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The limits of private certifications and the potential of state-led spatial data infrastructure in South America as to ensure deforestation-free exports to the EU

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The regulatory proposal by the EU Commission to reduce greenhouse emissions by tackling the importation of products linked to deforestation in third countries is an important step towards increasing global ambition and successfully reaching the goals of the Paris Agreement. With this purpose, the EU published the Incept Impact Assessment of this initiative for a period of consultation. This Assessment proposes a range of regulatory and non-regulatory options including: mandatory labelling, voluntary commitments and labelling, due diligence, verification schemes and methods such as the Product Environmental Footprint and Organisational Environmental Footprint.

As leading experts on food certification and the monitoring of supply-chains, we would like to advise the EU Commission to reconsider the current emphasis placed on the use of private sustainability standards, certifications and audits that are carried out by the companies themselves or third parties hired by them.

Since the 1980s, voluntary standards have increasingly been used by civil society organizations, private companies and governments to encourage sustainable production practices by linking consumer demand and branded products to the supply of sustainably produced products (Loconto and Fouilleux, 2014; Fouilleux and Loconto, 2017). This rapid expansion of the use of voluntary standards in international trade is often linked to the effects of globalization, in particular to the WTO's technical barriers to trade agreement, whereby the increased control of supermarkets over global value chains is coupled with food safety scares and consumer interest in social and environmental sustainability (Busch et al. 2008; Reardon et al., 2003; Santacoloma, 2014). While the market for certified products is still only a small fraction of international trade in agrifood products, they are increasingly becoming important for key tropical commodities such as coffee (39 percent), cocoa (30 percent), wild catch fish (20 percent), palm oil (22 percent), tea (18 percent) and forest products (10 percent) (Potts, et al., 2014).

Studies of the implementation of organic and other sustainability standards have found numerous problems with the third-party certification model that is dominant in these systems. These [in](#)

include fudging practices by farmers in order to pass the audit, engaging in parallel non-certified production that inhibits the traceability of products, and co-optation of the standards' content by powerful interests (Jaffee and Howard 2009; De Wit and Verhoog 2007; Darnhofer et al. 2010; Mutersbaugh 2005; Cheyns 2011; Konefal et al., 2019). There is evidence of economies of scale in certified markets and a tendency for self-selection in these systems (FAO, 2014). This means that the farmers and exporters who have the means (financial, educational and infrastructural) to make the initial investments are the first to join voluntary standards schemes. This self-selection is strongly related to the evidence of exclusion of non compliant and small farmers found in standards (FAO, 2014). While there is evidence of increased rural employment in certified value chains (Maertens and Swinnen, 2012), the literature suggests that this may be caused by a shift from smallholder agriculture to employed labour on certified farms. This suggests that the use of standards can effect the consolidation of land holdings.

The power of standards comes not just from the fact that a set of criteria has been written down by an authoritative body, but rather because of a layering of standards, certifications, and accreditation of certifiers into a cohesive system of rule creation, implementation, and enforcement (Loconto and Busch 2010; Busch 2011; Loconto et al. 2012; Loconto 2017). Fouilleux and Loconto (2017) use the case of the EU Organic standard to demonstrate how this system effectively creates a layering of markets whereby the market for sustainable products is dependent upon the creation and maintenance of a market for standards and a market for certifications (Reinecke et al. 2012). Both of these markets offer opportunities for accreditors to expand their markets for accreditation around the world (Fouilleux and Loconto 2017). These are competitive markets that push towards the escalation of the number of standards on the market (Ende et al. 2012; Arnold 2014). Conflicts of interest abound in these systems, as there are direct payments for the release of certificates (Busch 2011; Lytton 2014). The recent food safety and quality scandals with Italian and Turkish organic certifiers, the horse meat scandals and the silicon implants scandals all point to the implicit incentives in this system for cheating and a lack of accountability for certifiers (Galland 2017).

In line with the above cited literature about sustainability standards in general, it is very concerning the wide divergence found between private certificates ensuring deforestation-free meat supply-chains and other independent assessments. For instance, JBS S.A, the largest meat processing company in the world by sales, has been under increasing scrutiny in Brazil and abroad due to growing operations in the Amazon and potential links to deforestation. The company has denied any wrongdoing and presented an independent audit by DNV, a large Norwegian verification company, indicating that in 2017 and 2018 none of JBS' direct suppliers in the Amazon (out a 10% sample) have deforested. However, these figures are in stark contrast with the findings from Brazil Public Attorney's audits and independent investigations from Reporter Brasil, an NGO

specialized in investigative journalism, that found farms with recent deforestation selling to JBS tens of thousands of cattle heads (MPF, 2018; Reporter Brasil, 2019). Even if it is unrelated to food supply chains, it should be also recalled that the two tillage dams that burst in Brazil in 2015 and 2019, killing hundreds of people and causing large-scale environmental damage also had private certifications ensuring their safety. The safety certification for the tillage dam in the town of Brumadinho (which killed 270 people) was issued by TUV SÜD, a large German and Austrian businesses that provide inspection and product certification services. For this reason, the certification company is both under investigation for corruption as it willingly ensured the safety of the dam while knowing about early warnings indicating the risk of rupture (EM, 2020). While it is still unclear the source of the divergence between JBS' own deforestation monitoring and other assessments, the recent tragedies in Brazil also involving reputable European certification companies indicate that the current system is seriously flawed given the conflict of interest between the actors involved.

Given the shortcomings of private certification schemes, we urge the EU Commission to support approaches based on transparent and science-driven procedures to monitor supply-chains for deforestation. The main providers of agricultural products from Mercosur already have mature spatial data infrastructures that could provide the basis for such monitoring systems. Over the last decade Argentina, Brazil and Bolivia have adopted new instruments to monitor the compliance of farms with environmental laws using geospatial technologies, and to encourage farmers to restore illegally deforested areas. Specifically, Argentina adopted in 2007 a new Forest Law establishing a zoning that classified the country's forests into three categories, each of them allowing a different level of logging. Under the lead of the "Consejo Federal del Catastro" the different Argentine provinces have placed in online platforms the country's farm boundaries (see: <http://cfcatastro.com.ar/sitio/>). In a similar line, the Brazilian federal government has approved a new Forest Code in 2012 that required every landowner to register their farms at CAR, an national environmental registry system coordinated by the Brazilian Forestry Service that currently holds 6 million individual farms (see: <http://www.car.gov.br/publico/imshowis/index>). Finally in 2013 Bolivia adopted a similar instrument providing parcel information for the entire country (see: <http://geo.gob.bo/>). By combining the information provided by these farm-level registry systems with deforestation monitoring systems such as PRODES in Brazil and Global Forest Watch and export's invoice information it is possible to develop a fully transparent monitoring system that avoids the conflict of interest usually found in private schemes.

While the basic pieces for country-wide monitoring systems are already in place or in a very advanced stage of development, at the moment the preference of both the EU commission and exporters for individual certification schemes is delaying implementation. Therefore, in order to strengthen its deforestation-free imports politic, EU should make compulsory to each commodity-

exporting country to make effective the systems that are already or partially functioning. Over time, these systems should be improved with the support of EU and other international buyers and in order to reach common standards set by an international scientific panel coordinated by a multilateral organization (eg. UNEP or FAO) to develop the protocols and implementation timelines of effective and trustworthy deforestation monitoring systems. It is also crucial the full transparency and traceability of the origin of agricultural products at farm-level, in order to ensure the independent monitoring not only by state actors but also by NGOs and the scientific community.

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