Which commodities imported to the UK have the highest risk of overseas deforestation impacts?
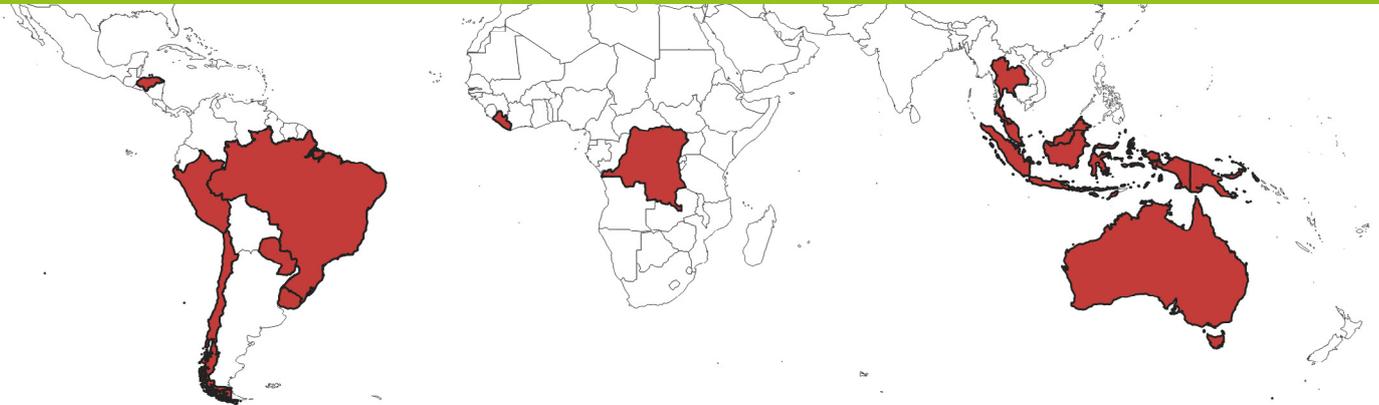

Figure 1: Countries from which the majority of the six highest risk commodities imported by the UK are sourced.

Summary

The UK's overseas land footprint is linked to the supply of "forest-risk commodities", whose import is known to be linked to high deforestation rates overseas. A small handful of commodities are responsible for the majority of overseas deforestation risk and associated carbon emissions, and their production is concentrated in just a few countries (Figure 1). The commodities with the highest deforestation risk are palm oil, beef, timber, soy, cocoa and coffee, the majority of which are included in the UK's due diligence legislation. Indonesian palm oil, Brazilian beef and Brazilian soy contribute to almost 50% of the UK's total overseas tropical deforestation impacts (Figure 2). However, other commodities such as sugar and spices are less well studied yet also have high overseas impacts.
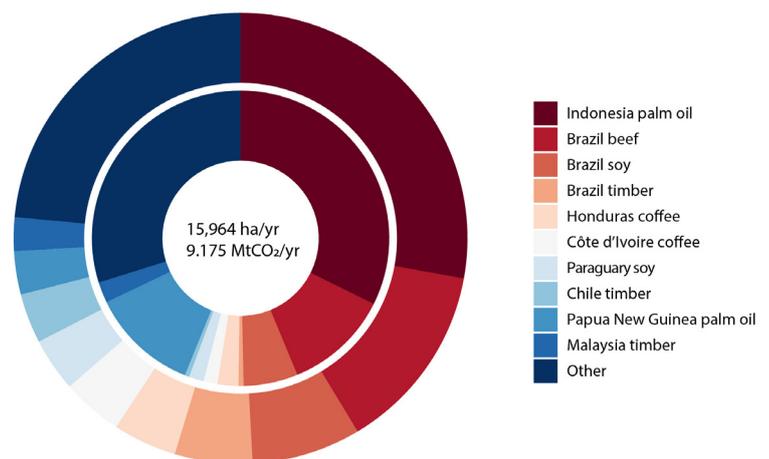
15,964 ha/yr
9.175 MtCO$_2$/yr

- Indonesia palm oil
- Brazil beef
- Brazil soy
- Brazil timber
- Honduras coffee
- Côte d'Ivoire coffee
- Paraguay soy
- Chile timber
- Papua New Guinea palm oil
- Malaysia timber
- Other

Figure 2: Tropical deforestation risk (ha/year, shown in outer ring) and associated carbon emissions (MtCO$_2$/year) from UK imports of agricultural and forestry commodities in 2017. Data from (Pendrill et al., 2020), based on (Pendrill et al., 2019a, 2019b).

Recommendations for policy

- There is a good evidence base for the inclusion of commodities covered in UK due diligence legislation; however, to strengthen the legislation, a broader range needs to be included and regularly reviewed.

- Incorporating other measures is also likely to be needed to reduce overseas deforestation e.g. improved uptake and enforcement of certification schemes.

- To avoid displacement of environmental impacts to other regions, demand side policies are likely to be required alongside supply side policies e.g. the promotion of lifestyle changes.

- The share of animal products in diets is the most important reason for differences in consumption footprints of EU countries; consuming fewer animal products, particularly beef, is an effective way of reducing the environmental impacts of consumption.

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Challenge

In 2015, the UK signed the Amsterdam Declaration, a commitment by seven European countries to eliminate deforestation from agricultural commodity chains by 2020. However, the rate of global commodity-driven deforestation has shown little sign of decline. The vast majority of deforestation still occurs from production of specific commodities in just a few countries. In response to the Global Resource Initiatives recommendations, the UK has recently proposed new due diligence legislation to ensure supply chains are free from illegal deforestation. Yet this alone is unlikely to lead to significant reductions in the UK's overseas deforestation impact. Furthermore, the evidence base for inclusion of specific commodities needs to be examined. This synthesis highlights where the key impacts are in order to inform how act efficiently and where to focus implementation of additional measures. It also critically appraises the methods and data used in studies identified.

Method

This policy brief was generated from a rapid review of both peer-reviewed and grey literature, which analysed forest-risk commodities with a high deforestation risk and their impact on the environment. Key environmental variables included land footprints, deforestation risk, carbon emissions and impacts on biodiversity.

Literature search and selection

A rapid systematic literature search returned 318 results across three databases: Web of Science, Scopus and Google Scholar. After excluding duplicated results within each individual database, a total of 232 studies remained. Both peer-reviewed and grey literature were included. The first sift extracted studies based on their title and abstract (n=152). A second sift extracted relevant studies based on the full text (n=26) and once the final results from each database were compiled, nine duplicates were removed, leaving 17 studies.

Extraction and synthesis

Of the final 17 studies, key summary information was extracted, included indicators measured, methodology, data inputs, study area, commodities assessed, time period of study and relevant policy recommendations. Studies were grouped according to (a) the region they cover, (b) the commodity they examine and (c) the indictors they measure.

Results

There were only four studies which examined a large number of commodities globally. Three of these used modelling and remote sensing methods, focusing on the first half of the past decade. The most common commodity and study area examined exclusively was Brazilian soy. Other countries commonly presented in results included Argentina, Colombia, Paraguay, Indonesia, Malaysia and Papua New Guinea. After soy, beef then palm oil were the most common commodities studied exclusively, with other high deforestation risk commodities including wood products, rubber, cocoa and coffee. A high proportion of tropical deforestation associated with UK supply chains can be attributed to these commodities and producer countries.

Figures presented in this policy brief were produced using the study with the most robust methodologies. This study also showed commodities including sugar, nutmeg and pepper as being in the top ten highest deforestation risk commodities embodied in UK trade. Inclusion of these commodities in risk assessment and strengthening of due diligence legislation is recommended, as well as continual review and other measures including demand side measures, improved certification schemes and wider stakeholder engagement.

Find out more

For more information, please contact:
Amy Molotoks (amy.molotoks@york.ac.uk)
Stockholm Environment Institute, Environment and Geography Department, University of York

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N8 AgriFood Food Systems Policy Hub
Email: policy@n8agrifood.ac.uk
Website: https://policyhub.n8agrifood.ac.uk