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# Certification of family forests: What influences owners' awareness and participation?

### Selmin F. Creamer<sup>a,\*</sup>, Keith A. Blatner<sup>b</sup>, Brett J. Butler<sup>c</sup>

<sup>a</sup> Human Dimensions Research Unit, Department of Natural Resources, Cornell University, Ithaca, NY 14853, United States

<sup>b</sup> Department of Natural Resource Sciences, Washington State University, Pullman, WA 99164, United States

<sup>c</sup> USDA Forest Service, Northern Research Station, Amherst, MA 01003, United States

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#### ABSTRACT

In the United States, 35% of the forestland is owned by family forest owners with approximately 0.2% of this land reported to be enrolled in a forest certification system. The current study was conducted to provide insights into factors influencing family forest owners' decisions to certify their lands. The bivariate probit model with sample selection results suggests that receiving professional advice regarding the forestlands and having a written management or stewardship plan had the highest positive marginal effects on awareness of certification programs and participation in these programs. Non-timber objectives had negative marginal effects on awareness of certification programs.

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#### Introduction

Family forest owners (FFOs), sometimes referred to as nonindustrial private forest (NIPF) owners, represent 92% of the private forest owners, holding 62% of the private forestlands (U.S. Forest Service, 2008). This group includes families, trusts, estates, partnerships, and other unincorporated groups of individuals (Butler, 2008). In the United States, 10 million FFOs hold 276 million acres alone, more than a third of the 751 million acres of the forestlands in the United States (Hodgden et al., 2007).

\* Corresponding author. Tel.: +1 607 255 2504.

E-mail address: sfc55@cornell.edu (S.F. Creamer).

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Historically, the biggest share of the United States timber has come from the NIPF lands (Beach et al., 2005), supplying 50% of the United States round wood timber supply (Zhang et al., 2005), and this number is expected to increase, reaching 60% by 2030 (Harrell, 1989). Due to policy changes and budget restrictions (Society of American Foresters, 2007), timber harvests on national forests had the largest proportional decline (57% from 1996 to 2006) compared to timber harvests under other ownerships (Smith et al., 2009). Moreover, the increase in domestic demand for wood products, combined with the harvesting restrictions on public lands, drew attention to the NIPF lands for future timber supply. Consequently, the forest management decisions of FFOs are crucial for not only improving the forest health and maintaining the biological diversity of the forests, but also increasing forest productivity.

Even though family forests provide crucial private and public benefits, only a small percentage of the owners systematically incorporate all of the management practices that ensure the sustainability of their forestlands (Hodgden et al., 2007). This may be related to the fact that current management practices are not aligned with FFOs' diverse values, objectives, and attitudes since FFOs own and manage their forestlands for non-timber and timber reasons, even though timber production is not a high priority (Hodgden et al., 2007).

Forest certification programs, such as American Tree Farm Systems (ATFS), Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), and Green Tag (GT),<sup>1</sup> present a non-regulatory process that is designed to encourage FFOs to reforest and adhere to good forest management. These programs assess sustainable forest management<sup>2</sup> through performance and/or process standards, attempting to respond not just to forest owners' economic, social, silvicultural, and environmental needs, but needs of the society and nature as well.

Historically, forest certification has been promoted in support of various perspectives, such as environmentalist, consumer, and producer (Haener and Luckert, 1998). Landowners and manufacturers have viewed forest certification as a potential market based tool, promoting their image and credibility, increasing market access, and capitalizing on price premiums (Hansen, 1998). Although the attainment of price premiums is still debatable, forest certification has facilitated the entrance of certified forest products to a number of environmentally sensitive markets, thereby improving the public images of these forestry companies (Chen et al., 2010).

Between 2000 and 2007, the acreage of certified forests has increased from 112 million to over 750 million acres worldwide (Metafore, 2008). Despite global efforts to prevent and reduce tropical deforestation, voluntary participation in forest certification programs has been primarily limited to developed countries in the northern hemisphere (Metafore, 2008). For example, only 1% of the tropical forests, 14% of the temperate forests, and 9% of the boreal forests were certified, leaving 92% of the global forest area uncertified as of 2007 (Metafore, 2008). Most of the United States forest area has remained uncertified (87%) and the total certified forest area in the United States reached a plateau by 2007 (Metafore, 2008). This was mainly attributed to the lack of participation by FFOs and public forests since only 0.2% of the nonindustrial private forestlands and 12% of the public forestlands were certified (Metafore, 2008). In addition, the lack of awareness of sustainable forestry practices was further identified as a barrier for the potential marketability of forest certification programs (Rickenbach, 2002), possibly hindering the likelihood of present and future participation in these programs.

The main objective of this study is to answer the question on how to get FFOs to participate in forest certification programs, in order to improve their forests' health and productivity and consequently satisfy the demand for round wood timber. The second objective is to determine the factors influencing FFOs' awareness of certification programs. These aims will serve various motivations worldwide to learn about FFOs' policy responses and factors behind their participation behavior. The current study concentrates on the Pacific Coast and Southern regions of the United States, where contrasting regulatory environments and forestland ownership patterns exist. In contrast to the forestlands in

<sup>&</sup>lt;sup>1</sup> FSC is a suitable fit for large and small ownerships. ATFS is appropriate for private landowners with 10–10,000 contiguous acres. Both programs have group certification options. SFI and GT are suitable for large and small ownerships, respectively (Hughes et al., 2009).

<sup>&</sup>lt;sup>2</sup> Sustainable forest management is based on the principle of balancing the environmental, social, and economic aspects of forestry to meet the needs of the present without compromising the ability of future generations to meet their needs, and is a broader concept than sustained yield forestry, which only emphasizes timber yield production (Bare, 2000).

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