

# SCIENTIFIC AND TECHNICAL CONSIDERATIONS ABOUT HOW TO REACH CLIMATE NEUTRALITY

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Achieving net zero depends on reducing emissions steeply while increasing carbon uptake from the atmosphere. Currently, the EU's land sink offsets less than 6% of emissions. Clearly, even with emissions decreasing, the EU's carbon sink - which currently is declining - needs to increase significantly to achieve net-zero emissions by 2050. Therefore, strong removals in the land sector must be incentivised, in particular through the restoration and preservation of natural ecosystems capable of storing carbon and delivering other vital ecosystem services. Particularly the forest sink, the most important land sink by far, needs to be restored. Yet, the European Commission has chosen a **weak land sector target for 2030 of -310 Mt (million tonnes) CO<sub>2</sub>, less than the -316 Mt CO<sub>2</sub> that the EU land sector removed in 2013**. This weak target won't lead to a sink capable to help achieve the EU's climate targets, nor to a healthy land use sector by 2050, particularly as in parallel, under Commission projections for the RED, **biomass use will double and use of forest wood for fuel will increase by 50%, further degrading the carbon sink**.

Scientists warn in the EU JRC report that **burning forest biomass is increasing emissions compared to fossil fuels and degrading the forest carbon sink, in addition to undermining EU biodiversity targets and contributing more air pollution than the road transport sector**. Already, **about half of the wood harvested in the EU is burned for energy**, and an increasing amount of wood pellets are imported from outside the EU to meet expanding needs. Unfortunately, proposed revisions to the biomass provisions in the RED will do little to protect forest ecosystems and sinks, and nothing to reduce the overall amount of forest biomass harvested and burned.

Biomass is counted as having zero CO<sub>2</sub> emissions in the RED (and the ETS), making it eligible for subsidies, with the assumption that emissions will be counted under the LULUCF Regulation. Yet, **many biomass burning emissions will not be counted** under the LULUCF, encouraging continued use of biomass as a "zero carbon" fuel. The emissions impact of burning forest wood is concealed in the 2021-2025 accounting period of the LULUCF Regulation because only emissions above Member States' Forest Reference Level (FRL) baseline are counted, thereby effectively counting existing levels of harvesting, plus whatever additional harvesting is allowed under the FRL, as having zero emissions.

**This could produce a potential unaccounted loss in the managed forest sink of over 40 Mt CO<sub>2</sub> per year** compared to average removals during 2016-2018.

A further major assumption in the Commission's modelling that contributes to the weak land sink target is that **biomass energy with carbon capture and storage (BECCS) will remove hundreds of Mt of CO<sub>2</sub> from the atmosphere after 2030**, thereby reducing the need for the land sink. **However, BECCS technology does not exist at scale and may never be capable of delivering negative emissions.** Additionally, **bioenergy is extremely costly; current subsidies for biomass alone exceed €17 billion per year in the EU. BECCS would be even more expensive**, and clearly not competitive with the continuing decreasing costs of solar and wind. As an example, the subsidies necessary for the UK's Drax planned BECCS plant *alone* are an exorbitant £1.3billion/year, over 25 years. In view of decreasing costs for other renewable energy sources, relying on biomass makes no economic sense.

As an alternative, biomass subsidies could inter alia be reallocated to support additional land carbon removals. If **reallocated, the money currently subsidizing 1 tonne of biomass could pay instead for an additional 4 to 7 tonnes of CO<sub>2</sub> uptake in the land sector.** It seems likely that EU citizens would rather support restoring and protecting forests than burning them for energy, an assumption borne out by the recent **Avaaz petition calling out flawed biomass accounting, already signed by close to 2 million people.**

["Why the EU's plan for climate neutrality by 2050 will likely fail"](#) - Mary S. Booth, Partnership for Policy Integrity, November 23, 2021.

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