



Comments on Implementing Regulation on establishing operational guidance on the evidence for demonstrating compliance with the sustainability criteria for forest biomass laid down in Article 29 of Directive (EU) 2018/2001 of the European Parliament and of the Council

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Please accept this feedback on the implementing regulation for the forest biomass sustainability criteria from the Partnership for Policy Integrity, a US-based NGO working with allies across Europe and the world for the protection and restoration of natural forests.

Background

The very existence of the forest biomass criteria are based on a false statement at Recital 101 of the RED: *“(101) It is appropriate to introduce Union-wide sustainability and greenhouse gas emissions saving criteria for biomass fuels used in the electricity sector and in the heating and cooling sector, in order to continue to ensure high greenhouse gas emissions savings compared to fossil fuel alternatives, to avoid unintended sustainability impacts, and to promote the internal market.”*

This statement is false and misleading because it claims that the sustainability criteria and by extension the LULUCF criteria can “ensure” that biomass emits less carbon pollution than fossil fuels, as well as protect forests from excessive impacts of harvesting.

Sustainability is not equivalent to carbon neutrality, however. As the EC’s own scientists have acknowledged, “sustainability” of harvesting does not deliver carbon benefits from biomass for the simple reason that burning wood emits carbon faster than trees can regrow to sequester it. The 2016 EC biomass assessment specifically rejected the equivalence of “sustainability” and benefits to the climate: *“Certain forest management practices can enhance the carbon sink, but ensuring that the harvest level stays below the growth rate of the forest is not sufficient to ensure climate change mitigation.”*¹ The IPCC warns, *“The combustion of biomass generates gross GHG emissions roughly equivalent to the combustion of fossil fuels. If bioenergy production is to generate a net reduction in emissions, it must do so by offsetting those emissions through increased net carbon uptake of biota and soils.”*² However, nothing in the sustainability criteria requires this additional carbon uptake to occur.

Regarding forest protection, the 2021 JRC report on biomass contains an especially damning section outlining the multiple ways that harvesting biomass damages forests and biodiversity, especially when forestry residues are collected as fuel. Importantly, many of the scenarios that are most damaging to the health, biodiversity, and regeneration capacity of forests are also those that have the greatest carbon emissions and thus impact on the climate. While it is not inconceivable that sustainability criteria *could* be devised that would protect forests from the worst impacts of biomass harvesting, as explained below, the RED criteria and the implementing guidance fall far short of that standard.

The apparent determination of EC policymakers to continue pushing the sustainability and LULUCF criteria as the solution to the biomass problem reminds us of “The Emperors New Clothes.”³ As summarized at Wikipedia⁴:

“Two swindlers arrive at the capital city of an emperor who spends lavishly on clothing at the expense of state matters. Posing as weavers, they offer to supply him with magnificent clothes that are invisible to those who are stupid or incompetent. The emperor hires them, and they set up looms and go to work. A succession of officials, and then the emperor himself, visit them to check their progress. Each sees that the looms are empty but pretends otherwise to avoid being

¹ 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

² IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Eds Edenhofer, O., et al). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Page 877 at https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf

³ https://andersen.sdu.dk/vaerk/hersholt/TheEmperorsNewClothes_e.html

⁴ https://en.wikipedia.org/wiki/The_Emperor%27s_New_Clothes

thought a fool. Finally, the weavers report that the emperor's suit is finished. They mime dressing him and he sets off in a procession before the whole city. The townsfolk uncomfortably go along with the pretense, not wanting to appear inept or stupid, until a child blurts out that the emperor is wearing nothing at all. The people then realize that everyone has been fooled. Although startled, the emperor continues the procession, walking more proudly than ever."

Now let's retell this as a story about the forest biomass criteria.

"Swindlers from the wood pellet and biomass industry arrive in the EU, which burns wood lavishly for renewable energy at the expense of its forests. Posing as knowledgeable about forests and climate, and working with complicit European Commission insiders, they promise to supply EU policymakers who are genuinely concerned about saving forests and the climate with detailed and complex forest biomass sustainability criteria that will protect forests and eliminate greenhouse gas emissions - but that only the most intelligent policymakers will be able to understand how the very complex new rules work. The EU hires them and they go to work, crafting an ever more detailed set of criteria. The new rules are included in the Renewable Energy Directive, and while some policymakers realize that the rules are a hollow sham designed to provide cover for continued liquidation of forests into the atmosphere, they go along to get along, perhaps fearing they'll be accused of simply not understanding the complex new rules. A few environmental organizations and scientists call out the new rules as hollow and meaningless, but EU policymakers continue to proudly insist that the new rules are meaningful... and business as usual continues."

We hope for a different ending to the story: that policymakers recognize the "sustainability" criteria are a sham that will never protect forests and the climate, and thus find the courage to stand up to the biomass industry to remove forest biomass from the RED altogether.

Before getting into the substance of the critique of the implementing act, it is important to point out a couple of facts that cripple the sustainability effort from the get-go.

The criteria apply to those burning the wood, not those producing it

The criteria apply to the *users* of biomass, not the producers. Even though nearly everything about the criteria relates to the sourcing of biomass, it is not the actual producers who are responsible for complying. Thus, as pointless as the criteria are, they're rendered even *less* meaningful because they are administered two or three steps removed from the land managers who make decisions about forest harvesting, replanting, etc. The "operators" depend for compliance on information from the biomass and wood pellet industries who are known for routinely misrepresenting everything from feedstocks they use to the carbon impacts of burning biomass for energy. Given the low quality of information reported by the Sustainable Biomass Program and similar schemes, it's impossible to imagine that the implementation of the EU sustainability criteria will produce a different result. All the incentives are for biomass producers and power plant operators to do or say whatever it takes to keep the wood supply flowing. That

the criteria expect operators to report against themselves and their suppliers on issues like poor enforcement of forestry rules is risible.

The criteria are hobbled by the EU's deference to member states in forestry matters

Presumably the main reason the criteria concern the plants burning the biomass, rather than the producers supplying the biomass, is that member states control forestry activities and policy, while the EU's domain is the production of renewable energy as covered by the RED. The EC-commissioned Joint Research Center report on biomass concluded that nearly all biomass harvesting activities are highly damaging to forests. Nonetheless, because of the EU's excessive deference to the member states in matters pertaining to forest policy, the EU apparently feels it's impossible to set sustainability criteria that are directly in line with that report's recommendations, such as for instance setting limits on removal of forest residues. Instead, the sustainability criteria require as evidence of compliance that there simply exist member state laws concerning forest harvesting, etc. – whether or not those laws are actually protective. This raises the question: if it really is out of the EU's jurisdiction to set meaningful protections for forests, then shouldn't the EU just stop promoting use of forest biomass altogether?

The criteria apply to a minority of the biomass burned in the EU

Since the sustainability criteria only apply to plants of 20 MW and larger, it is important to know what proportion of biomass burned in the EU would actually be covered. Data on the use and users of biomass is difficult to obtain (the JRC states, “without reliably knowing how much and what type of forest biomass is used for bioenergy, no effective policy can be implemented.”) However, a rough picture can be assembled from various sources. A 2013 survey coordinated by the European Biomass Association⁵ identified 4,079 biomass plants greater than 1 MW (energy input basis) in the EU burning wood to generate heat, electricity, and combined heat and power, consuming around 129 Mt of green wood fuel at that time (excludes residential heating). The large majority of plants were less than 5 MW in capacity, but plants greater than 20 MW energy input were responsible for about 73% of fuel consumption (94 million tonnes per year). If all of this were primary woody biomass (certainly not the case) this would still only constitute about 40% of the total of 229 million tonnes of primary woody biomass that the JRC 2021 report estimates is burned in the EU each year (Sankey diagram page 49). If half of it is primary woody biomass, then it would constitute around 20%. We estimate that the new sustainability criteria will probably apply to only around 30% of the biomass burned in the EU each year.

⁵ BASIS Bioenergy. Project results (updated 17.03.2016) At http://web.archive.org/web/20160427212553/http://www.basisbioenergy.eu/fileadmin/user_upload/Project_Results_BASIS.pdf

The criteria do not ensure legality of harvesting

A significant amount of the wood burned for energy in the EU is of unknown origin, and much of it is assumed to be illegally harvested. See Camia et al (2018)⁶ which identified a large problem with illegal harvesting EU-wide. Much of this wood is being harvested for residential heating, and is counted toward renewable energy targets. As shown above, the majority of biomass burned in the EU will not be covered by the sustainability criteria, including the requirement that biomass be sourced legally in order to qualify toward renewable energy targets. In other words, some meaningful amount of the EU's "renewable energy" appears to be met with wood that is illegally harvested, much of it in the last primary forests of Eastern Europe. The total failure of the REDII criteria to address this problem is just one of the many reasons the entire system can only be seen as greenwash for continued hollowing out of the EU's forests for fuel.

The sustainability criteria for harvesting

Biomass harvesting is both quantitatively different from "regular" harvesting (more material is taken) and qualitatively different (different material is taken – tops and limbs, standing deadwood, sometimes stumps). Stripping so much material out of forests has big implications for ecosystem function. Before critiquing the criteria, it's worth reviewing the JRC's recent conclusions about biomass harvesting. It is important to note that nothing in the proposed guidance addresses these factors:

- Replacing natural forests with plantation forests is a disaster for biodiversity and also has large net carbon emissions.
- Removing coarse woody debris (branches, stumps, deadwood) is highly damaging to biodiversity. Stumps are an important habitat for decomposer species and their removal can have large impacts on biodiversity.
- Meta-analyses on salvage logging find significant negative effects on biodiversity of decomposer species.
- Meta-analyses find significant decrease in nitrogen and phosphorus concentration and availability after removal of residues. Removing leaves and needles along with branches can increase the risk. Reviews found that seedling regrowth was impacted even 25 years after removal of residues.
- Studies of forest residue removal rates generally find that levels are too high. Voluntary certification standards (such as the Sustainable Biomass Program) do not explicitly mention slash or low stumps retention, and local guidelines are frequently insufficient.

⁶ Camia, A., et al (2018). Biomass production, supply, uses and flows in the European Union Ispra, Italy, Joint Research Centre.

Legalistic requirements will not protect forests

The JRC report concludes that removing biomass harms forest viability and regeneration. But there is not one meaningful requirement in the RED criteria or the implementing guidance that restricts feedstocks to the categories of fuels that the JRC claims are least damaging to climate and biodiversity. Instead, the criteria in the RED were designed by EC policymakers with input from biomass and wood pellet representatives to mirror existing “sustainability” schemes such as that administered by the Sustainable Biomass Program, precisely to ensure that the wood pellet and biomass industry are able to keep operating unchecked.

Article 3 of the implementing act sets out top-level guidance for the sustainability criteria for harvesting, requiring that operators “provide audited information establishing compliance with the harvesting criteria at national or sub-national level. To that end, economic operators shall carry out a risk-based assessment which provides accurate, up-to-date and verifiable evidence of all the following elements” – followed by several important-sounding requirements that are actually *not* required, because the operators can instead choose a much more lax system of requirements as laid out in **Article 4**.

Article 3 states that national or sub-national laws require:

- 1) Legality of harvesting (except as discussed above, the legality requirement actually doesn't apply to the majority of biomass burned in the EU).
- 2) Applicable laws requiring natural or artificial regeneration, aiming at the establishment of a new forest in the same area and within at least five years after the harvesting operation; as well as no biodiversity degradation and a prohibition on conversion of natural forests to plantation forests. This sounds really nice except that there are no such laws in the US and Canada which supply the majority of the wood pellets imported to the EU. Accordingly there is no way did any of the big pellet manufacturers would qualify under this requirement. However, they have nothing to worry about because Article 4 doesn't require this.
- 3) “Effective” protection of areas designated by law for nature protection purposes. Of course this is meaningless in the EU when it comes to the Natura 2000 network, where harvesting is allowed. In the US, truly protected areas are off-limits to harvesting anyway.
- 4) “that forest harvesting is carried out in a way that minimises negative impacts on soil quality and biodiversity, by demonstrating that the applicable laws ensure, during the harvesting operations, the protection of soils, species and habitats, and regulate the removal of stumps, roots, deadwood, and where appropriate, needles or leaves”
- 5) That the long-term production capacity of the forest be maintained or increased, by demonstrating that applicable laws ensure that forest harvesting does not exceed annual growth on average except when justified.

There then needs to be a system for ensuring that laws are implemented and enforced and that there be no significant lack of enforcement.

We're not aware of any country that has such laws on the books. It seems that compliance with Article 3 might be difficult. But the biomass suppliers need not worry – the biomass can always be certified under Article 4 instead, which assesses compliance with the harvesting criteria at the forest sourcing area level when “evidence of compliance with one or several harvesting criteria at national or sub-national level is not available.” In other words, if you don't comply with the even slightly protective Article 3 criteria, no problem, there is this other set of “sourcing area level” criteria that are much easier to comply with.

Unfortunately, the regulation does not define sourcing area level, so we don't know what this actually is. This definition was in the draft we saw in summer of 2020, but it's been removed in this version of the regulation.

The criteria do not meet the RED's requirement for “forest regeneration”

The Article 4 criteria are particularly weak, stating that forests be allowed a regeneration period of at least five years after harvesting. It's not clear what this means. Five years before they're cut again? How is this at all compatible with the RED's requirement that forests be allowed to regenerate? Recall that the RED itself states that under this “sourcing area” requirement, management systems be in place requiring “forest regeneration of harvested areas.”

- (b) when evidence referred to in point (a) of this paragraph is not available, the biofuels, bioliquids and biomass fuels produced from forest biomass shall be taken into account for the purposes referred to in points (a), (b) and (c) of the first subparagraph of paragraph 1 if management systems are in place at forest sourcing area level ensuring:
 - (i) the legality of harvesting operations;
 - (ii) forest regeneration of harvested areas;

The RED doesn't state that harvested areas get a five-year break before they're harvested again – it requires “forest regeneration.” Like so many other things in the criteria and implementing act, this has the taint of biomass and wood pellet industry influence. If the full regeneration requirement isn't actually achievable or enforceable, then this is yet another reason that forest biomass should no longer be allowed under the RED.

The next requirement is that “there is no biodiversity degradation in the regenerated forest area,” including a requirement that primary forests and natural or semi-natural forests are not degraded to, or replaced with, plantation forests. That shall be proven by using, inter-alia, forest management plans, operational protocols, environmental impact assessments, and results of relevant compliance audits and inspections.

Yes, this would be good if it were enforceable, but pretty much by definition, down here at the sourcing area level there do not exist laws that protect biodiversity and prevent conversion to plantations. So as a practical matter this would require operators (who are not the biomass purveyors or manufacturers, but simply the users) to be able to ascertain that years after they

burned biomass, the land from which it was sourced still remains natural forest and still has high biodiversity. Given that a large pellet company such as Enviva obtains wood from literally thousands of sources, this is utterly implausible. We anticipate that biomass suppliers and manufacturers will find some way to bamboozle their way through this requirement.

The sourcing area level criteria likewise require that forest biomass not be from areas designated for nature protection, but in this case the criteria are careful to include the loophole that harvesting is OK as long as it doesn't "conflict with the protection objectives of the designated areas." This provision will likely ensure that harvesting continues in EU protected areas at the same level or higher as it occurs now.

The sourcing area criteria also require that the harvest maintain or improve the forest long-term production capacity. This is an easy requirement to meet, as it *"includes ensuring annual felled timber amounts do not exceed net annual increment in the relevant sourcing area on average within the five year period prior to the harvesting intervention unless different amounts are duly justified in order to enhance the future production capacity of the forest"* or because of other reasons. Of course, looking to the previous five years says nothing about what the harvest-to-increment ratio will be *following* the biomass harvest, but in any case, the harvest-to-increment level is a fallacious proxy for climate impacts, as the EC's own scientists acknowledge.

The LULUCF criteria

The criteria can not ensure proper carbon accounting

Before commenting on the specific text in the implementing regulation concerning the LULUCF criteria, it is important to point out a particularly misleading statement regarding the carbon pollution impact of burning biomass. At recital 7, the implementing act states *"To ensure that biogenic emissions and removals associated with forest biomass harvesting are correctly accounted for, it is necessary that the forest biomass meets the LULUCF criteria at national level."* This is an nonsensical claim for two reasons.

First, it admits that there are emissions from burning biomass (true) which raises the question of why the RED is promoting burning forest wood at all, given the overwhelming importance of increasing carbon stored in forests to meet the EU's climate targets. This is the central argument for removing forest biomass from the RED.

More importantly, the statement is false because it implies that if a country complies with the RED's LULUCF criteria at the national level, meaning the country is a party to the Paris Agreement and has submitted an NDC, then this means biomass emissions are adequately counted in the land sector. This is false for the following reasons.

Leaving aside the fact that the EU has submitted a single NDC⁷ instead of individual NDCs being submitted by member states, the NDC of the EU does *not* contain provisions that ensure forest carbon loss from forest harvesting (for biomass or anything else) is “correctly accounted for.” That is because the NDC for the EU accounts for biomass under the EU’s LULUCF Regulation, which employs the forest reference level (FRL) approach. As the NDC states, “*Managed Forest Land uses as baseline a Forest Reference Level based on continuation of Forest Management Practices between 2000 and 2009 and taking into account the age-class structure of forests, projected through the compliance period.*”

Effectively, the FRL baseline is treated as the “zero” level of the sink against which gains in the sink are considered credits, and losses are considered debits. The baseline bakes in all existing harvesting for biomass, meaning that despite claims that biomass emissions are counted in the land sector, the carbon emissions associated with ongoing biomass harvesting are by definition counted as zero in *both* the energy sector and the land sector. The JRC’s most recent estimate for primary woody biomass being burned for energy is 229 million tonnes per year (166 million tonnes plus 63 million tonnes of wood of unknown origin that is overwhelmingly likely to come directly from forests). This translates to an approximately equivalent amount of CO₂ emissions.

Not only are current emissions counted as zero, but the FRLs for member states (and the cumulative FRL for the EU as a whole) include generous headspace for further growth in harvesting and loss in the sink. The EU’s FRL projects a loss of about 44 million tonnes of CO₂ per year in the managed forest carbon sink, representing an 11% decline compared to the 2016 - 2018 average sink. This loss of carbon *would* be counted under UNFCCC greenhouse gas reporting (which uses reporting guidance provided by the IPCC), but is treated as zero under the LULUCF Regulation. The discrepancy between emissions reported under IPCC rules and the emissions reported under the EU’s FRL system shows that just because a country is a party to the Paris Agreement and has an NDC, this does not mean it is correctly accounting carbon loss in the land sector.

Fulfilling the LULUCF criteria at the national level is no more than ticking a box

We predict that unlike the sustainability criteria, where operators will likely avoid certification at the more demanding national level and will prefer the sourcing area level, in the case of the LULUCF criteria, it’s a no-brainer to comply at the national level (**Article 5(1)(i)**), because this involves nearly zero effort. The national level criteria require that the country of origin simply have submitted an NDC that accounts for changes in the land carbon sink. It appears that all European countries will qualify under this requirement because the EU NDC references the LULUCF Regulation, and thus ticks that box. This means that for instance Hungary, where the FRL anticipates a reduction in the forest carbon sink from average level of -3,702 kt per year to -48 kt

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https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/European%20Union%20First/EU_NDC_Submission_December%202020.pdf

– a 99% reduction – will still qualify under the LULUCF criteria, because it is a member of the EU and the EU has submitted an NDC.

Likewise, now that the Biden administration has rejoined the Paris Agreement, and the US is formulating an NDC, no doubt the US-based companies will seek to qualify under this criteria. So will the Canadian companies. Nothing will change - companies will still be able to clearcut forests for biomass, but this will qualify under the LULUCF criteria because an NDC exists.

The second level of criteria offered for compliance (**Article 5(1)(ii)**) is more challenging, thus we predict that no company will choose this. It requires that national or sub-national laws exist to conserve and enhance carbon stocks and sinks in forests, that land sector emissions not exceed removals in the ten years preceding the harvesting of the forest biomass, and that stocks and sinks are conserved or enhanced between the last two successive 10 year periods preceding the harvesting of forest biomass. Obviously, no company is going to opt for this criteria when the previous one (Paris Agreement, NDC) is so much easier to comply with. Nonetheless it's worth noting that characterizing what carbon stocks were doing in the ten years prior to the harvesting of the forest biomass has absolutely zero bearing on the carbon impact to the atmosphere going forward from harvesting and burning that biomass. Time's arrow points forward – burning wood emits carbon pollution, and what matters is how fast the forest can regrow to sequester an equivalent amount of CO₂ to offset those emissions and compensate for foregone sequestration, not what happened over the last ten years.

There is one additional way that companies can comply with the LULUCF criteria, as laid out in **Article 6**. In this case, the criteria here are so rigorous, it's clear that no one is going to choose this route. It is nonetheless interesting that those crafting the guidance set out *one* pathway that's at least somewhat capable of illustrating the carbon impacts of harvesting and burning forest biomass. Accordingly, Article 6 employs counterfactual modeling using the following steps:

- Characterize the sourcing area
- Calculate forest carbon stocks and sinks over a historical reference.
- Describe expected forest management practices for a projected long term period, which they define as at least 30 years after the harvesting event from which the biomass is sourced
- Estimate average carbon stocks and sinks for at least 30 years after harvesting
- Compare carbon stocks and sinks as calculated with those of the historic reference period. If the post-harvest carbon stocks and sinks are equal to or higher than those of the reference, then the forest biomass is in compliance with the LULUCF criteria at the forest sourcing area level.

- Economic operators are supposed to put in place monitoring and verification systems to track the actual development of carbon stocks and sinks to demonstrate compliance. Of course, the economic operators who would do this are not going to be the same as the economic operators who are actually responsible for reporting on the sustainability criteria.

During the workshops for the REDIIIBIO guidance drafting process, there were howls of protest from the big biomass companies at any intimation that such modeling would be required. The fact the modeling alternative even survived in the implementing act is a credit to the consultants who crafted these criteria. However, we're sure it's high fives all around for the pellet and biomass suppliers, since it's evident they will *never* need to comply with Article 6. It's just much easier to comply with Article 5(1)(i) instead, checking the box that the country of origin has an NDC.

Damage occurring under existing certification schemes will continue under the EU's criteria

The regulations intend to let compliance with existing voluntary certification schemes such as the Sustainable Biomass Program serve as evidence that biomass complies with the EU criteria. Unfortunately, these voluntary schemes have signed off on the worst of the forest destruction that is now occurring for wood pellet manufacturing. For instance, US-based Enviva, the world's largest wood pellet manufacturer, and Graanul Invest, the company currently stripping Estonia's forests for wood pellets, are each certified by the Sustainable Biomass Program (SBP). Yet investigations by media and independent watchdogs over the past decade reveal that these companies are each engaging in damaging logging practices, including in Enviva's case the clearcutting of iconic wetland forests that are found in the North American Coastal Plain (designated as a biodiversity hotspot). All of these practices are permitted under a scheme that claims to protect biodiversity and soil health. All of these practices will assuredly continue under the EU's biomass criteria.