

## Scientists response to US advocacy for burning forest biomass

11<sup>th</sup> of March 2021

President Charles Michel, European Council

President Ursula von der Leyen, European Commission

Vice President Frans Timmermans, European Commission

Dear President Michel, President von der Leyen, and Vice President Timmermans,

Law professor Blake Hudson and US-based signatories published an open letter (hereafter referred to as Hudson letter) addressed to EU leaders on 10 February 2021, containing “4 fundamentals” of biomass energy. Their letter presents a point of view that is not in line with the urgency of restoring forests and addressing climate change. Here, we – the undersigned 59 scientists from 17 countries - present a critique.

### “Carbon benefits” of biomass

As acknowledged by the Joint Research Centre (JRC), other scientists working for the European Commission, and the EASAC<sup>1</sup>, burning forest biomass emits more CO<sub>2</sub> than burning fossil fuels, and because trees regrow slowly, the net cumulative emissions can exceed those from fossil fuels for decades to centuries<sup>2</sup>. As the JRC emphasized in their recent report<sup>3</sup>, even when the biomass is derived from low-diameter forestry residues that would otherwise decompose relatively quickly, net bioenergy emissions exceed those from fossil fuels for 10 – 20 years. As policymakers know, the EU goal of net-zero emissions by 2050<sup>4</sup> will require a massive effort to protect and restore forests and rebuild the EU’s forest carbon sink. Harvesting and burning forest biomass moves carbon out of forests and into the atmosphere right at the time when it is most important to reduce emissions.<sup>5</sup>

The Hudson letter suggests that the EU should develop its bioenergy policies based on sound and relevant science, but their letter ignores much of the known science, flatly stating that the carbon benefits of biomass are well known. However, their timeframe for these benefits – 100 years, which they claim is “(t)he most common timeframe for measuring the impacts of greenhouse gases” – is excessively long. It is obviously not correct to claim that 100 years is a standard timeframe for assessment of carbon impacts, particularly given the EU’s 2030

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<sup>1</sup> Letter from EASAC to Jean-Claude Juncker., Jan 8, 2018.

[https://easac.eu/fileadmin/user\\_upload/180108\\_Letter\\_to\\_President\\_Juncker.pdf](https://easac.eu/fileadmin/user_upload/180108_Letter_to_President_Juncker.pdf)

<sup>2</sup> European Commission. 2016. Impact Assessment: Sustainability of Bioenergy. Accompanying the document Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (recast). Brussels. At [https://eur-lex.europa.eu/resource.html?uri=cellar:1bdc63bd-b7e9-11e6-9e3c-01aa75ed71a1.0001.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:1bdc63bd-b7e9-11e6-9e3c-01aa75ed71a1.0001.02/DOC_1&format=PDF)

<sup>3</sup> Camia A., Giuntoli, J., Jonsson, R., Robert, N., Cazzaniga, N.E., Jasinevičius, G., Avitabile, V., Grassi, G., Barredo, J.I., Mubareka, S., The use of woody biomass for energy purposes in the EU, EUR 30548 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-27867-2, doi:10.2760/831621, JRC1227190. At <https://forestdefenders.eu/wp-content/uploads/2021/01/JRC-biomass-report-markup.pdf>

<sup>4</sup> [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en)

<sup>5</sup> For an interactive model that allows users to explore biomass carbon impacts, see <https://apps-scf-cfs.rncan.gc.ca/calc/en/bioenergy-calculator>

and 2050 climate targets. Obviously, **we don't have 100 years to wait for climate benefits** that are *potentially* delivered by forest biomass use for energy.

Further, it appears that the Hudson letter has confounded the use of a 100-year timeframe for assessment of the global warming potentials (GWP) of GHGs in the atmosphere,<sup>6</sup> as used by the IPCC, with the concept of a timeframe for assessing lifecycle emissions, which can be of any duration. The concept of GWP was developed to allow comparisons of the global warming impacts of different gases, and is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time relative to the emissions of 1 ton of carbon dioxide. This is barely relevant to assessing lifecycle impacts of burning wood for energy.

The adverse impacts of increased carbon emissions over even the next couple of decades was affirmed by the EU Joint Research Centre's recent report on biomass,<sup>7</sup> which concluded that of the 24 biomass sources evaluated in the study, **23 pose a risk to climate, biodiversity or both**. Their concept of "short term" carbon impacts is defined as biomass that increases carbon emissions compared to fossil fuels for 10 – 20 years, then *may* show a reduction relative to fossil fuels, if certain conditions are met. Apparently, the signatories of the Hudson letter believe the EU should simply ignore its carbon reduction targets and continue to pump forest carbon into the atmosphere, no matter what this means for climate warming.

The 4<sup>th</sup> point of the Hudson letter argues that the demand for wood helps keep land in forest and incentivises investments in timber production. Of course, this is a favourite talking point of the US wood pellet industry, the interests of which the Hudson letter seeks to promote. There is little evidence to support the industry's claim that increased market demand for wood helps to maintain natural forests. To the contrary a great deal of evidence suggests that the constantly increasing demand for forest resource driven by the hunger for renewable energy (Camia et al, 2018<sup>8</sup> and Camia et al 2020<sup>9</sup>) and the EU bioeconomy strategy will result in a further abrupt increase of forest area clear-cut (JRC, 2020<sup>10</sup>), decrease of rotation period and use of exotic species. These will eventually lead to further decline in the conservation status and resilience of forest ecosystems. Demonstrating how out of touch the Hudson letter is, it ignores the fact that the majority of biomass burned in the EU is sourced in the EU, and EU Member States protect forest land use so there is currently no deforestation trend in the EU. Beyond the call for protecting Europe's last remaining old-growth/primary forests, **the EU Biodiversity Strategy for 2030<sup>11</sup> even promotes further afforestation.**

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<sup>6</sup> [https://ghgprotocol.org/sites/default/files/standards\\_supporting/Global%20Warming%20Potential.pdf](https://ghgprotocol.org/sites/default/files/standards_supporting/Global%20Warming%20Potential.pdf)

<sup>7</sup> [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC122719/jrc-forest-bioenergy-study-2021-final\\_online.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC122719/jrc-forest-bioenergy-study-2021-final_online.pdf)

<sup>8</sup>

[https://publications.jrc.ec.europa.eu/repository/bitstream/JRC109869/jrc109869\\_biomass\\_report\\_final2pdf2.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC109869/jrc109869_biomass_report_final2pdf2.pdf)

<sup>9</sup> <https://publications.jrc.ec.europa.eu/repository/handle/JRC122719>

<sup>10</sup> <https://ec.europa.eu/jrc/en/news/recent-surge-eu-forest-harvesting-according-jrc-study>

<sup>11</sup> [https://ec.europa.eu/info/sites/info/files/communication-annex-eu-biodiversity-strategy-2030\\_en.pdf](https://ec.europa.eu/info/sites/info/files/communication-annex-eu-biodiversity-strategy-2030_en.pdf)

It's somewhat remarkable to see biomass industry proponents admitting that biomass may not convey carbon benefits for a century, given that many of them are still claiming burning trees for energy is "carbon neutral." Nonetheless, we urge you to follow the science, and exercise the precautionary principle in this matter. As the IPCC and climate scientists worldwide have shown, we need immediate reductions in atmospheric CO<sub>2</sub> to avoid the most catastrophic effects of climate change. In other words, the EU needs to grow forests, not burn them for energy. This requires removing forest biomass from the Renewable Energy Directive, which will also help allocating more subsidies for true renewables.

Thank you for your consideration,

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