



## Non-conformities to the Forest Stewardship Council (FSC) standards: Empirical evidence and implications for policy-making in Brazil



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### ABSTRACT

The Forest Stewardship Council (FSC) standards are becoming increasingly important in sustainable forest governance. In 2016, FSC certified a total forest area of 195 Mha across 80 countries. While there is considerable room for expanding FSC's reach, there has been a lack of incentives for producers to seek certification, particularly in tropical countries. Information about existing barriers and challenges to comply with FSC standards are fundamental to promote such incentives. The objective of this study was to explore the main challenges faced by firms in the FSC certification process and discuss their policy implications. This was carried out by analyzing the quantity, spatial distribution, non-compliant principles, potential triggers and thematic areas of non-conformities (NCs) to FSC certification disclosed in the Public Summary Reports of third-party audits in Brazil. More specifically it tried to understand the specific issues to which the NCs were potentially associated to. This study generated descriptive and inferential statistics of a sample of 1086 NCs to FSC standards disclosed in the 110 Public Summary Reports, from which the overall majority were related to the certification of plantation forests that had gone through maintenance audits. The occurrence of NCs was found to be most frequently associated with FSC Principles 4 (26,07%), 6 (21,82%) and 8 (13,72%), which are related to the themes "Community Relations and Worker's rights", "Environmental Impact" and "Monitoring and Assessment", respectively. Many NCs were triggered by aspects of forest planning, operation and monitoring, which altogether accounted for 42.91% of all NCs. Problems related to occupational health and safety were also a relevant theme, accounting for almost 20% of the total non-conformities. Findings from the Kruskal-Wallis tests suggest that auditors tended to identify similar NCs, regardless of the geographical region, of the type of forest and of the type of audit (certification or maintenance). Spearman Correlation tests indicated significant relationships between certified forest area and non-conformities with FSC Principles 4 and 7 (Community Relations and Worker's Rights, and Management Plans, respectively). The meaning of this relationship is unclear. Overall, findings corroborate previous studies that found FSC Principles 4 and 6 among the most challenging of the global FSC system. There seems to exist an opportunity for the development of stronger technical guidance and capacity building policies related to community relations, worker's rights, and environmental impacts. If such issues are already challenging in the context of large forest plantations, Brazilian policy-makers should expect small-scale firms to face even higher levels of difficulty, given their lack of financial and human resources. The study concludes by discussing its limitations and suggesting future research avenues.

### 1. Introduction

For millennia forests have provided the world's population with wood and non-wood products. While not always acknowledged by society, forests have also been providing important environmental services, such as clean water supply, habitat protection, and carbon dioxide sinks. These benefits, however, are menaced by deforestation. Recent data from the Food and Agricultural Organization show that, between 1990 and 2015, the global forest area decreased 3%, from

4128 Mha to 3999 Mha (FAO, 2015). Such trends have been triggering the emergence of numerous actors, institutions, legislation, market mechanisms, codes of conduct, among other initiatives that make up the increasingly complex arena of sustainable forest governance (Lister, 2011; Maguire, 2013).

Mandatory, legally-binding policies have long been playing a protagonist role in mitigating the rate of deforestation. Yet voluntary certification schemes are also becoming increasingly important. The idea behind forest certification, as synthesized by Bernstein and

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Cashore (2004, p. 37), is very simple: it is basically a labeling program “(...) designed to recognize officially those companies and landowners who voluntarily operate well-managed or sustainable forestlands according to predefined criteria”. The forest area certified under such a scheme increased from 14 Mha, in 2000, to 438 Mha in 2014, accounting for almost 11% of the world's total forest area (FAO, 2015). There are various types of forest certification schemes around the world. Some of them have become truly global standards, as are the cases of the Forest Stewardship Council (FSC) and of the Programme for the Endorsement of Forest Certification (PEFC). Other certification schemes are designed for domestic or local use, such as the ones from the Canadian Standards Association (CSA), China Forest Certification Scheme (CFCS), Certificación de Plantaciones in Cuba, Sustainable Green Ecosystem Council (SGEC) in Japan and the Brazilian Forest Certification Program (CERFLOR) (FAO, 2015).

One of the most influential certification schemes is the one promoted by the non-state market-driven organization Forest Stewardship Council (FSC), which certified, in 2016, a total forest area of 195 Mha across 80 countries (FSC, 2017a). The FSC was formally established in 1994, in the aftermath of the Earth Summit, with the mission to “promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests” (FSC, 1996, p. 2). FSC's mission has not changed since 1994 (FSC, 2015a), but its reach has extended substantially. The council has conquered an important role in global forest governance. And this phenomenon has been sparking intense scholarly debates around FSC's advantages and limitations (Bostrom, 2012; Cashore et al., 2007; Garrelts and Flitner, 2011; Gullison, 2003; Klooster, 2010; Pattberg, 2005; Taylor, 2005), legitimacy (Johansson, 2012), accountability (Auld and Gulbrandsen, 2010; Chan and Pattberg, 2008), effectiveness (Cubbage et al., 2010), uptake drivers (Carlsen et al., 2012), consumer perception (Brenton, 2013), articulation with state policies (Bell and Hindmoor, 2012; Gulbrandsen, 2006; Hysing, 2009; McDermott et al., 2015), among others. The benefits of certification have also been addressed in the context of developing countries. For example, Carlson and Palmer (2016), while studying the potential outcomes of eco-labels, such as FSC's, in developing countries, found that they had the potential to improve awareness of environmental impacts, increase stakeholder participation, improved eco-efficiency, among others. FSC has also drawn the attention of activist groups who often accuse the organization of misleading consumers and tacitly promoting unsustainable forestry practices (Axelrod, 2016; World Rainforest Movement, 2009). The emergence of the website FSC-WATCH epitomizes this criticism (FSC-Watch, 2017).

The growing academic literature and activism around FSC indicate that more important than understanding “if” FSC certification should play a role in forest governance is to understand “how” to promote and articulate its potential contributions to a sustainable forestry industry. For example, some scholars have claimed that there has been a lack of public policies creating incentives for producers to seek certification, particularly in tropical countries where the costs of complying with the FSC guidelines are potentially higher (Cashore et al., 2007; Gullison, 2003). This is arguably the case in Brazil, a country that ranks 7th in the FSC system (FSC, 2017a). Between 2008 and 2009, > 70% of the area exploited for timber in Brazil had no legal authorization (Adeodato et al., 2011), a figure that hints at the potential for expansion of sustainable forestry in Brazil. According to Lentini et al. (2012), the Amazon region would need between 35 and 40 million ha of forests to be certified to supply current volumes of extracted timber. Brazil's underexplored certification market was actually corroborated by FSC Brazil, which, in 2012, created a project to investigate the various options to strengthen the standard in that country (FSC Brasil, 2012).

The promotion of forest certification, in Brazil or in any country, depends on information about existing barriers and challenges. However, for various reasons, such information is not always readily and reliably available. While there have studies addressing barriers to certification (e.g. Basso et al., 2012; Halalisan et al., 2016; Lallo et al.,

2016; Silva et al., 2016), very few of them attempted to explore the empirical context of large territories, and, to the best of our knowledge, very few of them tried to understand how factors such as geography, forest type and forested area might influence the certification process. These factors are particularly relevant in Brazil, as its regions have many social and environmental differences that might affect the certification process. For example, Brazil's south and southeastern regions are significantly more populated and industrialized than the northern portion of the territory, a fact that might affect the quality and availability of human resources in the certification process. In addition, the size of FSC certified areas, which might bring additional challenges to the certification cycle, vary significantly in the Brazilian territory. The extent to which these factors may or may not affect FSC certification is unknown.

The purpose of this study was to explore the main challenges faced by firms in the FSC certification process and to discuss their potential implications for improving forest governance. More specifically the study's main objective was to analyze the quantity, spatial distribution, non-compliant principles, potential triggers and thematic areas of non-conformities (NCs) to FSC certification identified in third-party audits in Brazil. NCs signal the standard's most problematic principles and respective criteria, thus providing indirect, but reliable indication of the most challenging certification issues at the local scale. The potential associations of NCs with a number of FSC certification factors were tested through Kruskal-Wallis and Spearman Correlation tests.

While this study's empirical evidence was collected in Brazil, findings are likely to be relevant for global policymakers and scholars interested in the general topic of forest governance, and more specifically to those who are interested in the promotion of voluntary forest certification in middle and low-income countries.

This paper was structured in five sections, including this introduction. The following section explains the methodology. The third section presents the results of the content analysis and its most relevant descriptive and inferential statistics. Section 4 discusses the findings, comparing them to previous studies, discussing and highlighting their implications to policy-making. Section 5 finally draws concluding remarks and highlights future avenues of research.

## 2. Methodology: the windows of information offered by Public Summary Reports

While a variety of methods has been used to investigate FSC's growing role in forest conservation, qualitative approaches, underpinned by interviews and literature reviews, are arguably predominant. However, the increasing availability and accessibility of FSC-related data online is creating many opportunities for quantitative and mixed methods research. In the past decade, for example, scholars started to assess the impacts of FSC certification on the ground by analyzing Corrective Action Requests (CARs) of public audit reports (e.g. Blackman et al., 2014; Bowler et al., 2015; FSC, 2009b; Gullison, 2003; Newsom et al., 2006). CARs, as pointed out by Peña-Claros and Bongers (2010), provide an indirect measure of the extent to which FSC is driving economic, social and environmental changes on the ground.

This study adopted a mixed-method approach, underpinned mostly by quantitative systematic content analysis (Krippendorff, 2004), to explore the online Public Summary Reports issued by third-party certifiers accredited by FSC. FSC “requires that a report on the outcome of the evaluation is brought to the client's notice by the certification body, identifying any non-conformities that have to be discharged in order to comply with all the certification requirements” (FSC, 2009a). Such reports are of great importance not only for those directly involved in the certification process, but also for scholars who are interested in evaluating the FSC challenges. In doing so, scholars should note that FSC requires different scopes of evaluations in different stages of the certification process. While the evaluations are guided by the relevant national Forest Management Standard (e.g. FSC-STD-BRA-03-02-2013

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