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## The impacts of forest certification for Chilean forestry businesses

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## ABSTRACT

Forest certification, under both the Forest Stewardship Council (FSC) and the PEFC-endorsed Chilean CERTFOR schemes, has been widely adopted in both the native and plantation forestry sectors in Chile. This study of the impacts of forest certification on Chilean forestry businesses is based in-depth interviews with 72 actors representing a diversity of roles and perspectives in the Chilean forestry sector.

The impacts of certification have been greatest in the plantation forestry sector, and for larger businesses. These impacts include the cessation of deforestation for plantation establishment, rehabilitation of natural ecosystems, greater benefits to local communities, and the development of a positive dialogue between forestry businesses and their stakeholders. However, certification has not resolved some long-standing conflicts between forestry businesses and other actors, notably in relation to Indigenous peoples' land claims and workers' rights.

Both certification schemes in Chile have promoted legal compliance; FSC certification is encouraging improvements beyond legal compliance, and deepening the changes initiated by CERTFOR. The results illustrate how certification can contribute to effective hybrid governance regimes, but also of the limits of certification in addressing deeply-entrenched social conflicts. Nevertheless, the impacts of certification for Chilean forestry businesses and their stakeholders have largely been positive.

## 1. Introduction

The scale and adverse impacts of unsustainable forest management in the second half of the 20th Century prompted many governance responses at a range of scales, from international to local (Lister, 2011; McDermott et al., 2010; Humphreys, 2014). Since the mid-1980s, promoting sustainable forest management (SFM) has been a central concern of forest governance globally. SFM aims to enhance and balance the environmental, social and economic values of all types of forests (see definition in UN, 2007). However, the lack of progress in developing credible international intergovernmental arrangements to address deforestation and forest degradation (Humphreys, 2014), and the limited progress at national and subnational levels in many countries (e.g. McDermott et al., 2010), have catalyzed the emergence of forest certification, a form of “private” or “non-state”, “market-based” governance (Auld et al., 2008; Auld, 2014; Cashore et al., 2006).

Since forest certification was initiated by the Forest Stewardship Council (FSC) in 1995, certification has both diversified – as other actors initiated a number of competing forest certification schemes (Lister, 2011) – and expanded, to now encompass some 500 million ha of forests globally (FSC, 2017; PEFC, 2017), around a third of the

world's production forests (Auld, 2014). While natural tropical forests were the initial focus of forest certification, forests in all geographic regions, and both natural (syn. native) and plantation forests, are now the subject of certification (FSC 2016, Auld, 2014, Cubbage et al., 2010, Mikulková et al., 2015).

As the scale and significance of certification as a forest governance mechanism has increased, so too has interest in the impacts of certification (e.g. Gale, 2014; Lewis and Davis, 2015; Miteva et al., 2015; Poynton, 2015). However, as many of these authors note, our knowledge and understanding of forest certification impacts are limited, and the majority of studies to date have focused on the impact of certification in natural forest management. This study investigates the impacts of certification in both the native and plantation forestry sectors in Chile.

We first review what has been reported by other studies about the impacts of certification, and describe our research framework and methods. We then present our findings from applying this framework to the Chilean forestry sector, and discuss our results and their implications.

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## 2. Forest certification impacts

Studies of the impacts of forest certification have been conducted both at the operational level (e.g. Cabbage et al., 2010; Miteva et al., 2015) and on broader forest governance (e.g. Auld, 2014; Gale, 2014). At the operational (often Forest Management Unit – FMU) level, most studies have followed the characterisation of authors such as Cashore et al. (2006), and focused on economic, environmental and social dimensions of sustainability as the basis for analysis.

At the FMU level, there is considerable evidence that certification has often had positive environmental impacts, for example in terms of biodiversity conservation (Dias et al., 2013) and ecological values more generally through use of lower-impact harvesting methods (Lidestav and Lejon, 2011). Conversely, others criticize certification standards as inadequate to protect environmental values (Poynton, 2015), or as being relatively ineffective (Blackman et al., 2014). Others (e.g. Auld et al., 2008) have noted that the scope of certification is limited to certified forests, and so does not address the major environmental issue of deforestation.

There is no clear consensus about the social impacts of certification. In some cases certification has realized positive impacts for forestry workers and local communities. For example, Cashore et al. (2006) reported improvements in working conditions of forestry workers across regions and countries, and Dare and Schirmer (2011) and Tsanga et al. (2014) reported how certification had improved the relationship between firms and Indigenous communities in Australia and Cameroon, respectively. Conversely, McCarthy's (2012) review found that certification has not reduced conflicts between firms and Indigenous peoples, or that they had been only partially addressed (Teitelbaum and Wyatt, 2013). Others have found that certification addressed the power imbalance between firms and their stakeholders (Cashore et al., 2006), increased the participation of local communities, and fostered better dialogue between different actors in forest governance (Ulybina and Fennell, 2013). Other studies have identified structural limitations in how certification addresses community concerns (Boström, 2012), the poor quality of certification assessments (Malets, 2015), and concerns about inequitable outcomes amongst stakeholders (Pinto and McDermott, 2013, Moog et al., 2015).

Certification has influenced the economic performance of forestry businesses in various ways and to varying degrees. For instance, impacts such as improved access to environmentally sensitive markets, premium prices for certified timber, and increased costs of production have been reported in some cases (Lidestav and Lejon, 2011), but not in others (Toppinen et al., 2013). Certification does, however, appear to have led to greater transparency in the supply chain (Cashore et al., 2006). One of the most common concerns about the economic impact of certification remains its disproportionate cost to smaller-scale forest owners and businesses (Poynton, 2015).

Overall, Auld's (2014: 250) observation that “while certification programs have made laudable progress, they face an ongoing struggle to bring on board more participants and adapt to the ever-changing perceptions of environmental and social challenges” seems an appropriate synopsis of the operational impacts of forest certification.

Studies of certification more concerned with its impacts on forest governance have explored the dynamic between state and private governance mechanisms, and the role of certification as an example of a “new” form of environmental governance (sensu Tollefson et al., 2012). In this context, Burns et al. (2016) discuss the interplay between state and non-state actors in the adoption of certification in Argentina, in which the former played a decisive role, and argue that this is a more general phenomenon. Auld et al. (2008) note that there are both positive and unintended consequences of certification for forest governance, and a range of spillover and longer-term effects.

The results of this study both echo and inform many of these general conclusions drawn by previous work. They also complement those previously reported for Chile, notably by Cabbage et al. (2010),

Masiero et al. (2015) and Heilmayr and Lambin (2016). The contributions of this study are principally in its comprehensiveness – encompassing both natural and plantation forestry sectors, and large and small forestry businesses – and its use of a mixed methodology framework. The study took advantage of the unique trajectory of certification adoption in Chile, in which some businesses adopted different schemes sequentially; the framework provided a structure for the evaluation of certification impacts through comparison of businesses that were not certified and those that were certified under one or both certification schemes.

## 3. Research context, framework and methods

### 3.1. Research context

Few studies of certification impacts have been able to take a comprehensive approach, addressing each of environmental, social, and economic impacts; or employ a research design that allows investigation of the ways in which different types of forestry businesses in an otherwise similar operating environment have responded to competing certification schemes. The specific forms of forestry in Chile, and the particular history of forest certification there, suggest Chile as a case study from which to address these limitations.

Chile has a large area of temperate natural forests, some of which is managed for production; a well-developed export-oriented plantation forestry industry; significant environmental and social issues in the forestry sector; and a large area of both native and plantation forests certified under one or both of two schemes, the Forest Stewardship Council (FSC) and the Chilean Forest Certification Scheme (CERTFOR), a PEFC-endorsed scheme.

Hence, this research was able to investigate the impacts of certification in different forest types, i.e. natural and plantation forests; in different scales of operation, i.e. small to large; and in terms of other characteristics (e.g. geographic region, market orientation, business structure, and level of professionalization; as grouped in Table 3). It was also able to take advantage of the particular history of forest certification in Chile (Table 1), which is that most large plantation companies now hold dual certification, under the CERTFOR and FSC schemes, as a consequence of them first adopting the former, and then the latter, scheme. This pattern of adoption allows comparison of the impacts of the two schemes.

### 3.2. Research frameworks

The research draws firstly from the framework developed by Tikina and Innes (2008) for assessing the effectiveness of forest certification (Table 2). This framework identifies a number of criteria for effectiveness, viz. in terms of problem solving and goal attainment; and each of process, behavioral and constitutive effectiveness. We did not seek to use the framework to assess “effectiveness” in their terms, but rather to provide a structure (Table 2) for assessing certification impacts. In this study, we did not seek to investigate constitutive effectiveness directly.

### 3.3. Research design

The research design was informed by the counterfactual approach (Blackman and Naranjo, 2012), which seeks to avoid selection bias, i.e. the risk of overestimating the changes due to certification when selecting only the best performers. Although the study could not implement a counterfactual approach, the research design was based on investigation of a set of reasonably similar “matched groups” of certified and non-certified forestry businesses, and of FSC-certified and CERTFOR-certified businesses; a total of 19 businesses comprised the sample (Table 3). These groups were similar in terms of the common characteristics shown in Table 3, but differed in their adoption of certification. This design was complemented by use of a *before-after*

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