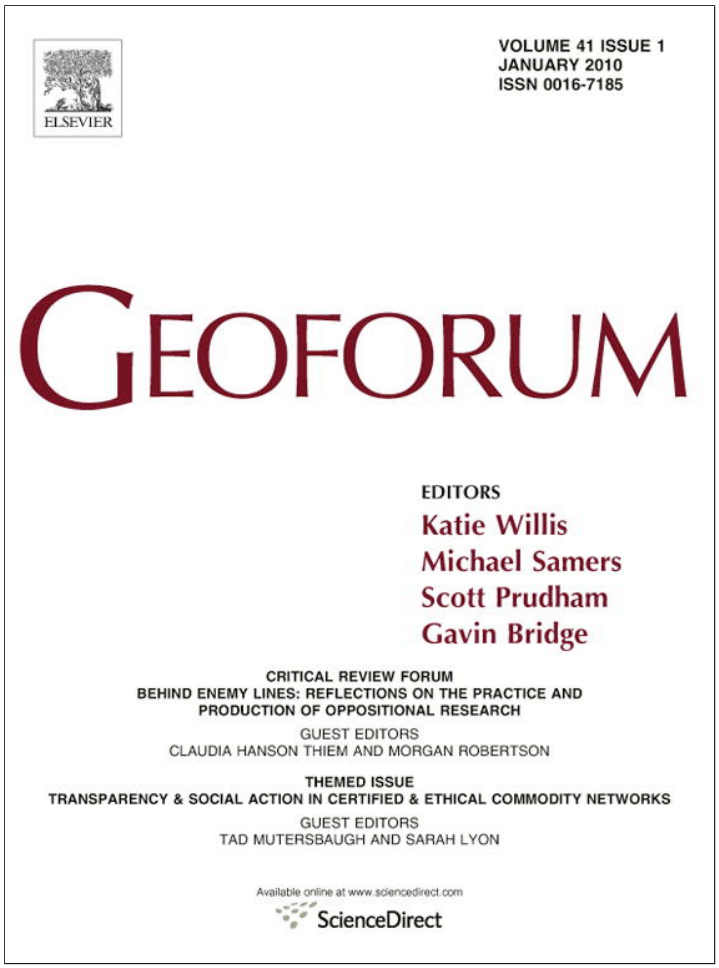

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The certified Maine North Woods, where money grows from trees

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ABSTRACT

Beginning in the 1990s, private ownership in Maine forestland shifted from a number of corporate owners to a patchwork of timber investment management organizations (TIMOs) and real estate investment trusts (REITs). This transformation reflected restructuring trends in the paper and pulp industry. During this same period, forest certification increased to levels that today make Maine one of the most certified states in the United States with nearly 8 million acres certified by one of a number of certifying entities. This paper examines the contradictory tensions of these trends. Specifically, the conservation goals of certification are undercut by increased investment in timber resources characterized by new financial instruments focused on return on investments. The increased use of first-party, industry-based certification suggests that the antagonisms between capital and conservation are being resolved in ways that undermine the purported conservation goals of forest certification standards.

1. Introduction

The Maine North Woods (MNW) is an industrial forest. Over 90% of Maine's 19.8 million acres are forested—the highest percentage in the United States. Of that forested amount, 97% is classified as productive timberland. And 90% of all productive timberlands in the MNW are privately owned and operated for timber production. The numbers attest to the MNW as a forest devoted and managed almost exclusively for the growth and extraction of wood fiber for paper and pulp production (Jin and Sader, 2006, p. 177). A walk in the MNW woods with an industry forester provides an even more telling illustration. The instrumental phrase "wood on the stump" is used commonly by foresters to talk about the trees in the forest. The dominant language of forest economics reflects the industrial view of the MNW and the character of the commodities produced. This arrangement is a function, and long has served the needs, of industrial and commercial forestry.

Beginning in the 1970s, however, a series of biological and economic challenges to the Maine forest products industry precipitated an economic restructuring in ownership and management. The Spruce Budworm epidemic ravaged timber resources throughout the 1970s and early 1980s. Industry responded to the epidemic with extensive clear cutting (Acheson, 2000, p. 148). These practices intensified conflict between industry and conservation organizations and culminated in the Maine Forest Practices Act of 1991, which limited clear cuts on private timberlands. Meanwhile, as a result of increased international competition, Maine forest products firms experienced lowered demand for their products. The resulting industry-wide restructurings have had far-reaching consequences for Maine's forests and forest economy. Transformed ownership patterns and new real estate and investment-focused land owners have increased the anxiety over the sustainability of the MNW as a "working forest" (Wolf and Klein, 2007).

But this is only half the story. The ecological and economic challenges to industrial forestry that forced firm restructurings amid intensified conservation pressures provided also an opening for regulatory restructuring. Environmental non-governmental organizations (ENGOs), no longer content to rely on government to regulate the industry, developed forest certification models in the early 1990s that offered an ENGO-led alternative to the kind of state regulation of forest resources that had long bedeviled efforts to resolve the thorny environmental politics of forest regulation in places like Maine. The Forest Stewardship Council (FSC) was founded in 1993 as one of the first certifiers of best practices in the forest industry.[1] FSC first certified timberlands in Maine in the late 1990s. The trail FSC blazed was one that they promised would lead a market-disciplined industry to better conservation practices and outcomes.

Despite the market friendly (or at least focused) premise of forest certification, industry interests were alarmed by the conservation focus of FSC and its exclusion of industry in the creation of criteria for assessment. In the United States the American Forest & Paper Association (AF&PA), the forest industry trade group, spearheaded the establishment in 1995 of the Sustainable Forestry Initiative (SFI) designed as an alternative certification regime to FSC. Participation in SFI is a requirement for membership in the AF&PA. SFI began certifying forests in Maine shortly after FSC.

[1] See Gulbrandsen (2004), Eden (2009), and Klooster (2005) for more detailed analyses of FSC.

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Table 1
Summary of principles and objectives for forest certification.

FSC principles	SFI objectives
1. Compliance with applicable laws and treaties	1. Ensure long-term harvest levels based on scientific information
2. Demonstrated, uncontested and clearly defined Land Tenure and Use Rights	2. Ensure long-term forest productivity and conservation of forest resources through reforestation, soil conservation and afforestation
3. Recognition and respect of Indigenous Peoples' rights	3. Protect water quality
4. Enhancement of social and economic well-being of forest workers and local communities	4. Manage wildlife habitats and contribute to biological diversity through stand- and landscape-level measures
5. Sharing of benefits derived from the forest	5. Manage visual impact of harvesting and forest operations
6. Reduction of environmental impact of logging activities	6. Manage in a manner that recognizes the special qualities of participants lands
7. Appropriate and continuously updated management plan	7. Promote the efficient use of forest resources
8. Monitoring to assess the condition of the forest and the social and environmental impacts of management	8. Broaden sustainable forestry through procurement programs
9. Maintenance of High Conservation Value Forests (HCVFs)	9. Improve forestry research, science, and technology
10. Plantations must contribute to reduce the pressures on and promote the restoration and conservation of natural forests	10. Improve the practice of sustainable forest management through training and education programs
	11. Commitment to comply to laws and regulations
	12. Encourage public to participate in sustainable forestry
	13. Promote the continual improvement in the practice of sustainable forestry and monitor, measure and report performance
Source: FSC (2009)	*Source*: SFI (2009)

The differences between these two regimes are significant (Table 1). The ten principles upon which FSC is based are rooted in 56 criteria established by regional and national working groups. The criteria provide a road map for social, environmental and economic goals that include protecting indigenous peoples land tenure rights, worker rights, provisions to exclude the use of genetically-modified organisms and the conversion of natural forests to plantations. Forest managers pursuing certification hire independent, third party certifiers who apply the assessment criteria to determine certification eligibility. In contrast SFI was initially established as a first-party, industry-designed and operated certification framework modeled on the process-based (not performance-based) International Organization of Standards (ISO) 14,000 Environmental Management Systems (EMS) protocols (Cantrell, 1998). Since 2002 SFI has established third-party standards for assessment and moved to increase the independence of its certification standards from the AF&PA. Despite these reforms, critics note troubling credibility problems with SFI. A 2005 United Nations report on global forest certification chided SFI for lacking "meaningful minimum performance-based standard[s]...adequately protecting rare and endangered species and addressing social issues" (UN, 2005, p. 18). The report also noted that although by 2003 SFI had developed more stringent assessment mechanisms, including independent assessments and evaluations to determine eligibility for the certification standard, SFI was still dominated by forest industry interests and perhaps most troubling of all, the report noted "[c]ompanies can customize the standard used to assess them thereby compromising the independence of certification" (UN, 2005, p. 18). In contrast, FSC largely has satisfied critics interested in protecting forest ecologies or forest dependent communities. The UN applauded FSC's efforts to establish credible social and environmental standards created through broad-based participation among groups interested in environmental, economic and social issues.

FSC and SFI are not alone; a number of different certification schemes compete in some countries, collaborate in others or combine their efforts in still more. The Program for the Endorsement of Forest Certification (PEFC) was developed as an alternative to FSC in EU countries and today certifies millions of hectares largely in EU countries. Canada's forest trade association, as with AF&PA in the United States, also developed an alternative to FSC with its Canadian Standard Association (CSA). Eden notes in a forthcoming article about UK forest certification that the UK Woodland Assurance Standard, begun as an alternative to FSC, eventually coalesced with FSC into a single national standard. In the UK case study, Eden cites the heterogeneous network of scientists, activists and economic interests that established FSC as a dense network of actors that together produced a credible governance scheme binding together science and policy and recognized by consumers and producers alike (Eden, 2009).

In Maine, unlike in the UK, FSC and SFI have not combined certification efforts. FSC was the early certifier in Maine. While certified forests have steadily increased by total acreage in Maine since the late 1990s, many timberland owners have shifted from FSC to SFI and most new timberland owners are now enrolling with SFI (Fig. 1). The transition from independent certification to industry-designed certification has occurred alongside continued and increased restructuring and land ownership transitions in the MNW. These new patterns of ownership are characterized largely by the entry of institutional investors into Maine's timberlands. Timber Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (REITs) have taken advantage of the sell-off of timberlands by paper companies that sought to cash in on timberland reserves as a means to infuse cash into firm restructurings

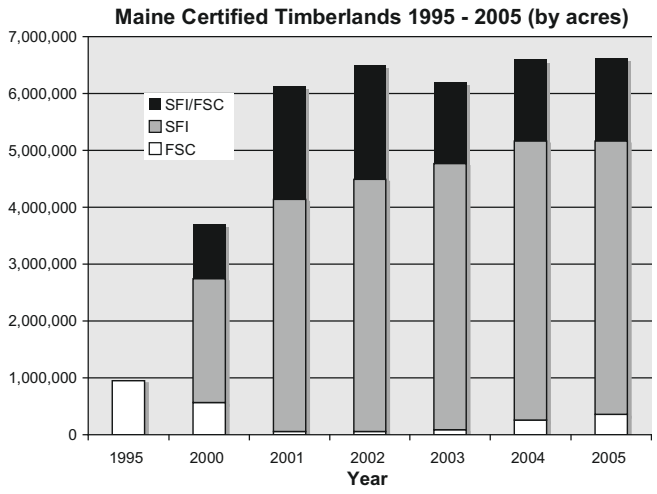

Fig. 1. *Sources*: Maine Forest Service; Maine Forest Certification Advisory Committee.

Table 2
Selected major timberland sales in Maine 1998–2006 (in acres).

Seller	1998	1999	2000	2003	2004	2005	2006	Buyer
SAPPI	908,000							Plum Creek
International Paper		245,000			1,100,000			Clayton Lake Woodlands LLC (1999), GMO (2004)
Bowater	656,000	380,000						McDonald Investment Company (1998), Inexcon (1999)
Georgia Pacific		446,000						Yale University Pension/McDonald
Champion			913,000					International Paper
MeadWestvaco				629,000				Wagner
Irving						230,000		Timberstar
Fraser						240,000		Forestland Group
Pingree							105,000	Timberstar
Total (acres)	1,564,000	1,071,000	913,000	629,000	1,100,000	470,000	105,000	

Sources: Timberland Markets, Timberland Reports.

(Table 2). The trend is reflected nationwide. From 1981 to 2005, forest products companies sold 60% of their landholdings, reducing ownership from 58 million acres to 21 million acres (Switzer, 2006).

As this paper demonstrates, the logic and practice of certification and recent patterns of investment in Maine timberlands provide an explanation for how the industry-friendly SFI standard has overcome the critics and conservation pressures and heterogeneous network density of FSC to emerge as the dominant player in forest certification. In addition, although forest certification is, as Cashore (2002) describes it, a non-state, market driven form of authority, the state as been a major player in shoring up SFI credibility and shifting regulatory authority. State-sponsored efforts to encourage market-based regulatory mechanisms in Maine's forest products industry have accommodated, through the state's acceptance of industry-designed certification standards, increased investment and production in the forest products industry and undermined FSC efforts to establish certification authority.

Whereas certification efforts by FSC seek a market-based mechanism to impose conservation practices on Maine's forest products firms, industry-designed certification standards, backed by new institutional investors, have effectively obscured transparency in sustainable forest practices and now serve the financial imperative of investor return rather than the goal of forest conservation. Moreover, the forest products industry has used certification to attach new values to industrial forestry—namely that industrial firms possess a unique ability to manage the MNW in ways that both increase economic returns and as a direct result of this economic activity achieve improved environmental services and function in regional forest ecosystems. This logic draws on the premise of market-based conservation to position intensive industrial forestry, and the profit position of large firms, within the rubric of sustainable forest management. Most significantly, the acceptance of industry-designed standards for forest certification further draws regional biophysical processes within the orbit of global financial markets. These industry-defined "sustainable" forest practices allow forest products firms to harness the language of certification to shroud industrial forest practices in a veneer of sustainability.

This paper is organized into three parts. In the first section I examine the logic of forest certification and the political economy of market-based conservation with an emphasis on the Maine North Woods. I argue here that the histories of FSC and SFI in Maine reflect not merely a struggle to become the non-state, market-driven authority in forest certification, but instead has been a struggle to define and control the conditions and relations of production in the forest sector. The next section expands on this point by examining the logic of certification. I suggest that forest certification serves as a form of economic rent. I argue here that forest certification can only harness market forces by engaging in certain kinds of rent-seeking behavior. One consequence of this has been the ability of forest industry firms to present themselves as ecologically focused actors. Third, I examine the land ownership changes and certification issues in Maine from the perspective of new institutional investors. This portion of the paper seeks to understand the structure of the forest products industry in Maine as a way to further understand how industry versions of sustainable forestry have gained traction. In this section, I pay careful attention to forest sector restructuring in Maine and the impact of this restructuring among forest certification actors. As investor-focused landowners bought millions of acres in Maine from paper companies, FSC found increased resistance to conservation standards linked to production practices.

The final section is based on a review of the business and industry trade press, analysis of timberland investments by industry journals and lastly through in-depth interviews with three institutional investment portfolio managers, two paper mill managers and one timberland manager. Although the number of interviews conducted was small, this reflects the disproportionate control of timberlands by institutional buyers. The three fund managers interviewed were among the largest institutional owners of MNW timberlands. Their arguments and explanations related to certification in Maine are compelling for a number of reasons. First, prior to the arrival of TIMOs and REITs in Maine, a small number of large paper companies owned millions of acres in the MNW. While the type and focus of timberland landowners has changed in the MNW from an interest in timber reserves to investment potential, one pattern has remained the same: the MNW remains a forest owned largely by a relatively few, well capitalized owners. Three of the five largest TIMOs in the United States maintain huge landholdings in Maine. Between June and August of 2007, I conducted telephone interviews with three of these portfolio managers (none of whom lived in Maine). The financial managers were selected because they had recently purchased for their funds at least one million acres from paper companies divesting in Maine timberlands. All three funds maintained SFI certification for all timberlands.

In addition to fund managers, I interviewed one mill manager and one corporate paper purchaser. These interviews were not intended to provide generalizable knowledge about the role of mills and corporate consumers in the development or acceptance of certification regimes but rather they provided background information on issues related to certification demand and the way other certification actors reacted to changing landownership patterns. All of the interviews offered a preliminary view of the conflict over certification amid a rapidly changing set of ownership arrangements in Maine. The fund managers, for example, ratified trends and patterns identified first in the financial press and literature: command and control over production via SFI certification has become a key strategy to blunt conservation pressures while preserving, and even expanding, return on investment.

2. Sustainable forest management and the logic of forest certification

"Forest Stewardship Council over my dead body."[2]

Forest certification is a non-state form of resource management regulation organized according to, ideally, a set of biogeographically specific principles and prescriptions for sustainable forest management (SFM). The development, implementation, and auditing of SFM principles under a forest certification regime require, according to Gulbrandsen (2004), a shift from government to *governance* in state–society relations that diffuses authority to delineate the forest management regime along market/regulatory axes. The logic of forest certification begins with the premise that environmental improvements follow when market forces are harnessed to compel sustainable practices. A shift in standardized industry practices toward certified sustainable forest management, according to this logic, rests with increased consumer awareness and demand for sustainable products. Ecolabeled products, the argument goes, are derived from sustainable practices established by independent adjudicators and guaranteed through third-party auditors that allows producers to capture price premiums in a parallel "green" market. Despite the 'free market" rhetoric attached to certification regimes, the moral economy upon which such an arrangement is based requires layers of assessment, auditing, and chain of custody guarantees. As Mutersbaugh (2004, 2005) has shown in the case of organic coffee production and certification in Oaxaca, Mexico, these market arrangements work to transform labor processes, restructure social relations of production, transform rent relations and reinforce access to production inputs by powerful commercial actors. Such arrangements reflect the complex local/global political and economic geographies of certification regimes that must unfold before the utility of a certification ecolabel can emerge. These social practices reflect local geographies that "operate in vastly different political, biophysical and socioeconomic settings" (Gulbrandsen, 2004, p. 78).

Maine, more that any other US State, is embracing certification as an official policy dealing with the political challenges inherent to forest ownership changes. In July of 2003, Maine Governor John Baldacci launched the Maine Forest Certification Initiative with the goal of improving forestry practices while at the same time expanding market access for local forest products firms. This feat was to be accomplished through the labeling of certified forests and certified forest products. One interesting aspect of the Maine initiative has been its willingness to accept multiple and competing certification programs, both independent and industry-led (Brusila, 2005). With over 7 million acres in a variety of market-based certification programs in 2003, the initiative set a goal of achieving at least 10 million by the end of 2007.

In the Maine context certification does not operate, contra Stringer's (2006) assessment of the resource periphery context, as a value-adding form of production input. No differentiating market premium exists.[3] Rather, certification has emerged as a form of green branding of forest management and forest products without any increased return on investment. In other words, forest certification in Maine does not operate as a scarcity-producing mechanism or value-adding mechanism, but rather as a method to reinforce control over the production process.

The ongoing conflict between forms of certification in Maine reflects the struggle to define the standards governing forest ecolabeling and thus the political legitimacy and authority to remake (or defend) production practices. FSC standards have been developed among a body that largely excludes public sector and industry interests and rests on outcome-based audits. Conversely, SFI developed standards through a body dominated by industry reliant on process-based standards, not outcome-based expectations confirmed independently through on-site audits. While the efforts of moral economy conservation organizations like ForestEthics and recent decisions by large paper purchasers such as L.L. Bean to require FSC-certified paper suggest the development (or at least the possibility) of demand pressures, FSC as a certification label has been unable to establish substantial market demand over SFI in Maine (Turkel, 2007). Recent shifts away from the FSC third-party scheme toward the industry-based certification program of SFI suggest that in the Maine context certification operates within a framework characterized by weakly developed demand for certified forest products among the large paper purchasers. This has been reinforced by general and continued disagreement regarding definitions of SFM. Such an arrangement (i.e., the lack of a market premium) limits the scarcity-producing ability of an idealized exogenous forest certification label.

Despite the continued absence of market premium, acres in certification have grown in Maine. This growth almost entirely has been a result of increased enrolment in SFI. The SFI-based version of sustainability draws on the "working forest" tradition of the MNW to suggest that challenges to the forest products industry are equally threatening to forest ecology. Therefore, efforts to increase the economic potential of the MNW promise also the possibility of an improved forest ecosystem.[4] Through this argument, the defense of forest ecosystem health is transferred to industry and away from conservation interests. In this way, as will be more fully discussed below, FSC is painted as a flawed political body while SFI, drawing on the same logic, is seen as an ecological body (as extended through forest economics by the SFI logic of SFM). This has been reinforced through the legitimizing role of the state.

An additional barrier for FSC is that in Maine, as elsewhere, paper and pulp provides a particularly challenging industry in which to establish certification as an alternative forest regime. The industry is dominated by large timberland owners and paper producers and large purchasers. While most large purchasers of paper, lumber and specialty wood products have established corporate purchasing policies that mandate percentages of sustainably-sourced forest products, these policies reflect a defensive tactic born of the tension between the need for return on investment against ongoing external efforts to force forms of "green" corporate capitalism (Emel, 2002). While this motivation does suggest a market force for sustainable forestry, the layers of corporate policy, differential certification audits, chain of custody limitations, and green image branding illustrate one set of limitations to market-based conservation.

3. Commodity certification as rent seeking

A central argument of this paper is that certifying nature through labels and seals serves as one means to capture surplus value in the production of forest commodities effectively hijacking the conservation rhetoric of certification. Though the explicit goal of forest commodity certification, and social regulation more generally, is not to appropriate surplus value produced by forest products firms, the logic of market-based conservation rests on the argument that defining and controlling the conditions of production leverages the power of the market to efficiently produce beneficial environmental outcomes in ways that may be

[2] TIMO portfolio manager interview with author, August 2007.

[3] This claim is based on a review of the industry press, interviews with one corporate paper purchasing officer and three institutional investment portfolio managers conducted from June–August 2007.

[4] For the industry's argument about ecology and economy under an industry designed SFM framework, see Cantrell (1998) and Wallinger (1995).

impossible for top-down bureaucratic regimes. Labels, in this sense, serve as a form of rent that produces a particular set of socio-ecological relations and conditions of production. Producers pay a rent for the suite of certification services (standards, auditing, labels) in order to access the certified market. These rents are derived from certification resources such as the practices and capacities to manage the complex chain-of-custody network that in turn establish an ecologically centered political economy of production. In terms of policy and governance, this view of certification as rent suggests that certification is not merely productive of environmental quality but also is a route to regulatory relief bound up as it is in the relations of production in the forest products industry. Rent, whether from the collection of ground rent for productive land, or the fees associated with acquiring labels demonstrating certification of production practices, "provides a basis for various forms of social control over the spatial organization and development of capitalism" (Harvey, 1999, p. 337).

A number of scholars consider certification a form of neoliberal environmental governance (Gulbrandsen, 2004; Klooster, 2005; Overdevest and Rickenback, 2006). These writers depart from Cashore (2002) who has written extensively on the policy dimensions of forest certification within the context of a comparative analysis of the structure of the forest sector. He has argued that global economic shifts in forestry, the structure of the local forest sector and the local histories of forest policy mediate the politics of legitimization and the prospects of durability for various forest certification regimes. His institutionalist approach has provided a useful framework through which to examine the ability of competing forest certification regimes to establish legitimacy and authority. In Cashore's model, however, the state, as with individual firms, is only one actor influencing the credibility and legitimacy of various forms of non-state market driven authorities. When it comes to understanding certification/market relations, this position obscures more than it reveals. What exactly do certification authorities "harness," for example, when they harness the market in pursuit of conservation goals? This paper draws on a political economy approach to examine how certification operates as a form of rent that reinforces control for certain actors over production processes. My argument is that the struggle between SFI and FSC in Maine is not a struggle over policy legitimization in forest governance, but rather a struggle over control of the conditions and relations of production in the forest sector.

In Maine, the competition between FSC and SFI has not been a reaction to the structure of the forest sector as Cashore has suggested, but rather a struggle to reshape the structure of the forest economy itself. It is with this point that I depart from the kinds of policy analyses or network analyses of forest certification that understand the structure of the forest sector as a condition that effects the politics of certification. SFI has been effective in Maine because the industry has used the logic and language of certification to establish control over the forest sector itself.

Although I am arguing that the logic of certification provides an opening for capital that undermines the conservation goals of certification, there can be no doubt that FSC and SFI reflect two very different forms of certification. SFI is an industry standard while FSC seeks forest practices that balance environmental and commercial interests. The logic of FSC certification begins with the premise that only through the harnessing of market forces of exchange can certain outcomes come about—in this case improved environmental outcomes in the production of paper and pulp. The value of the FSC label is expressed through exchange. The certifying authority (FSC) must establish certification utility before it can hope to convert certain production processes. FSC, for its part, works to establish consumer-based values through the production of a market for FSC labels among consumers recognizing that the expression of the value of certification requires the exogenous development, and policing, of market demand. Furthermore, the exchange value of certification in its general form, assuming utility *is made to exist* as a character of the label, reflects the ability to produce the political and bureaucratic authority required to establish and defend label standards.

The power of FSC to impose this forest certification agenda in Maine depends on its ability to capture rents as one way for its label to emerge, but this effort has been blunted by industry consolidation and the oligopsony purchasing patterns of paper consumers. As one TIMO manager pointed out, the 49 million acres of private US timberlands controlled by TIMOs and REITs mean that they have the clout to "organize against [FSC]." Timberland owners in Maine have organized against FSC in an effort to maintain control over forest practices despite some exogenous pressures to conform to FSC's clearly more ecologically sensitive practices. Finally, the emergence of SFI as a market-acceptable (given that the market is largely industrial paper purchasers), industry-controlled alternative has undermined FSC's ability to capture these rents.

4. Industrial restructuring and Maine's new timberland investment management owners

Suddenly it seemed, amid restructurings and regulatory changes, timber became the perfect investment. With economic bubbles growing and none yet bursting, the business press began singing the praises of timber investments in the early 1990s with timber industry investment analysts encouraging both the sell-offs by paper companies and investment by institutional fund managers (Economist, 1999). New investment-focused owners and investors flocked to timber investments, drawn to the investment class by analysts quite literally describing money growing from the trees.[5] Returns exceeded 13% over the last 40 years of the 20th century, outperforming nearly every other investment type. The growth in investments this bubble-producing hysteria created rests quite simply with the biological properties of the timberland investment class. "The best reason to invest in timberland" one investment press writer reminded his readers "is the simple fact that trees grow" (Strum, 2001).

Timber Investment Management Organizations, Real Estate Investment Trusts, and even newer Mill Investment Management Organizations make up Maine's new investment and real estate-focused landowners. These TIMOs and REITs emerged as major players in the Maine forest products industry when they purchased timberlands and mill operations in Maine from paper companies that sought to liquidate large property holdings as a means to fund firm restructuring. Timberlands were a relatively unknown commodity in the market but have been shown to far outpace other investment funds, including stocks and bonds. In 2006, 7.3 million acres of timberland changed hands in transactions greater than $8.3 billion.[6] The great majority of these purchases were made by TIMOs such as GMO Renewable Resources and REITs such as Plum Creek. The concentration of Maine timberlands in the hands of institutional investors has introduced a shareholder-driven production system. These investment instruments have transformed more than merely land ownership patterns, they are at the root of land use changes and harvesting practices in the MNW. The REIT Plum Creek, for example, purchased nearly 1 million acres in the MNW in the late 1990s and now proposes a massive residential development for upscale homes and resorts. Likewise, in 2005 GMO Renewable Resources, LLC, a private equity firm, purchased 1.1 million acres of International Paper's land holdings in Maine for $250 million. The

[5] Switzer (2006).

[6] Timberland Markets, 2007, 5 (1).

sale included a long-term agreement for GMO to supply wood fiber to IP's Maine paper and pulp mills in Jay and Bucksport.[7] The agreement also included a long-term agreement for IP to provide SFI Certification management. GMO has become the third largest TIMO, as measured in acreage owned (2,254,000 acres), through its purchases of IP timberlands. Of the five largest TIMOs, three maintain significant landholdings in Maine (Timberland Markets, 2005, 5:1).

According to the Maine Forest Service, the average forest managed for timber adds roughly 8% more timber growth every year while standing timber continues to increase in value. Real prices for timber have steadily risen for more than 100 years and price trends in timber suggest that timber prices are often counter-cyclical to existing business cycles. In addition to growth rates, the mixed hardwood/softwood forest of the MNW provides a unique quality to finished paper. Moreover, the physical characteristics of wood limit the ability for emerging wood fiber producers to tap into the local market. Transportation constraints protect both market penetration and price fluctuations.

But the timberland investment class is not merely biological or geographical. Pension fund investors first recognized the investment possibilities after the passage of the Employee Retirement Income Security act of 1974 and its requirements for portfolio returns. Publicly traded timber REITs represent another emerging owner investing in timberlands in the MNW. The category is a tax designation for any corporation investing in real estate. REIT status provides a tax reduction and in some cases a complete elimination of all corporate income taxes. Additional tax benefits accrue to timber REITs because income derived from wood fiber sales is treated as income from real property. The combination of huge privately owned forests, advantageous tax designations for institutional ownership and the unique biological capacity of the MNW accounts for the transformation in ownership.

Timber investing in Maine by pension funds began in earnest during the 1980s. Sell-offs by paper companies and tax benefits for investors combined to make timberlands a significant investment holding for a broad range of institutional investors. The result has been a transformation in MNW ownership that reflects a shift from a "working forest" landscape to a real estate landscape. The "working forest" landscape had been dominated by large vertically integrated paper companies. These firms controlled private timberland ownership in Maine throughout the 20th century. A small number of large paper companies—Great Northern Paper, Fraser, SAPPI, International Paper, Bowater, and MeadWestvaco—operated large paper and pulp mills and together owned the vast majority of the over 17 millions of acres of timberlands in the MNW. The huge landholdings served as a wood fiber reservoir and hedge against timber prices. The new investment-focused owners transformed the established ownership patterns in the MNW.

While industrial timberland ownership long had provided significant benefits for forest products firms, the increased competition in the global forest products industry beginning in the 1990s showed that industry-owned timberlands restricted flexibility in the increasingly global competition among firms. The reorganizations that began in the late 1990s were funded largely through divestment in timberlands. The larger firms in the industry responded to increased international competition in low-cost paper by consolidating production processes and focusing on core products. International Paper, once the largest private landowner in the United States, sold 90% of its landholdings, 5.7 million acres, between 2005 and 2006 for $6.6 billion (Economist, 2007). While timberland sales have not been unusual in the MNW, the sales, until recently, were often among large, industrial owners. Beginning in the 1990s, a new trend emerged in which a number of industrial operators sold timberland to institutional investors and real estate trusts (Hagan et al., 2005). These new landowners sought timberlands for short-term financial interests. The new management priorities and financial motivations of investment-focused owners created concerns among many for the long-term prospects of the MNW. These concerns are reflected in the aggressive efforts of conservation organizations, such as The Nature Conservancy, and individuals, such as Bert's Bees heir Roxanne Quimby, to purchase industrial timberlands for strictly conservation goals (Harrison, 2006). This concern emerged primarily from the anxiety that new landowners sought ownership for short-term returns for investors at the expense of forest ecologies.

The emergence of TIMOs in Maine transformed not only the forest products industry, but also the patterns of forest certification. For institutional investors, FSC-certified lands increase costs through certification payments and conservation-based production standards, all without a price premium. Meanwhile SFI, according to portfolio managers, amounts to an industry-controlled rubber stamp.[8] According to one portfolio manager, FSC-certified timberlands sell at a discounted rate of 20–25% in land valuation. As he explained, "SFI is a non-factor, it's just as though the land isn't certified. FSC, however, creates a huge risk factor. Their rigorous standards are unpredictable, change frequently and are hard to model."[9] Part of the issue in Maine is found in the wood supply agreements appended to TIMO purchases in Maine. Large TIMOs like GMO Renewable Resources, with over 1 million acres in Maine, and REITs like Plum Creek, with nearly 1 million acres in Maine, certify with SFI and have long-term contracts with Maine paper mills. A number of portfolio managers suggested that the discount for SFI-certified timberlands originates in the guarantee that owners themselves establish and certify their own timberlands. A requirement to switch over to FSC could wipe out as much as 20% of the value of merchantable timber. As one manager explained, "I do not want fungible, flexible standards."[10]

Genetically modified organisms (GMOs) also serve to underline the character of the conflict between SFI and FSC. FSC is the only global forest certification regime that does not allow GMOs within the certification rubric. SFI, however, places no restrictions on GMO use or research. For TIMOs, this standard restricts flexibility: "If there is a tree that grows five times as fast as another tree that's in the pipeline, we're going to experiment with that tree. We have a commitment to our shareholders."[11] The suggestion here is that certification standards that limit production practices limit return on investment. For many mill owners, however, forest certification is seen as a non-issue. The economic organization of the industry places constraints on certification preferences. With wood fiber sourced from hundreds of local suppliers, the chain-of-custody problems and the Just-in-time production/delivery schedule limit certification preference flexibility. One paper mill manager suggested, however, that investors do appear to be making purchasing decisions based on certification concerns.[12]

The 24 TIMOs operating in the United States (up from two in 1990) manage nearly $16 billion (Little, 2006). More significantly, TIMOs control over 30 million acres of timberland, a figure that accounts for half of all productive timberlands in private hands in the US. When combined with the 19 million acres controlled by timber REITs, institutional investors "control the lion share of wood fiber

[7] Since the 2005 land sale, IP has also sold it's mill operations in Jay and Bucksport to Verso Paper, a Mill Investment Management Organization (MIMO) subsidiary of the private equity firm Apollo Management, LLC. Apollo, started by a colleague of Michael Milken of the junk bond firm Drexel Burnham Lambert, specializes in leveraged buyouts and distressed securities in corporate restructurings. At the time of this writing, the firm manages nearly US$40 billion in investor commitments.

[8] This conclusion is drawn from portfolio manager interviews.

[9] August 2007 interview with Maine TIMO portfolio manager.

[10] June 2007 interview with portfolio manager.

[11] August 2007 interview with portfolio manager.

[12] July 2007 interview with paper mill manager.

in the US."[13] Portfolio managers, obligated to produce returns on investments, have become a formidable opponent of FSC's version of market-based conservation. As one TIMO manager described, "We pay for the certification. FSC is trying to say this is the product take it or leave it. And then they hammer away at conservation organizations to pressure us to comply or they hammer away at wood buyers to make sure we certify with them. It's taking the ultimate customer, us, and driving us away."[14] Since, as this same fund manager explained, SFI "gets the same treatment in the marketplace," FSC cannot impose strict production standards. SFI, accepted equally by the state of Maine and many paper purchasers, provides the same market requirement for certification without the FSC encumbrances. The market, as an instrumental force for conservation, clearly has failed to embed environmental values in Maine forest products production.

5. Conclusion

> "The social character of the means of production in capitalist production—the fact that they express a definite productive relation—has so grown together with, and in the mode of thought of bourgeois society is so inseparable from, the material existence of these means of production as means of production that the same definition (definite category) is applied even where the relation is the very opposite."[15]

In the quote above, Marx concluded a lengthy section on productive and unproductive labor by addressing the question of what exactly it means for labor to be productive. His point was to draw attention to the social character of the relations of production to suggest that in capitalist production only labor transformed into capital is deemed productive. His more general point above about capitalist production serves to reveal the obfuscating logic of forest certification. The social character of the relations and conditions of production in the forest sector and the material existence of forest resources as nothing more than means of production have "so grown together" in the logic of capital that they appear to be the same thing. In other words, the forest is 'wood on the stump' and protecting the forest, conserving forest resources, must then require converting more of the forest into 'wood on the stump.' Forest certification in Maine serves the interests of industry to create more 'wood on the stump,' the increased production of use values (certified wood and paper products) and the appropriation of surplus value through market exchange.

But more importantly, can the goal of conservation be accomplished at all by harnessing the market? This question is central to the legitimacy of the certification regime. To answer yes is to suggest that ecological values and outcomes as an end in themselves are somehow inherent to capitalist production. While this argument—sustainable capitalism—sells books in airports with its practical and moral economy resonance,[16] the question itself obscures what exactly it is that we imagine serves as the mechanism of conservation in capitalism. The free market? Marx attributed this undying faith in free markets to bourgeois thick headedness—a tendency to view capitalist market forces as eternal and essential to all economic questions.

References to free market forces and environmental outcomes obscure a particular political economy of certification. Forest certification works to make conservation inseparable from the market by assuring consumers, through the use of ecolabels, that specific conservation practices occur in the production of various forest products. Yet the goals of the Maine Certification Initiative and SFI reinforce the power of capital over nature and allow for the increased volume production of wood fiber. Such increases in extraction embed obvious contradictions in purportedly sustainable systems of forest management. SFI overcomes this contradiction by cloaking capitalist relations and conditions of production in sustainable terms—forest extraction and increased return on investment magically improve environmental outcomes. Through SFI, the forest products industry links commercial timber production with environmental benefits. The explicit rhetoric in the emerging green forest products industry suggests firms are attaching, as an outcome of intensive forestry, unique environmental goods, such as large-scale carbon sequestration, and potential alternative biofuel sources, to production processes.

Considering certification as a form of economic rent serves as a useful framework to examine the struggle over the production process in Maine between FSC and SFI.[17] As Guthman (2004, pp. 515–516) suggested, economic rents in certified agriculture "stem from people's willingness to pay more for certain goods and services that are construed to be particularly desirable." But creating these consumption-based "wants" requires the economic and political effectiveness to control the meaning of SFM and the ability to establish continued authority over those meanings. The struggle between FSC and SFI in Maine reflects this struggle over control of meaning and, therefore, control over the production process itself. In that no market premium exists, however, the costs of certification are not offset by certification-produced surplus value. SFI serves the need of industry to reassert authority over the production process by timberland owners and expand access to forest resources.

As is clear from the language of TIMO portfolio managers, however certification is operationalized as an input in the production process rather than as a rent paid to certifiers and from which surplus value is extracted from timberland owners. A small number of well-capitalized institutional investment funds dominate ownership of wood fiber. The consolidated nature of the industry allows for timberland owners to carefully control the competition over certification through the politicization of certification. By virtue of industry control of "the lion share of wood fiber" in the United States, TIMOs dictate the terms of certification. The forest products industry has thus far succeeded in passing off industrial restructuring as productive of forest conservation. The increased use of industry-based certification suggests that the contradiction between capital and conservation is being resolved in ways that demonstrate the usefulness of forest certification as a method to increase intensive forestry.

In Maine, forest certification has legitimized and, perhaps more importantly, harmonized the terms of access to forest resources necessary for intensive forestry. This industry-based certification rhetoric repositions forest products firms in environmental struggles broadly. In this way the Forest products industry positions commercial forestry firms as green agents (Goldman, 2006; McAfee, 1999). The position of industry is buttressed by state-sponsored efforts to push market-based regulatory mechanisms as a means to reduce regulatory costs, increase industry access to resources, and intensify industry production, while suggesting this arrangement improves environmental outcomes. This magic act relies on the neoliberal logic of green capitalism in natural resource-dependent industries that posits environmental protection as a function of ever expanding markets for forest resources and the environmental services that follow. Such an arrangement however requires new investment instruments & vehicles and regula-

[13] August 2007 interview with portfolio manager.
[14] July 2007 interview with portfolio manager.
[15] Marx (1951, pp. 192–193).
[16] See O'Connor (1998) for a critique of sustainable capitalism. See Hawken et al. (1999) for its celebration.
[17] For a more in-depth discussion of rents and commodity certification, see (Guthman, 2002, 2004; Kaplinsky, 2004; Mutersbaugh, 2005).

tory forms that strengthen industry control over resource access and production processes and, as a result, create less than ecologically sustainable futures. In this sense, forest certification in Maine has not served as a policy instrument for forest governance in reaction to the existing structure of the forest sector, but rather as a vehicle to leech more profit out of wood pulp through a reinforced control over the relations and conditions of production.

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