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Can voluntary standards regulate forestry? — Assessing the environmental impacts of forest certification in Sweden

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ABSTRACT

This article addresses the issue of to what extent forest certification schemes contribute to the enhancement of environmental protection in Swedish forestry. Our assessment is built on the analysis of three different data sets, namely: 1) the Swedish National Forest Inventory (NFI), 2) the Swedish Database for Forest Owner Analysis, presenting data on small-scale forestry practices and certification, and 3) a follow-up mail survey addressed to private small-scale forest owners with certified forest properties. Our NFI analysis indicated some minor improvements in forest conditions, corresponding with the interim target for enhanced biological diversity (dead wood, broad-leaved trees and old forests). The improvements were less evident on large-scale forest properties (certified in accordance with the Forest Stewardship Council scheme) than on small-scale private forest properties (mainly certified in accordance with the Programme for the Endorsement of Forest Certification Schemes). This contradicts a common assumption that a much higher degree of certification with stricter environmental standards will give more evident positive impacts on environmental conditions. However, results from the follow-up survey showed that more harvesting activity had taken place on certified small-scale forest properties than on non-certified properties. This could mean more negative effects on biodiversity. We conclude by stressing the importance of improving quantitative methods for determining a cause-and-effect relationship between certification and nature protection; previous research tends to report rather far-reaching conclusions based on limited data sets.

1. Introduction

1.1. Background

The inter-governmental failure to adopt a global forest convention at the Rio Earth Summit in 1992 spurred the development of national and local initiatives to combat global deforestation. The voluntary and private sectors developed so-called certification schemes, which have spread rapidly, particularly in North America and Europe. Forest certification requirements have been portrayed as *voluntary standards* that legitimize sustainable forest management (Cashore et al., 2004). An increasing European consumer pressure for sustainable wood and paper products has led purchasers in Europe to demand certified timber, especially certificates relying on the Forest Stewardship Council (FSC), initiated by prominent environmental non-governmental organizations (ENGOs) (Cashore et al., 2004). The Pan-European Certification Scheme (PEFC), which is supported by private forest owner associations, was launched in 1999 as a response to the FSC and was later renamed Programme for the Endorsement of Forest Certification Schemes (Gulbrandsen, 2005). A major difference between the two schemes is that the FSC-standard was initially targeted towards large-scale forest companies, whereas the PEFC was founded by industry associations to accommodate the interests of small-scale private forest owners (Cashore et al., 2004). Moreover, in the FSC, the interests of the economic, social and environmental chambers have an equal footing, whereas in the PEFC Council the private forest owners have a final say in decision-making forums (Gulbrandsen, 2005). The PEFC has thus been criticised for not taking environmental concerns seriously enough and for having a stronger focus on economic gains for constituent owners. Recently, similarly critical concerns have been raised against the FSC. In Sweden, several press releases and reports from ENGOs have raised major complaints directed towards large-scale forest companies (Lööf and Sahlin, 2009). In late 2000, several ENGOs accused forest companies with FSC-certified forests of logging old and valuable forests. In 2008, one of the founders of FSC Sweden, the Swedish Society for Nature Conservation (SSNC), decided to leave the Swedish FSC board and 2 years later withdrew their membership from FSC Sweden (Swedish Society for Nature Conservation, 2010).

The national Swedish Forestry Act sets minimum environmental targets for forest owners and expects forest owners to voluntarily aim for even higher degrees of environmental protection. Thus, the forestry sector is responsible for its own forest environmental policy

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and for implementing this through all its activities (*Sector Responsibility*) (Appelstrand, 2007). The aim of this paper is to examine how we can evaluate the extent to which forest certification schemes contribute to the enhancement of environmental protection in Swedish forestry. Forest certification schemes have been argued to represent "[…]the most advanced case of nonstate-driven rule making dynamics globally in the environmental field" (Gulbrandsen, 2004: 76). The Swedish state has been and is currently advocating this "non-state" and market-based incentive, in order to reach a policy goal. Since its initiation, the state has viewed certification as legitimate and welcome, and has certified its own forests in accordance with the FSC-standard (Boström, 2003). FSC dominates in Sweden, with approximately half of the total forest land (11 million hectares) certified (FSC Sweden, 2010). The competing PEFC is currently expanding, to the extent that it now covers 7.9 million hectares of certified forests in Sweden (PEFC Sweden, 2009b).

Forest certification has been largely described as a success in Sweden, mainly due to the high number of certified areas (Cashore et al., 2004). Certification in Sweden has also developed relatively quickly with government support. This makes it a relevant "test case" of how the state's broader reliance on private initiatives may affect public policy (Pierre and Peters, 2000). However, the Swedish state has had problems implementing its forest policy, and over the last three decades Swedish forestry has experienced many disputes over environmental aims (Boström, 2003). This makes it particularly important to evaluate how certification can stipulate, or be used to regulate, forest management in Sweden.

In 1992 and 2005, the Swedish parliament adopted 16 national environmental quality objectives and 72 interim targets. As a way of increasing environmental protection in the forestry sector, the Swedish Forest Agency formally adopted in March 2005 the *Sustainable Forests* objective, including the overall policy objectives and 13 interim targets (Swedish Forest Agency, 2005). Nevertheless, the Swedish Environmental Objective's Council (2008) reports that nine of the 16 environmental objectives, including the objective for Sustainable Forests, will be very difficult, if not impossible, to attain within the defined time-frame (i.e. by the year 2020). The Sustainable Forests interim targets for *enhanced biological diversity* (by 2010) include: 1) increasing the quantity of hard dead wood by at least 40%; 2) increasing the area of mature forests with a large deciduous element by at least 10%; 3) increasing the total area of old forests by at least 5%; and 4) increasing the area regenerated with deciduous forests (broad-leaved trees) (Swedish Environmental Objective's Council, 2008). Previous assessments (Swedish Forest Agency, 2008; Swedish Environmental Objective's Council, 2008, 2009) highlight some trends, such as increasing volumes of dead wood and large and old trees, and increasing areas of mature forests with a large deciduous element. In this case, the interim target for "enhanced biological diversity" is expected to be met, even though it is unclear if the increase is taking place in areas where biodiversity is particularly threatened. The increase is slower in the northern parts of the country. Regarding Sustainable Forests, the council's evaluation also stresses that the high number of certified forests areas in Sweden "improves the chances of meeting several of the interim targets" (p. 196).

Several studies have attempted to relate the adoption of certification schemes to impacts on practical forest management (Gullison, 2003; Rametsteiner and Simula, 2003; Newsom et al., 2006; Auld et al., 2008; Schlyter et al., 2009). However, these studies mainly focus on processes rather than environmental outcomes and the effects on forest biodiversity and landscape protection still remain unclear. Most previous research lacks "on-the-ground" (ecological) data and relies on small samples and/or third-party evaluations, e.g. corrections required from a third-party certifier. This raises the issue of how research on environmental *impacts*, *effects* or *effectiveness* of forest certification can be undertaken, with a basis on empirical data. Before making claims about environmental impacts or effectiveness of forest certification schemes, we argue that on-the-ground fieldwork or ecological monitoring is needed. We therefore question the assertions presented by Schlyter et al. (2009), who argue that their study shows that FSC and PEFC certification in Sweden "is *effective* in its respective area of predominance" (p. 381, emphasis added), without presenting any empirical ecological monitoring data.

1.2. Aim and outline of the study

This paper addresses the question: how can we evaluate whether forest certification schemes contribute to environmental protection in Swedish forestry? We empirically explore whether there might be substantial improvements in forest management practices after the initiation of certification. We make our evaluations in terms of the four environmental targets, viz. dead wood, broad-leaved trees, old broad-leaved trees, and old forests, that are established in national policy and certification standards. Drawing on previous research, combined with quantitative data primarily from the Swedish National Forest Inventory (NFI), we explore the possibility of quantitatively relating forest certification to actual forest conditions. First, the paper presents progress in achieving the four environmental targets, drawn from data from the NFI (2000–2005). Second, we relate these data to the adoption of the FSC and PEFC forest certification schemes. We illustrate how potential impacts of certification can be assessed on an empirical basis and the extent to which we can argue that the adoption of voluntary standards can be related to changes in forest management practices among different categories of forest owners and regions. Given the potential differences between forest owner associations in the degree of certification, the data for all forest owner categories are structured and analyzed according to the existing association regions. As all the major large-scale forest companies are certified according to the FSC standard, while only a minor part of the small-scale private owners are certified according to the PEFC standard, we might assume that impacts on environmental conditions are more evident on large-scale forest properties, especially due to the more stringent FSC standard. The research questions can be divided into two parts: 1) is there evidence of improved nature conservation, as defined by the four NFI targets; and 2) how can we assess whether any potential improvements in nature conservation over time are likely to depend on forest certification?

1.3. Regulation and governance: Assessing the role of certification in the forestry sector

Literature on more recent policy studies emphasizes a general shift from government to *governance*, implying an increased role of public–private partnership and stakeholder participation in decision-making forums (Pierre and Peters, 2000). In these new forms of regulation and governance, the state is described as a facilitator, while non-governmental organizations and business associations play crucial roles, even if they lack governmental authority (Rosenau, 1992; Pierre and Peters, 2000). Rhodes (1994) goes even further and argues that the traditional hierarchical state and its sovereignty in the decision-making process are challenged by other processes, including public actors, operating in society (Rhodes, 1994).

Forest certification is an archetype of these regulatory processes. Certification has been described as a "non-state market driven" governance system that "derive(s) authority directly from interested audiences, including those that they seek to regulate, not from sovereign states" (Bernstein and Cashore, 2007: 348). Auditing, with on-the-ground-inspections of forest land, is usually undertaken by an independent third-party whose assessment indicates if a certificate can be issued. Wood products are then labelled and the customer can trace processed timber along the market supply-chain (Elliott and Schlaepfer, 2001). Forest certification is therefore a prime example of a new form of self-regulation, which implicitly "regulates for results"