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Motivations for implementing voluntary environmental actions in Argentine forest companies

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ABSTRACT

Several motivations play an important role in the design and implementation of voluntary environmental actions in forestry, which include systems and procedures of production that minimize environmental impacts and satisfy eco-demanding customers. The aim of this study was to explore what motivations inspire forest managers from large landholding companies in the Northeast of Argentina to implement voluntary actions and how these motivations are perceived outside the companies. To achieve the objective we compared the opinion of private foresters and companies' external consultants who scored motivations based on their importance as driving forces for environmental initiatives. The findings were also compared with motivations described for North American foresters. Multiple factors motivated the companies to participate in voluntary environmental actions following a four driver model with five motivational mechanisms defined as Learning, Signaling, Economic, Legal and Moral. Results showed that of the thirteen analyzed motivations, only two: effective resource management and corporate social responsibility differed significantly between Argentine foresters and consultants and were higher ranked by foresters. Both corresponded to the motivational mechanism Signaling. Our findings confirm that market pressure (via forest production certification) or the enrichment of the company image (through corporate social responsibility) were major motivations but not the only ones. In coincidence with foresters in USA, legal followed by moral motivations were major drivers and were more valued than financial gains. In Argentina bottom up mechanisms influenced by the individual concern for the environment of the decision makers and other workers seemed to be distinctive. Discrepancies between Argentine foresters and consultants highlighted the need to address some improvement in management and communication beyond the company.

Introduction

The forestry sector acknowledges the complexity of production supported by natural capital with links to other ecosystems and to economic and social spheres where multiple users' claims and interests concur especially in the case of large landholding companies (Elbakidze et al., 2010). Since the sustainability concept emerged in several countries around the world at the end of the 80s, the timber production sector has been aiming at being eco-efficient in as many stages of the production chain as possible (Machlis, 1999). Eco-efficiency is understood as efficiency in the use of materials, space and biodiversity (Jansen, 2003) and it is a preventive strategy that minimizes the negative impact of manufacturing products on the environment. Sooner or later many companies in the forestry sector implement integrated Environmental Management Systems (EMS) which helps to improve the performance of processes (Fresner, 1998). EMS represents compulsory and voluntary initiatives that address the systems and procedures of production in order to minimize environmental impacts and, at the same time, to satisfy customers who are more eco-demanding. Voluntary environmental agreements are actions (VEAs) designed by the companies themselves following several drivers to meet eco-friendly objectives in a flexible manner (Ten Brink, 2002), ensuring sustainable forest management (Cubbage et al., 2010).

Internal drivers to set up voluntary environmental initiatives refer to the specific capabilities of an organization, such as the

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companies' proficiency in environmental management, but also the leadership and pro-environmental behavior of managers and workers (Sharma and Vrendenburg, 1998; Anderson and Bateman, 2000; Christmann, 2000). These drivers frequently result from motivations and strategic interaction processes between multiple inter-reliant actors. Economic values are important motives, but ethical beliefs, such as recognition of the environment's intrinsic value, or moral responsibility, are also important (Spash, 1997; Johansson-Stenman, 1998).

External forces include all factors outside a company that influence its practices, such as market regulations, media pressure and customer preferences (Lyon and Maxwell, 1999; Ice et al., 2010). Voluntarism and self regulation contemplate ethical standards of conduct extending beyond compliance with the law, and are asserted to have a variety of benefits, such as better product quality, higher productivity and more attractive markets, raising standards of behavior and reducing environmental risks while increasing the company's reputation (Lyon and Maxwell, 1999).

Some initiatives refer to the conservation of biological diversity and ecological functions within forest stands, together with the preservation of fresh water, soils, nutrients and wetlands (IUCN, 2006; Dennis et al., 2008), adopting an ecosystem approach, and tailoring actions at the watershed and regional level. Other projects include life cycle assessment or are based on carbon sequestration, supporting collaborative global initiatives linked with climate change (Reijnders and Huijbregts, 2003). Several tasks involve local communities in order to enhance social well being and increase public awareness of habitat loss and degradation. Nevertheless, voluntarism in relation to forestry has largely been discussed as a reaction of forestry companies to market pressures, looking for responsibly produced timber. As a result firms decide to implement certification processes, including efforts to meet high standards in management through verification, usually carried out by a third-party audit, which ensures public confidence, social acceptance and respect (Rametsteiner and Simula, 2003; Araujo et al., 2009). Forestry certification emerged in the early 1990s as a governance mechanism to promote eco-efficiency in the sector and it is guided by international norms developed under the umbrella of the International Organization for Standardization (ISO) in which independent assessors grant a certification label to producers who comply with certain legal, management, environmental and social criteria (Cashore et al., 2004; Keskitalo et al., 2009). The certification systems give the assurance that forests are being well managed and that companies make information, concerning the status of their resources, available to customers (Bouslah et al., 2010). Cashore et al. (2005) explained that companies choose forest certification thinking that environmental benefits can help reduce external pressures. As some studies on the North American timber industry showed (Dyke et al., 2005; Overdevest and Rickenbach, 2006), motivations for participating in collaborative ecosystem management initiatives include the desire to decrease governmental regulations, collect data, develop relationships and improve current practices.

Two principal models have been developed which explain how voluntary initiatives are motivated. Takahashi (2001) proposed a four-driver model, combining market and production with social and moral drivers. While the first two seek economic and additional benefits through the improvement of efficiency, the social driver aims to increase exchanges between firms and stakeholders. The moral mechanism is what leads people to act according to their personal values.

Overdevest and Rickenbach (2006) offered a second conceptual model that comprehensively describes essential motivational aspects for forest certification in the USA. The model addresses major concerns to managers: (1) market benefits and incentives (Economic mechanism), (2) new forest management practices and technology transfer (Learning mechanism) and (3) better recognition for forest practices and public relations (Signaling mechanism).

Whereas the Economic driver was more important than the Learning and Signaling mechanisms in USA, in Brazil companies were more motivated to certify for better communications with external audiences (Signaling) followed by Learning (Araujo et al., 2009).

Forest certification in South America

On account of the growing interest in forest certification in South America in recent years, research has been undertaken on different aspects of the implementation of actions within and beyond the certification processes. These studies dealt with, e.g. the impacts (Aguilar, 2000; Amaral and Amaral Neto, 2005; Cubbage et al., 2010), motivations (Araujo et al., 2009), perceptions (Humphries and Kainer, 2006), conservation effectiveness (Ebeling and Yasue, 2009) and improvement of market access for firms' products (Carrera et al., 2006), among others.

Brazil has the largest area certified by the Forest Stewardship Council Standard (FSC), which is the most widely used framework that oversees a system of certifiers as well as regional and national networks in the forestry products industry (Schepers, 2010). The networks include NGOs, certification agencies, wood products, producers, and retailers (Espach, 2006). FSC is perceived as being NGO dominated and therefore as the strongest and strictest of the various certification schemes available worldwide (GTZ, 2005). Considering the number of hectares certified, Brazil is followed by Bolivia, Mexico and Chile. Argentina is likely to become a major global forestry country and private companies are playing an important role in the establishment of forest plantations, some of which are certified or undergoing certification processes. According to FSC the certified forest area in Argentina covers 474,218.51 ha including 11 companies. According to Cubbage et al. (2010) in a study on the impacts of forest management, companies in Argentina were carrying out 75% more changes than the corrective actions required. Most of these changes were performed in preparation for the forest audits in order to implement the certification system and they were motivated by corporate social responsibility (Cubbage, in Araujo et al., 2009; Said and Zuleta, 2013).

The aims of this study were to make an inventory of the actions carried out by large forest companies in Northeast Argentina within their Environmental Management Systems and to explore which motivations inspired forest managers to implement different VEAs. In addition we analyzed how these motivations were perceived outside the companies, considering that public confidence, social acceptance and respect are significant drivers for the implementation of actions (Araujo et al., 2009).

Methods

Study area

For the case study, we selected three private forest companies in North-eastern Argentina (Mesopotamia region). These companies are representative of the large landholding forestry sector in the "Campos and Malezales" eco-region producing timber on their own land, but they provide interesting comparisons since they differ in the implementation of VEAs, the total afforestation area, main afforestation species and certification systems (Table 1).

Together they account for 8.34% (120,946 ha), of the total afforestation in Argentina (Fig. 1). After the enactment of Argentina's Forestry Development Law 25.080 in January 1999, the forestry sector grew by 64% in a decade favored by

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