CONCEPT NOTE

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Fostering Sustainable Trade in Agricultural Commodities: The Role of Standards and Traceability

(10 December, 10 a.m.–1 p.m)

Over 420 million hectares of forest were lost to deforestation between 1990 and 2020 (IPCC, 2022). Balboni et al. (2023) estimate that, of the 1.48 million km^2 of forest area lost between 2001 and 2020, more than half was tropical forest, and they found that the rate of loss of tropical forests was higher than that of other types of forest between 2012 and 2020. Since up to two-thirds of species are supported by tropical forests, deforestation is a direct threat to biodiversity.

Deforestation also contributes directly and indirectly to climate change by weakening forests' important carbon-sinking role, releasing the carbon stored in the forest, and affecting the hydrological cycle. Trees act as water reservoirs, releasing water by transpiration and affecting infiltration and runoff via their protection of soil cover.

A large part of the deforestation in recent decades has been caused by land use changes linked to the expansion of the agricultural frontier. For example, FAO (2022a) found that agriculture expansion explained 88.1 per cent of deforestation around the world from 2000-2018, with 50 per cent converted to cropland and the remaining 38.1 per cent to pastureland for animal grazing. While large-scale farming played a role in this process, Branthomme et al. (2023) found that 68 per cent of deforestation was due to small-scale farming-related land conversion.

Standards for agricultural products, both voluntary and mandatory, emerge from differnt informational asymmetries that exist in agricultural value chains. In particular, the fact that the consumption of agricultural products *ex post* does not reveal any information on the conditions under which they were produced,[1] led to the emergence of several sustainability standards, as predicted by earlier economic literature (e.g. Leland, 1979).

[1] In their seminal paper, Darby & Karni (1973) introduced the concept of "credence goods": "*Credence qualities are those which … cannot be evaluated in normal use. Instead the assessment of their value requires additional costly information*" pp.68-69.

These standards encompass not only environmental sustainability but also other intangible aspects of "quality," such as labour standards and fair pricing, in particular in smallholder-dominated value chains like coffee and cocoa.[2] They function through third-party certification, funded by stakeholders, including producers, to verify that the certified commodity or product meets voluntary standards.

However, such voluntary sustainability standards cover a relatively small percentage of the land area of production of several commodities linked to deforestation produced in tropical countries. According to ITC (2023), for example, in 2020-21, 21.7 per cent of the area of cocoa production was certified, 14.5 per cent of the total area of coffee, 11.6 per cent of the area with oil palm and 1.7 per cent of the area planted with soybeans. There is also significant heterogeneity across countries in terms of coverage.

Therefore, in recent years several countries, notably major importers like the European Union for coffee or cocoa, have discussed the adoption or taken steps to adopt mandatory standards for the import of a number of tropical commodities. These standards aim to overcome information asymmetry in agricultural value chains by requiring full traceability of a product's geographic area of origin, to ensure it was not produced on deforested land.[3]

The introduction of mandatory environmental standards modifies the economics of agricultural value chains in different ways.

First, the mandatory need for certification requires the establishment of full traceability of the product's specific geographic origin. Implementing and maintaining traceability along the value chain results in additional costs (both fixed and variable), which need to be paid by one or more stakeholders along the chain, from producers to consumers.

Producers in agricultural value chains are heterogeneous. Among the important and connected dimensions of heterogeneity, we can include size (Lowder et al, 2016) and access to production inputs, including access to finance (FAO, 2022b). These and other factors, in turn, result in different costs of production for farms even in the same area[4]. Therefore, there is a risk that more vulnerable and lower-margin producers may be excluded from markets introducing mandatory standards.

Several factors that could affect this can be identified. For example, in markets where substantial buyer power from intermediaries and processors reduces the profitability of producers, the volume of profits received by producers, notably smallholders (who by definition have small outputs), may be insufficient to cover fixed and variable costs of implementing product traceability. Also,the fact that smallholder producers who need to pay fixed certification costs have a higher per-unit cost of certification than larger producers (as the fixed cost is spread over larger volumes), compounded by the

[2] "Quality" defined as a set of attributes that can be consistently ranked by individual stakeholders and groups, is a multidimensional construct. In this way, attributes of a product like environmental sustainability of its value chain, can be included within such a multidimensional view of quality.
[3] In some cases, these mandatory standards combine the demand for full traceability from non-deforested land with additional requirements. For example, the European Union Deforestation Regulation requires importers to certify that the commodity imported was "produced in accordance with the relevant legislation of the country of production". See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115&qid=1687867231461
[4] There is also often large heterogeneity in terms of prices received even for homogeneous agricultural products in developing countries. For example, see Cárcamo-Díaz (2020) for the case of maize in Lao PDR.

correlation between access to finance and producer size, which translates in higher costs of external finance for smallholder producers.

In this context, diverse outcomes are possible. They include the diversion of uncertified products to either the local market or destinations that do not apply mandatory standards, the switching from products covered to others not covered by mandatory standards, changes in the use of land away from agriculture and others. For example, Swinnen et al. (2015), using a conceptual model that accounts for different product "qualities" in developing countries, show that lower productivity producers, with less access to capital and with higher transaction costs per unit of output, are more likely to be excluded from a "high quality" product markets.

Second, while the previous results are possible even in the presence of a common mandatory standard across different jurisdictions, the introduction of different mandatory standards that are mutually incompatible may force stakeholders of agricultural value chains to pay for multiple traceability schemes or reduce the number of export options.[5]

Of key importance is the fact that the outcome from the introduction of mandatory standards will be conditioned by the specific factors that affect each value chain in different geographic areas, including both producing and consuming countries. Therefore, it is not possible to assess a priori the effects of the introduction of standards in individual value chains and geographic areas.

Finally, in view of the discussion above, the introduction of mandatory environmentally-motivated standards and the implementation of full traceability solutions to address the requirement of those standards presents the international community with a number of important challenges. In particular, designing and implementing mandatory standards and traceability solutions that are effective in attaining their sustainability objectives, while not creating "winners" and "losers" among different stakeholders in agricultural value chains, especially the more vulnerable ones, is extremely important. In this context, this session will try to address several emerging questions:

- How should mandatory standards be used to promote environmentally sustainable agricultural value chains that work for all stakeholders and contribute to addressing the SDGs?
- How can the net benefits of introducing mandatory environmental standards be maximized, in particular through implementing traceability solutions that preserve the important role that smallholder farmers play in different agricultural value chains?
- How should the challenges of multiple possible standards be addressed through international dialogue and cooperation, as was the case with the introduction of mandatory food safety standards?

[5] For example, in addition to the European Union Deforestation Regulation, which will come into force on 31 December 2024, the United States Senate is discussing the "Forest Act of 2023", while the UK in December 2023 indicated that new legislation would be introduced along similar lines.

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