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Flawed numbers underpin recommendations to exclude commodities from EU deforestation legislation

A leaked draft impact assessment, informing the EU Commission's coming legislative proposal for minimizing the risk of deforestation and forest degradation associated with products placed on the EU market, has led to [recent debate](#). A key point of contention is the scope of the proposed regulation: the impact assessment recommends that some key forest-risk commodities – maize and rubber – be left out of the regulation. In this policy brief we show that the analysis that underpins this conclusion has severe flaws and that current evidence does not support such a recommendation.

KEY MESSAGE TO POLICY MAKERS

Current evidence does not support recommendations to exempt key forest risk-commodities, such as maize or natural rubber, from EU legislation on imported deforestation.



Rubber tree plantation in Indonesia. Photo by Ryan Woo/CIFOR

THE LEAKED DRAFT IMPACT ASSESSMENT analyses different options for addressing the problem of EU imports of commodities that contribute to deforestation. These range from mandatory due diligence or product labelling to a deforestation-free requirement for placing commodities onto the EU market. A central question for all these proposed options is which commodities the legislation will cover, as this will affect both the potential impact of the regulation and its associated costs. In section 5.1 of the draft impact assessment, a recommendation is made to include six commodities in the regulation – wood, palm oil, soybeans, beef, coffee and cocoa – but to exempt two other key forest-risk commodities, natural rubber and maize.

The main motivation for this recommendation is found in Table 1 of the impact assessment, which presents a rough “cost-benefit analysis”. In the table the benefits are proxied by estimates of deforestation

embodied in the imports of the different commodities (as estimated in research by the brief authors and presented in [Pendrell et al., 2020](#)) and the costs are proxied by the corresponding values of total EU imports of these commodities (indicative of the breadth of actors covered by the policy).

Inconsistent reasoning leads to flawed conclusions

Table 1 in the draft impact assessment suggests that the ratios of import value (costs) to potentially avoided deforestation (benefits) are substantially higher for maize and rubber than for the other commodities, thus leading to a recommendation to exempt these two commodities from the proposed regulation.

However, we argue that there are two fundamental inconsistencies in the estimated cost-benefit ratio,

Table 1: Reproduction of Table 1 from the EU commission's draft

Commodity	FAO codes	Embedded deforestation [ha / yr]	Import Value [million EUR / yr]	Ratio [million EUR / ha]	Ratio from draft impact assessment [million EUR / ha]
Palm oil	254, 257, 258, 259	67 662	4 953	0.07	0.06
Soy	236, 237, 238, 239, 240	65 428	12 647	0.19	0.08
Cocoa	661, 662, 664, 665, 666	15 032	6 217	0.41	0.40
Coffee	656, 657, 658, 659, 660	13 968	8 848	0.63	0.58
Beef	867, 869, 870, 874, 875	9 976	2 048	0.21	0.20
Rubber	836, 837	6 831	2 563	0.38	2.58
Maize	56, 57, 58, 59, 60, 61, 846	3 221	2 117	0.66	0.88
Data for embedded deforestation are from Pendrell et al. (2020). Data for the economic values are from FAOSTAT (accessed October 20, 2021, and converted from US dollars to euros using an exchange rate of 1.16 USD/EUR). All values are annual averages 2008-2017 for the EU27. Programming code of how the numbers were derived is available from the authors of this brief.					

Reproduction of Table 1 from the EU commission's draft impact assessment presenting the cost-benefit analysis underpinning the recommended product scope, but here using consistent numbers for deforestation risk and value of the imported forest-risk commodities (original numbers from the draft are presented in the rightmost column, for comparison).



Aerial footage of palm oil and the forest in Sentabai Village, West Kalimantan. 2017. Photo by Nanang Sujana/CIFOR

which implies that the conclusion to exempt maize and rubber is misguided. Most importantly, there is a mismatch between the products included when estimating embodied deforestation and the associated economic value. We quantify deforestation embodied in EU imports using a trade model that excludes highly processed products; when it comes to rubber, for instance, the deforestation embodied in imports only accounts for trade in unprocessed natural rubber. In contrast, the EU Commission in its draft impact assessment calculates the value of rubber imports using a [trade code](#), which encompasses a broad range of rubber products, not restricted to natural rubber, but also including reclaimed and synthetic rubber. In addition, because many of these products have gone through processing steps that add economic value, the value of EU rubber imports becomes very large compared to that of other assessed commodities. Conversely, for other commodities, such as soybeans and cocoa, the products included in the monetary estimate are more restrictive than those covered in the assessment of traded deforestation (seemingly excluding the substantial EU imports of soybean cake for feed, reported under trade code HS2304).

We also note another inconsistency, namely that the deforestation embodied in imports is based on data averaged over the period 2008–2017, whilst the value of imports is taken from the period 2015–2019. This is not a fair comparison, as there are temporal trends in the amount of deforestation attributed to different commodities, in the mix of regions from which the EU sources its imports, as well as in the total import volumes.

When we correct for these inconsistencies in the calculations and instead compare the value of the import flows that correspond to the commodities (trade codes) for which embodied deforestation is assessed over the same time period, a different picture emerges (see table 1): there is no longer such a marked difference between the different commodities.

Limitations to the estimates of EU-driven deforestation

While the corrected table 1 still shows differences in the cost-benefit ratio between commodities, there are additional reasons why one should be cautious

to use this data alone as a basis for recommending which commodities to include or exclude from the coming regulation. This has to do with the way the amount of deforestation embodied in EU imports is estimated: the data used in the draft impact assessment (from [Pendrill et al., 2020](#)), are derived from a model that combines satellite-based estimates of tree-cover loss with agricultural statistics to attribute deforestation to agricultural commodity crop production, thereafter linking this to a global model of agricultural trade. Because deforestation is attributed to crops expanding at (mainly) the national level, it cannot distinguish between direct (crops expanding on former forest land) and indirect drivers (crops expanding on existing agricultural land, pushing other land uses into forests). Moreover, the trade data also pertain to the national level, implying that products originating from forest frontiers are not distinguished from those originating from established agricultural areas.

As such, these estimates of the amount of deforestation embodied in EU imports should be viewed as a measure of deforestation risk. The fact that we do not know for certain if the products the EU imports have been implicated in deforestation or not is, of course, a key reason why we need something like a due diligence mandate in the first place. This way, importers of forest-risk commodities will be required to assess whether forests have in fact been cleared to produce the commodities entering their supply-chain.



Aerial view of an area deforested by soybean farmers in Novo Progreso, Para, Brazil, September, 2004. AP Photo/Alberto Cesar-GREENPEACE/HO.

Moreover, while the figures presented in table 1 are internally consistent for each commodity, there are still differences in the product coverage between commodities, as the trade model includes processed products only up to a certain level, namely those covered in the FAOSTAT database. This potentially inflates the cost-benefit ratio for the products where trade in processed, high value-added products are covered, such as for coffee and cocoa (compared to soybeans, palm oil or maize). Besides this, we want to stress that the choice of commodities to include in the regulation should not be constrained by the currently available data but should rather aim at including highly processed products for all key forest-risk commodities.

Do not exclude forest-risk commodities from the EU legislation prematurely

We welcome that the draft impact assessment recognizes the need to regularly review and amend the product scope, in order to reflect changes in deforestation drivers. However, based on the available evidence – and knowing its limitations and caveats – we do not think that there are strong reasons at present for a recommendation to exempt any of the assessed commodities from the initial scope of the forthcoming EU legislative proposal.

FURTHER READINGS

Read about additional recommendations for the new EU-legislation, in these preceding briefs: [Three principles for the EU to reduce imported deforestation](#), Focali brief written by Simon Bager and Focali member U. Martin Persson, and [A broad EU deforestation approach can help protect climate and biodiversity](#), Trase brief written by U. Martin Persson and colleagues.

Reference

Pendrill, F., Persson, U.M. & Kastner, T. (2020). *'Deforestation risk embodied in production and consumption of agricultural and forestry commodities 2005-2017'*. Chalmers University of Technology, Senckenberg Society for Nature Research, SEI, and Ceres Inc. DOI: [10.5281/zenodo.4250532](https://doi.org/10.5281/zenodo.4250532)

Contact the authors



Martin Persson

Professor
Physical Resource Theory,
Chalmers University of
Technology
and Focali member
martin.persson@chalmers.se
+46 31 772 2148



Thomas Kastner

PhD, Senior Researcher
Senckenberg Biodiversity and
Climate Research Centre
thomas.kastner@senckenberg.de



Florence Pendrill

PhD candidate
Physical Resource Theory,
Chalmers University of
Technology
and Focali member
florence.pendrill@chalmers.se



Gothenburg Centre for Sustainable Development (GMV)



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About the Focali research network

To tackle global challenges related to interlinked forest, landscape, climate and livelihood issues, there is an urgent need for policymaking and practice to be better informed by transdisciplinary research. Focali, a Swedish multidisciplinary research network, gathers more than 100 researchers devoted to these issues with a particular focus on the global south and tropical rainforest regions. A wide range of disciplines, universities and research institutes are represented in the research network via Focali members and the Focali advisory group. Focali, founded 2009, aims to make research within our thematic area more accessible and to facilitate dialogue between researchers, policy-makers and practitioners. Focali collaborates broadly with actors in different sectors, both within Sweden and globally, and has a close partnership for multi-stakeholder dialogues with the Swedish International Agriculture Network Initiative – SIANI.

Focali is hosted by, and has a secretariat placed at, The Gothenburg Centre for Sustainable Development, GMV. GMV is a network organization at Chalmers University of Technology and University of Gothenburg.

Contact us

Focali Project Manager
Maria Ölund
maria.olund@gu.se



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