>1</sup>**

New research commissioned by Fern, Birdlife Europe and Transport & Environment shows that not only has use of wood for energy increased by about 75 million cubic meters over the past five years (see Table 1), but that use of wood that comes directly from the forest has grown more (24 per cent) than the use of forest industry residues (10 per cent). Even in countries with strong forest industries like Sweden and Germany, the use of wood directly from forests has increased more than the use of industry waste.

The transportation of wood for energy across Europe and import of wood from as far away as the USA has also increased heavily, illustrated by the doubling of the use of pellets – compressed biomass from chips, sawdust or in many cases whole trees.

Burning such wood can be worse for the climate than burning fossil fuels. Potential carbon dioxide (CO<sub>2</sub>) reductions from bioenergy production depend on the type of forest, the biomass source (for example, branches, stumps or roundwood), and the type of forest as well as the way it is burnt (see Table 2).<sup>2</sup>

**Table 1: Growing use of wood for energy since the introduction of the EU Renewable Energy Directive in 2009**

Consumption of Wood Biomass for energy by products (1 000 m <sup>3</sup> equivalent)	Year						Change between 2010 and 2015 in %
	2010	2011	2012	2013	2014	2015	
Roundwood (firewood)	88 900	95 500	97 000	106 100	104 200	104 600	18
Short Rotation Wood	0	3 500	3 500	4 500	4 500	4 500	450
Primary residues	43 500	49 800	51 800	57 800	56 700	54 800	26
<b>Total increase of primary woody biomass from forests for energy</b>	<b>132 400</b>	<b>148 800</b>	<b>152 300</b>	<b>168 400</b>	<b>165 400</b>	<b>163 900</b>	<b>24</b>
By-Product Wood Chips and Sawdust	43 000	45 900	46 300	41 000	40 400	44 000	2
Bark	32 300	39 000	38 600	39 900	40 100	40 300	25
Black Liquor	99 000	100 400	102 000	106 900	107 500	107 500	9
Waste Wood	36 700	41 000	41 200	41 200	41 300	41 200	12
<b>Total increase of forest industry residues and waste wood for energy</b>	<b>211 000</b>	<b>226 300</b>	<b>228 100</b>	<b>229 000</b>	<b>229 300</b>	<b>233 000</b>	<b>10</b>
Wood Pellets	20 525	24 146	28 124	40 752	39 444	42 941	109
<b>Total</b>	<b>363 925</b>	<b>399 246</b>	<b>408 524</b>	<b>438 152</b>	<b>434 144</b>	<b>439 841</b>	<b>21</b>

**Table 2: Impact on payback times of wood bioenergy (JRC, 2014)**

Factor	Payback time
Higher carbon intensity of substituted fossil fuel	Shorter
Higher growth rate of the forest	Shorter
Higher biomass conversion efficiency	Shorter
Higher initial carbon stock	Longer
Higher harvest level	Longer

According to the projections in Member State Renewable Energy Action Plans, more of the wood harvested will end up being burnt for energy than will be used to build houses, furniture and other material uses combined.<sup>3</sup>

This increased harvesting is reducing the amount of CO<sub>2</sub> that EU forests are taking up from the atmosphere – at a time when this needs to be increasing. By 2014,<sup>4</sup> EU forests were already sequestering 24 million tons less CO<sub>2</sub> than they were in 2009. By 2020, this is projected to drop by a further 57 million tons. Together that’s equivalent to an extra 80 million cars on the road or the annual CO<sub>2</sub> emissions of Romania!

### Why is the date important?

The new research shows why EU discussions around a new Regulation to account for Land Use, Land Use Change and Forestry (LULUCF) revolve around the year 2009. This was when the Renewable Energy Directive came into force and harvesting started increasing. If the Regulation compares future harvesting levels with harvesting levels from 2009,<sup>5</sup> then the bioenergy emissions from any increase in harvesting will be counted. If a later date is given, such as 2012 or 2017, then emissions caused by bioenergy policies introduced since 2009 will not be counted anywhere. Hiding such emissions could make or break efforts to keep climate change to a maximum of 1.5 degrees as explained by [climate scientists in an open letter](#).<sup>6</sup>

### Why is the definition important?

Some MEPs are suggesting that emissions from forests be measured against ‘active, sustainable forest management’. But how should sustainable be defined? Some are suggesting that sustainable forest management could allow countries to cut 100 per cent of their forest growth without accounting for any of the 376 megatons of CO<sub>2</sub> it could release into the atmosphere. That’s far bigger than the total CO<sub>2</sub> emissions of France.

### Why is the type of wood important?

Each type of wood for energy has a different kind of impact on the climate and forests. If the Renewable Energy Directive is to help the fight against climate change it should only

support use of forest industry residues and wastes, rather than increase wood extraction from forests. The European Commission proposes only using ‘sustainable’ wood – but this isn’t enough.

If forests and bioenergy are to play a role in reducing the strength of climate change, the LULUCF Regulation must ensure honest accounting of emissions, and the Renewable Energy Directive must ensure that bioenergy doesn’t create such emissions in the first place.

To find out more about increasing harvests and reducing sinks in individual Member States visit: [www.fern.org/REDimpact](http://www.fern.org/REDimpact)

To find out more about NGO recommendations for the Renewable Energy Directive visit: [http://www.birdlife.org/sites/default/files/attachments/Bioenergy\\_post\\_2020\\_NGO%20recs.pdf](http://www.birdlife.org/sites/default/files/attachments/Bioenergy_post_2020_NGO%20recs.pdf)

- [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg\\_110a&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_110a&lang=en)
- <http://www.fern.org/sites/fern.org/files/climate%20and%20bioenergy%20final.pdf>
- EU Forest Strategy, COM (2013) 659 final; ECN (2015)
- The last date for which official data is available.
- As proposed by the European Commission, supported by Member States including Germany, Belgium, Spain, Portugal, Netherlands and Denmark: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016PC0479>
- <https://www.euractiv.com/section/climate-environment/opinion/forest-accounting-rules-put-us-climate-credibility-at-risk/>

