
2004

Conceptualizing Nature: The Politics behind Allocating and Utilizing Native Forest Resources in New Zealand

Gregory Stephen Gullette
University of Georgia

Follow this and additional works at: <https://scholarcommons.usf.edu/jea>

Recommended Citation

Gullette, Gregory Stephen. "Conceptualizing Nature: The Politics behind Allocating and Utilizing Native Forest Resources in New Zealand." *Journal of Ecological Anthropology* 8, no. 1 (2004): 5-23.

Available at: <https://scholarcommons.usf.edu/jea/vol8/iss1/1>

This Research Article is brought to you for free and open access by the Anthropology at Scholar Commons. It has been accepted for inclusion in *Journal of Ecological Anthropology* by an authorized editor of Scholar Commons. For more information, please contact scholarcommons@usf.edu.

ARTICLES

Conceptualizing Nature: The Politics Behind Allocating and Utilizing Native Forest Resources in New Zealand

GREGORY STEPHEN GULLETTE

Abstract

This paper explores the political ecological basis behind events in New Zealand's sustainable harvesting regime of native forest species on public land. The case study centers on the mandate of the 1999 newly elected Labour-led government to stop all native forest harvesting on Crown-owned land along the West Coast of New Zealand's South Island. Ethnographic research was conducted from May to July of 2001. This study examined how different members of a given institution or community often have disparate views on logging practices and natural resource conservation while simultaneously exhibiting consensus regarding certain logging and conservation practices. A historical background traces the trajectory of New Zealand's forestry sector and the relationships between conservationists and logging communities. This is followed by a discussion on the key institutions involved in the Labour-led government decision for the cessation of native forest harvesting and what their primary sentiments were regarding the government mandate. Ultimately, this study illustrates how the appropriate utilization of natural resources shift over time and that the struggles over the 'proper' use of resources are politically and historically constructed. These struggles, of course, are pertinent in any context where human-environment interactions occur, regardless of conventional notions on 'developed' and 'undeveloped.'

Introduction

The New Zealand government signed the Convention on Biological Diversity in 1992, obligating them to develop national policies to conserve and sustainably use the nation's biodiversity. However, the exact meaning of the Convention on Biological Diversity and more importantly what is considered an appropriate form of sustainable development has different meanings for different people within New Zealand (e.g., Steinberg 1992). This is particularly evident when examining native forest harvesting on the West Coast of New Zealand's South Island. Here the debate occurred primarily between four main groups: Timberlands West Coast Ltd. (a state-owned logging company); Coast Action Network (a West Coast movement designed to support access to native timbers and ensure continued logging contracts between Timberlands and West Coast loggers); and Native Forest Action and the Royal Forest and Bird

Society (both conservation movements that sought to end native forest harvesting). Other groups such as the Buller Conservation Group and Rural Action New Zealand as well as various sustainable development and forestry researchers were also active in the native forest debate; however, the majority of respondents interviewed during the research were members of or affiliated with the four groups first noted.

The central disagreement between the groups was whether Timberlands West Coast Ltd. (along with allied logging partners or contracted laborers along the West Coast) plans for sustainable harvesting of native timbers via helicopter removal should be implemented or continued on Crown-owned land, i.e., public lands. Timberland Proponents argued that sustainable native forest harvesting could be achieved through Timberlands West Coast Ltd. and by doing so New Zealand would escape a mindset of pristine/spoilt and dissolve the nature-culture dichotomy

that has plagued other nations (see Cronon 1995; Neumann 1995; Peet and Watts 1996; Williams 1980). Conservationists maintained that given what little lowland rainforest remains in New Zealand, implementing a harvesting scheme, which may do untold ecological damage, is too risky.

A primary goal of this research was to determine that, despite seemingly disparate orientations, respondents in each group would exhibit agreement on certain conservation and forestry themes (Bührs 1993; Hoffman and Ventresca 2002; Lewicki et al. 2003; Mercer 1995; O'Leary and Bingham 2003; Rainbow 1993). This would establish that inter-group connections and similarities exist, supplying a common ground for the groups to mediate future disagreements over environmental and natural resource usage. It will be shown that while agreement on certain themes existed, groups simultaneously held disparate views on others and the eventual political nature of the debate precluded any conciliation. Ultimately, the complex relationship between groups and individuals were derived from their historical interactions and the history between conservation and logging.

First, this paper will discuss how political ecology may be utilized to examine the various understandings of 'nature' that emerge between different groups. Political ecology's relevance to this case study in New Zealand is also presented. Next, the historical circumstances that propelled the debate over native forest harvesting on Crown land to become highly politicized will be covered. I will also address how the different groups cognized New Zealand's native forests, producing divergent and similar views on resource use, conservation, and New Zealand biodiversity.

A discussion and concluding section contextualize this particular history in New Zealand forestry within the wider literature on conservation and the politics of natural resource usage. Through this process essentialist, sustainable development, and conservationist literatures were relied upon. These texts enabled an exploration of the essentialist tendencies in the political ecology of natural resource utilization (i.e., how certain notions and ideas on natural resource utilization become viewed as natural, inherent,

and unquestionable within a given environmental resource situation). To move against these static views on natural resource usage and allocation, anti-essentialist literatures deconstruct rigidity and constancy by incorporating greater understandings of changing histories and local/global interactions. Unfortunately, much of the anti-essentialist literatures are grounded in the division between the north-south, developed-undeveloped, and are in danger of becoming essentialized themselves; I apply these frameworks to New Zealand. It is hoped that by juxtaposing this literature with the events in New Zealand's native forestry sector and the conservationist movement a more inclusive understanding on the roles various actors have in both the constitution and allocation of natural resources will emerge, which may ultimately inform more equitable and regionally-specific policy formation in New Zealand and elsewhere.

Political Ecology

Contemporary researchers are now at a position where nature has thoroughly been reevaluated as a concept that "lacks a fixed reference" (Soper 1996) and in many ways is constituted and determined by both cultural patterns and differential levels of power (Bryant 1998; Escobar 1996, 1998; Ellen 1996; Greenberg and Park 1994). Nature, as a term, strips such diverse phenomena into a flat concept devoid of its original dynamic—the historical processes that formed both its structure and our understanding of it (Cronon 1995). Much of the nature that anthropologists, biologists, policy makers, or ecologists are concerned with takes its form only through centuries of human involvement (Guyer and Richards 1996; Posey 1998) and is "in an important material sense a product of cultivation or 'cultural construct'" (Soper 1996:23-4). In essence, nature is socially constructed according to historical and cultural determinations and the nature-culture dichotomy often relied upon is an "inadequate or misleading tool" to account for the ways people talk about and interact with their physical environment (Descola 1996:82). Indeed, if full attention were given to the history of the environment/nature creation and its contemporary tailoring to modern needs and perceptions, the conceptual difficulty would be to sustain nature and culture as two separate and discernible

domains (Borgstrom 1997; Soper 1996; Williams 1980). The very conception of nature and our place in it are so enmeshed with our beliefs and ideas that to separate the two would prove impossible.

Some have argued that the reproduction of nature, place, and space depends on the interaction of localized spaces with those individuals possessing the knowledge to reproduce such a setting (Appadurai 1998:181). From this interpretation it is the community that constitutes locality and nature through complex, even quotidian performances and actions, and in turn gives the community form and function. The people, their politics, or their perceptions transform the natural area into a cultural landscape. This manifestation of the human/nature union will inevitably differ for everyone (for the anthropologist, the policy maker, or members of the community). Each will have their own cognition of the area and its resources and how they should be utilized or integrated into social, economic, or political systems.

I would argue, however, that within post-modernity there exists an ability to form conceptualizations on a particular area or resource based not necessarily on direct interaction but rather on learned aspects or knowledge and information distributed through print, media, and social networks. The very notion of community and which community defines and creates a particular nature becomes complicated. While nature may be created by local performances and actions, such localities are still embedded within wider political and economic arenas. If a group, a community, or political party is able to control how a resource is to be understood or should be understood, then they can control how it is to be used (e.g., Lease 1995).

To understand the processes of how a particular area or resource—here native forests—are contested by West Coast communities, people within a nation, and governmental parties, it is necessary to employ a political ecology framework. This enables exploration of the issues of culture and nature, indigenous forest perception, and politics surrounding natural resource conservation or extraction. It then becomes possible to view how differing conceptualizations on nature compete and when coupled with political parties and governmental power, determine how

native forest resources are to be used. It should be recognized, however, that not all individuals or groups hold the same levels of power or political influence to ensure that their view of nature or its most salient aspects are upheld in the face of alternate or challenging perceptions. Just as there is a massive amount of human history embedded within nature, there is also a distinctly human-related history to be examined. Here political ecology can focus on both micro and macro levels and the complex and historically shifting political alliances within, among, and between communities, organizations, and state bureaucracies—a primary importance to this study on tropical native forestry (e.g., Moore 1996, 1998; Peluso 1992).

The History of the Forestry Debates and the Beginnings of a “Politicized Environment”

The history between New Zealand’s conservation movements and the timber industry dates back to the early twentieth century. In fact, it was the ongoing unsustainable or clear-cutting harvesting regimes within native forests throughout the twentieth century that produced critical political debate and caused a decline in public support for the industry (e.g., Norton 2003; Roche 1990). Covered here, however, are the more salient historical issues of this debate and the circumstances that directly affected the rise of the politicized environment on the South Island’s West Coast.

In 1985 the fourth Labour government made sweeping changes to the forestry sector by dividing forests into commercial and non-commercial types. This placed state indigenous or native forests into non-commercial types and plantation forests composed primarily of radiata pine (*Pinus radiata*) into commercial production. Based on this move, the Department of Conservation, the Ministry of Forestry, and the New Zealand Forestry Corporation were created to control either commercial or non-commercial forests on April 1, 1987. These government branches were responsible for a host of operations: preserving natural and commercial forests, managing native and exotic flora and fauna, and managing commercial forests until their privatization.

The year prior to this, however, native forest production was still occurring on Crown lands located on the West Coast of the South Island, primarily with rimu (*Dacrydium cupressinum*) and beech (*Nothofagus*). This caused numerous conservation groups to challenge the harvesting of these forests and demand greater accountability. To placate both harvesters and conservationist organizations the West Coast Accord was created, which was essentially a multilevel negotiation between the Crown (i.e., the national government), the regional and district councils on the West Coast, the foresters and sawmilling industry, and the forest conservation groups. The accord officially gazetted approximately 130,000 hectares of the region's indigenous forests for sustainable wood production in perpetuity. Remaining lands were converted into national parks (i.e., Punakaiki) or later fell under the general protection of the Department of Conservation, which now holds approximately 1.8 million hectares on the West Coast (see Figure 1 for the region's estate breakdown). However, the transition to sustainable forestry was more complicated. In return for the protection of hundreds of thousands of hectares of native forests, conservationist groups ceded that certain sections of the West Coast would undergo unsustainable harvesting regimes. For example, the Buller region underwent an overcut¹ of native beech forests, that is, until the Labour government ordered its cessation at the end of 2000. One argument was that these forests had to be harvested unsustainably in order to provide a transition to sustainable harvesting regimes in other native forests, as well as to allow the government's West Coast radiata pine plantation forests to reach greater maturity levels for production. The West Coast Accord also assumed that plantation forestry of radiata would continue in perpetuity.

The Crown subsequently decided to sell many of its plantation forests in the late 1980s to private companies and had contemplated selling its West Coast forests. However, because of the unique situation the West Coast Accord presented special management was required. Accordingly, in 1990, a new state-owned enterprise named Timberlands West Coast Ltd. was created. As a state owned enterprise it operated under government control from the two

shareholding ministries of the Crown: Forestry and Finance. The deed of appointment required it to manage forests allocated under the West Coast Accord, to force the transition from unsustainable to sustainable harvesting, to manage the ecosystems of the West Coast, and to earn profits and pay dividends. During the 1990s, Timberlands West Coast Ltd. had conducted sustained yield helicopter harvesting within two of its beech forests in the Buller and Grey districts and lowland podocarp forests (mainly rimu) within the Saltwater and Okarito forests. Then in the late 1990s Timberlands West Coast Ltd. submitted a sustained yield plan—termed the Beech Scheme—for the forests of the Grey Valley, the Maruia Valley, and the Buller. This raised the level of focus on native forest harvesting and whether it could be done in a sustainable manner.

In February of 1997, Native Forest Action occupied the Charleston forests managed by Timberlands West Coast Ltd. and which fell into the overcut permitted by the West Coast Accord. Native Forest Action hoped to stop all native forest harvesting on Crown land. With the upcoming election the Royal Forest and Bird Society, Native Forest Action and several related conservation groups began political lobbying and direct-action tactics for the cessation of all native forest harvesting on Crown land. Eventually, the Labour party drafted the conservationist position onto their election platform and declared that if elected they would end all harvesting of indigenous forest species.

The Labour party was elected into office in November 1999 and formed a coalition with the Alliance party on December 6, 1999.² The newly elected government required that Timberlands West Coast Ltd. withdraw the Beech Scheme from their corporate statement of intent. A year later, the company was directed by the government to end remaining native forest harvesting and dissolve their sustainable development sector, canceling all contracts with logging companies on the West Coast without compensation. In May 2001, the Labour-Alliance coalition “decided to reallocate for conservation purposes all the indigenous forest production land currently managed by Timberlands” into the Department of Conservation estate (Department of Conservation

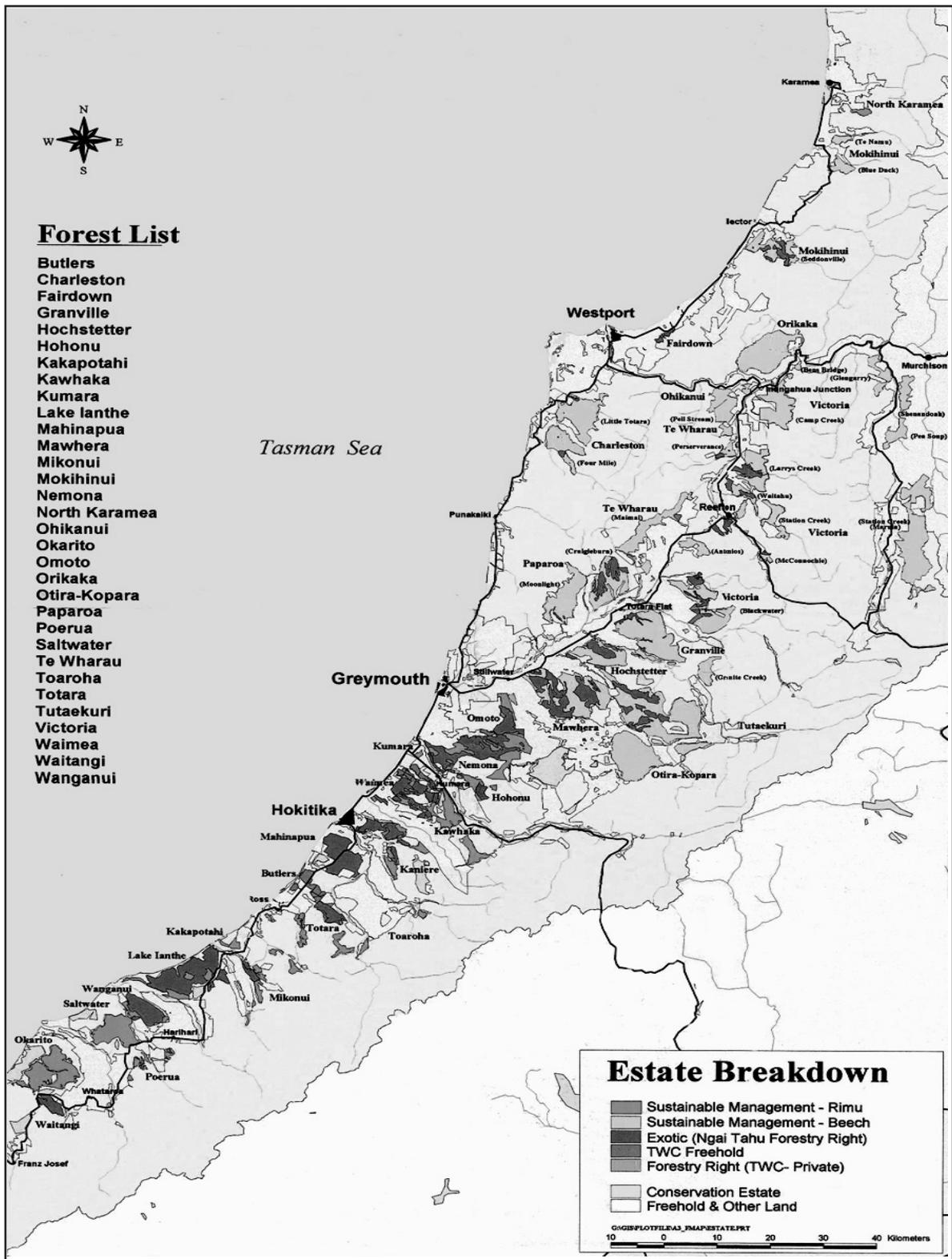


Figure 1. The estate breakdown of the West Coast of New Zealand’s South Island. Indicated are the conservation, sustainable forestry, and freehold estates prior to the Labour government decision to transfer Timberlands West Coast Ltd. managed properties to the Department of Conservation. (Source: Timberlands West Coast Ltd. 2001.)

2001), which operates under the legislation that excludes any commercial timber extraction or plant removal.³ In return for the loss of native forest timbers and the associated jobs for West Coast communities, a NZ \$120 million *Development and Compensation Package* was granted to the West Coast to ease the transition away from indigenous forest harvesting. In April 2002, all native forest harvesting on Crown land ceased when the last of the rimu forests were logged in South Westland.

Methods and Data Analysis

To understand how the various groups and individuals interacted and conceptualized the forests on the West Coast of New Zealand's South Island, five ethnographic methods were used. Data collection occurred from May to July of 2001. Respondents were located on both the North and South Islands and at various cities throughout the country. The methods used were participant observation, semi-structured and unstructured interviewing, chained referral sampling, and archival research.

Given that respondents were to be directly involved in the debate over native forest harvesting, chained-referral sampling was used (Bernard 1995; Johnson 1990). The total sample size was 39. This sampling method was used to build an exhaustive sampling frame and to find specific people who would know of others involved with the forestry/conservation debate. To ensure the collection of reliable data through cross-checking, the methods utilized included participant observation, interviewing, and archival research. Participant observation primarily centered on viewing the workings of conservation organizations, logging operations, and the processes for environmental and performance audits undertaken cooperatively by Timberlands West Coast Ltd. and the Ministry of Forestry within the Okarito forests.

Semi-structured and unstructured interviews were used to explore how respondents conceptualized native forests and the logging schemes proposed or implemented by Timberlands West Coast Ltd. All interviews were tape recorded and transcribed to ensure accurate reproduction of word choice and key terms. All field notes and interviews were coded

with *NVivo 1.0* (Richards 1999). Initial questions for interview sessions were generated from archival research undertaken in the United States on the issues in New Zealand native forest logging and were later augmented or refined based on themes and topics raised by respondents. Therefore, themes discussed in the following results section were those initiated by respondents during interviews.

Archival research also occurred during the data collection in New Zealand and complimented interviews by providing a deeper historical understanding of the debate. Literature was collected from Timberlands West Coast Ltd., Native Forest Action, and the Royal Forest and Bird Society that summarized their positions on native forest harvesting over the previous 4-5 years. This literature consisted of internal documents, press releases, political lobbying materials, long-term email correspondences, or sustained yield harvesting plans. Journal articles and newspaper clippings, which provided a means to determine the direction of public support and political direction, were also collected. Essentially, the historical data collection offered insight to understand how the history of the West Coast and the debate over native forest harvesting formed the basis for inter-group disagreement or consensus formation.

During the process of data analysis respondents were dichotomized into two groups: Timberlands Proponents ($n=21$) and Conservationists ($n=18$). Respondents were either members or employees of Native Forest Action, Royal Forest and Bird Society, Coast Action Network, or Timberlands West Coast Ltd. However, seven respondents belonged to different organizations (e.g., the Buller Conservation Group or the Ecologic Foundation). These respondents held positions that were in concert with attitudes exhibited by the four main groups. The method of dichotomization was based on respondent networks uncovered through the chained-referral sampling. That is, respondents would identify other interviewees; however, through the referral they either identified with them or placed them as an oppositional respondent in regards to their position on native forest harvesting.

Cognitions on the Environment, Natural Resource Utilization, and Politics: Results

1) *Inter-Group Differences*

Timberlands Proponents held relatively dichotomous positions on natural resource utilization when compared to respondents in the Conservationist category. Yet, there were agreements between the groups and simultaneously respondents within a group did not exhibit absolute consensus. To simplify the dynamic social and historical relations between the various actors involved in this forestry debate, the primary discord between Timberlands Proponents and Conservationists centered on: 1) the issues of sustainable development and the appropriate management regime for ensuring forest integrity and sustaining biodiversity levels; and 2) whether native forest conservation in New Zealand would shift tropical wood extraction to another country, domestically producing greater foreign wood imports.

All respondents viewed their position on either conservation or native forest harvesting as a form of sustainable development. However, contrasting how they conceptualized sustainable development revealed inter-group polarities. Timberlands Proponents maintained that the dominant view of timber harvesting in New Zealand is unsustainable and was aggravated by Conservationists who used pictures from 1970s clear-felled regions to generate support for their campaign. Timberlands Proponents felt that in general Conservationists viewed humans as “inevitably greedy and destructive,” where the only way to protect forests is to keep humans as far away as possible. A respondent in the Parliamentary Commissioner for the Environment stated:

We have not got to a wise-use or Aldo Leopold approach. I don't think we have grown as a country. You cannot be sustainable on some parts of the land and unsustainable on others. You cannot artificially split the landscape into discrete packets and say, 'Okay, that is the conservation part for indigenous species and that is the part for exotic species and you can do whatever you like with that.' (Timberlands Proponent)

For Timberlands Proponents, native forest harvesting would enable New Zealanders to become

integrated into the land and ecosystem and achieve sustainable development. Nature would no longer be divided into reserves and commercial properties, allied to maintain a dichotomy, and any extractive use of a forest would not inevitably result in forest decline (see Table 1 for the different forestry management paradigms historically implemented in New Zealand). In fact, by incorporating an adaptive management technique (Norton and James 2001), Timberlands West Coast Ltd. stated that they could raise biodiversity levels through tree plantings, reduce pests, and increase light penetration allowing faster regeneration of the canopy and accelerating the growth time on rimu and beech forests.

Conservationists held a contrasting conceptualization of sustainable development to that held by Timberlands Proponents. For one, Conservationists stated that foresters and Timberlands West Coast Ltd. were only concerned with monetary gains and had co-opted the term ‘sustainable’ in order to give the veneer that their Beech Scheme was ecologically amenable. The issue of Timberlands West Coast Ltd. using the term sustainable was aggravated by the fact that they simultaneously practiced what were labeled as sustainable and unsustainable harvesting regimes with native forests.⁴ That is, some of the focus for Native Forest Action fell on the Charleston forests in the Buller region, which fell under the overcut sanctioned by the West Coast Accord and was to enable the transition to sustained yield harvesting. However, Timberlands West Coast Ltd. also conducted sustained yield operations in South Westland. This affected in part why Conservationists viewed the company skeptically, and this dual role was discussed throughout the interviews. For Conservationists, Timberlands West Coast Ltd. had adopted a complicated role—claiming sustainable development was occurring in the Saltwater and Okarito forests or would occur as outlined in their Beech Scheme, yet concurrently practicing unsustainable harvesting in the Buller region.

Additionally, for many Conservationists sustainable development came down to a scalar issue. A Native Forest Action respondent stated:

The larger scheme is sustainable development of the whole nation. Sustainable development does not

Table 1. Different forestry practices historically implemented in New Zealand; including the objectives of each primary management paradigm, their socio-environmental scope, and aspects of sustainability. (Source: Cited in part from Chris Perley and Associates, 2001. Forest and Natural Resource Consultants: Dunedin, NZ)

PARADIGM	DESCRIPTION	OBJECTIVE	SOCIO- ENVIRONMENTAL SCOPE	SUSTAINABILITY CRITERIA
Ecological Preservation (e.g., NZ Dept. of Conservation) Wholly Ecocentric	Single objective of protecting ecosystem health/integrity. Management for 1) 'intrinsic' forest values—ecological diversity and function—and 2) non-wood utilitarian values—soil and water, aesthetics, recreation, etc. No forest wood product use. Requires external financing to maintain ecological health (esp. pest control).	Single Objective: Protecting ecosystem health and integrity	Intrinsic ecological values and non-extractive utilitarian values	Sustaining ecosystem functions, biodiversity and complexity across space and time
Ecosystem Management (Sustainable management) (e.g., Timberlands West Coast Ltd.) Primarily ecocentric; very long-term and broad perspective	Primary objective of protecting ecosystem health/integrity. Management for 1) 'intrinsic' forest values—ecological diversity and function and 2) wider range of utilitarian values, including timber. Timber management is within ecological disturbance patterns to protect intrinsic values. Timber harvest set below sustainable yield levels. Large proportion of funds reinvested into the forest system, including its ecological health.	Primary Objective: protecting ecosystem health. Commercial use allowed within that constraint	Broadest perspective: 'Intrinsic', utilitarian, community considerations	Sustaining ecosystem functions, biodiversity and complexity across space and time
Sustainable yield & Multiple Use (e.g., Some NZ industry and farm forestry) Primarily anthropocentric, but encompassing issues of ecology and intergenerational periods	Mixed environmental, social and economic objectives. Management usually for utilitarian values—timber as well as soil and water, aesthetics, recreation. Timber harvested at or below sustainable yield levels to cater for other utilitarian values. Intrinsic environmental benefits are usually incidental. "Health" is measured in utilitarian terms; e.g., aesthetics, wood productivity or individual tree health.	Mixed Objectives: commercial and non-commercial utilitarian Dominant use is timber	Considers only utilitarian values to owner and wider community	Sustaining crop production (wood fiber, and other utilitarian "crops") to owner and community
Sustainable Yield "Cropping" (e.g., much NZ industrial forestry) Anthropocentric; longer-term perspective than below	Single objective on (usually) sustainable timber yield. Social and environmental constraints, other than sustainable yield, are imposed by regulation/legislation. Timber harvested at assumed sustainable yield levels. Any intrinsic benefits to environment are incidental to management objective. "Health" is related to forests' and trees' wood production.	Single objective: sustaining timber yield	Considers only utilitarian values to owners	Sustaining crop production (wood fiber)
Mining/Liquidation Anthropocentric; very short term perspective	Single objective of either maximizing profit or land use change. Timber harvest rates above sustainable yield levels. Funds not invested back into the forest system—invested in next mining operation. Ecological health not an issue.	Single objective: maximize profit	Narrowest considerations: utilitarian monetary values of owners	Sustaining capital and profit

necessarily require us to harvest every resource on the planet. [It only] asks us to think about resources for future generations. There is no compulsion that we must harvest wildly. (Conservationist)

In this case, the central discord between the groups was whether sustainable development was solely for the West Coast or for New Zealand as a whole.⁵ This was of course even if Timberlands West Coast Ltd.'s plans for beech and rimu harvesting could be conducted as a sustained yield.

Conservationists maintained that harvesting native forests would negatively impact the forests' ecological stability compared to not logging them at all and would therefore fail to achieve sustainable development for the nation (e.g., Weaver 1999). In 1999, the Royal Forest and Bird Society stated that they did not believe sustainable development with native species was even possible, not least of which is due to the extremely long growth rate of rimu trees—at approximately 400-500 years for full maturity. A report entitled *Evaluation of Model Evidence for Sustainability in Timberlands West Coast Beech Plans* stated that “modeling indicates that the proposed scheme is unlikely to be sustainable” (Landcare Research 1998:2; see also Efford 1999). The Landcare Research modeling concluded, based on rates of extraction and refill, that over the course of the Timberlands West Coast Ltd. management regime the forest would steadily progress towards a savannah-type environment. Modeling indicated that no set of mortality rate or sapling recruitment could maintain the current forest structure.

However, a respondent within a school of forestry stated that the Landcare Model did not accurately represent what Timberlands West Coast Ltd. proposed to do. In particular, the model assumed that naturally felled trees were randomly chosen rather than carefully selected to subsume natural mortality. The Beech Scheme set forth by the company established a range of mitigation techniques to ensure that any adverse effects through logging could be avoided, remedied, or controlled. Some of the more salient mitigation techniques were harvesting trees in proportion to their natural presence and across a range of diameter classes, harvesting wind-thrown trees as a priority over standing trees, and utilizing

an adaptive management technique. According to the Green Audit (Ministry of Agriculture and Forestry 1998) the management of Timberlands West Coast Ltd. from 1993 to 1998 met and exceeded the guidelines in the Resource Management Act and the Forest Act. Timberlands Proponents felt that their ability to manage the forests had been established and the Landcare Research report was biased (Landcare received funding from the Royal Forest and Bird Society to create and run the models). Timberlands Proponents argued that the report ultimately put years of work towards an ecologically and economically sustainable project at political risk.

Groups also exhibited virtually polar positions on whether the Labour government decision to transfer forest production lands to the Department of Conservation would shift tropical wood extraction to another country. Timberlands Proponents argued that by reducing tropical wood harvesting within New Zealand the importation of tropical woods from outside countries, such as Fiji, would rise. According to the Ministry of Agriculture and Forestry (2001; Figure 2), the steady decline in natural timber availability was correlated with a simultaneous increase in wooden furniture imports. However, Conservationists maintained that plantation timbers are readily available and there is no need to harvest indigenous forests. Though more importantly, Conservationists felt that what is needed is a shift in consumer patterns where the consumer decides not to buy woods that come from forests ecologically damaged during harvesting. Conservationists stated that the Forest Stewardship and Certification Program is allowing that to happen by enabling timber companies to acquire certification stating their timbers are produced in an environmentally and socially responsible manner. Timberlands West Coast Ltd.—while they exceeded the requirements of the Resource Management Act and of the Forests Act—did not seek certification under the Forest Stewardship Council. According to the first five year independent audit, their first objective was to achieve certification in ISO14001 Environmental Management and later seek Forest Stewardship Council certification. However, Conservationists cited the lack of Forest Stewardship Council certification as a reason to distrust Timberlands West Coast Ltd.,

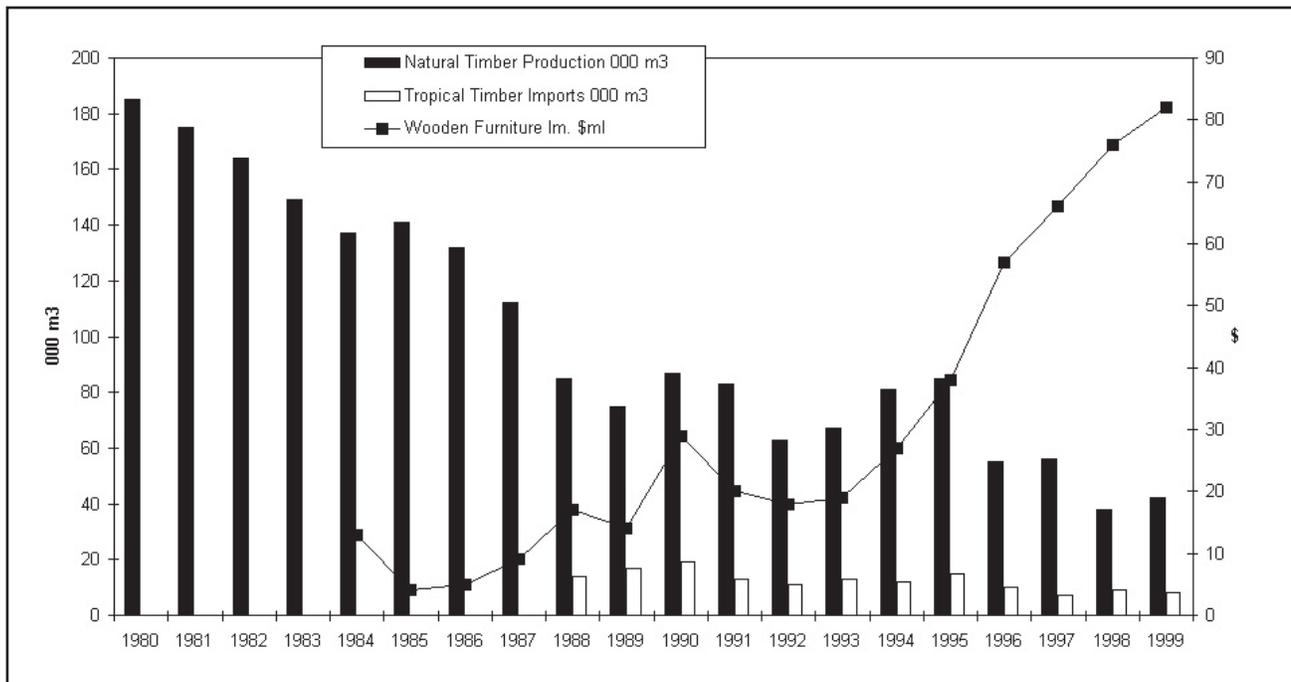


Figure 2. Importation of tropical timber and wooden furniture versus domestic production of native forest timber in new zealand from 1980 to 1999. (Source: Ministry of Agriculture and Forestry 2001)

since it was feared that the internal workings of the company could be hidden through independent audits and a lack of strong international pressures from agencies outside New Zealand demanding transparent accountability.

II) Inter-Group Consensus and Intra-Group Dissension

There was some agreement between Timberlands Proponents and Conservationists, and/or intra-group disagreement when respondents discussed the following: 1) current funding levels allocated to the Department of Conservation and their ability to successfully manage the conservation estate; 2) the implementation of plantation forestry with native species; and 3) the levels of political power West Coast communities have in government and their associated ability to control local resources.

Since biodiversity protection and forest integrity were key themes for both groups, it is unsurprising that there would be some agreement on these issues.

Virtually all Timberlands Proponents felt the level of funding allocated to the Department of Conservation was insufficient to manage the growing conservation estate and to control pests, most notably stoats (*Mustela erminea*) and possums (*Trichosurus vulpecula*). Conservationists were evenly split on the issue. Whereas Timberlands Proponents maintained logging generates capital for pest control and the construction of logging roads allow for on-the-ground pest management activities, Conservationists argued that while Department of Conservation funding was low, logging roads allow for greater pest infestation and that capital for pest management and estate maintenance could be generated from activities other than logging (e.g., ecotourism).

Still, New Zealand has experienced a decline in its native forests due to possum infestation, with massive consumption of flora ending in tree death. Other pests such as stoats and rats are also depleting bird populations such as the kiwi (*Apteryx*) that find habitat in old, rotting trees within indigenous forests.

Timberlands Proponents disagreed with the assertion that logging roads allow for greater infestation. According to several respondents, if this were the case South Westland forests that have no logging roads—such as those around Milford Sound—would not be in ecological danger and losing its associated bird life. On-the-ground eradication measures were suggested as a means to eclipse the 1080 poison drops administered by the Department of Conservation. Both groups insisted that 1080 poison is not the answer to New Zealand's pest infestation since it has not been determined if the poison has adverse effects on bird populations within the forests. Both groups stated that there have been reports of other animals eating dead possums or stoats contaminated with 1080 and then dying themselves. According to Timberlands Proponents, pest control in Okarito using ground based stations or bait stations and access via logging roads was estimated to cost between NZ \$1-2 /ha a year compared with NZ \$12+ for inaccessible Department of Conservation land. Further studies on the success of ground-based pest eradication measures should be implemented.

Both groups also saw possibilities in plantation forestry with native species and recognized that this had not been explored as a viable option. Respondents believed that native forest plantations were feasible if the appropriate time frame needed to grow rimu and beech were given. Such plantations would be more ecologically sound than the monocrop system of radiata pine that dominates the plantation forestry sector. Undoubtedly they are correct; however, given the short-term view of capitalism and its acceleration in the global market, it is unlikely that plantation forestry will be initiated by private industries with a tree species that requires approximately 500 years to reach full maturity. Yet the government, along with cooperation from conservation groups and Timberlands West Coast Ltd., could initiate a host of government sponsored plantation forestry sectors relying on a polyforestry approach using newly planted podocarp and beech trees.⁶ In turn, this would test Timberlands' hypothesis that given tree felling, canopy gaps, and increased light penetration, the growth rate on rimu would likely double, and thus shorten the acquisition of profits

to less than a couple hundred years. Likewise, this might prove most beneficial for biodiversity levels by increasing habitat for native bird species by serving as connectors for fragmented forests, and allowing easier pest control via roads. The benefits are potentially numerous and should be seriously examined.

Finally, regarding the distribution of political power in New Zealand, when asked whether West Coast communities have governmental power to determine what changes occur on the West Coast, there was a high level of consensus among the respondents. Most viewed the West Coast as economically, politically, and socially removed from the rest of New Zealand—from the North Island in particular, which is governed by the cities of Wellington and Auckland. According to one Native Forest Action respondent, "the West Coast is the Third World of New Zealand. Politically it has been exploited. Economically it has been exploited." Yet, the most frequent response was that due to New Zealand's MMP government or proportional representation, the low population level on the West Coast (approximately 40,000) does not afford them the governmental influence Auckland or Wellington might have, drastically reducing their control over West Coast natural resources. Therefore, West Coast communities and pro-logging groups could not compete with conservation parties or the Wellington and Auckland populations that predominately viewed native forest logging negatively.

Discussion

To fully understand the events in New Zealand, it is necessary to contextualize this history within the wider literature dealing with conservation, timber industries, and the politics of natural resources. Doing so, it is possible to see the intricateness and the importance of how nature is cognized, by whom, and for what.

It is argued in *The Myth of Wild Africa* (Adams and McShane 1992) that Europeans invented a mythical Africa untouched by human activities, which served in the Western imagination as a means to escape the drudgery of the industrial (and now the technological) age. Once Africa's "wilderness" began to shrink, or more importantly, seemingly began to shrink in some areas,⁷ interventionist activities were

implemented to save the Eden. The residue from such intervention is that these conservationist methods frequently date from early colonial periods, where colonial methods of boundaries and exclusion have been shown as incapable to stand alone, outside the local context and aside from local peoples (Guyer and Richards 1996; Neumann 1995, 1997). Ultimately, it is argued for the inclusion of locals into the planning process whereby conservation and development become two parts of a single process (e.g., Brandon and Wells 1992). Adams and McShane (1992) maintained that the establishment of national parks in Africa and throughout much of the world was born from a colonial mindset on an idealized version of nature; now the best way to conserve wildlife is to grant greater control and power to the local communities.

Oates (1997) countered this position. Oates argued that in reality approaches such as Integrative Development Conservation Projects and Community-Based Conservation are as much a myth as a "preservationist" mindset. The ideal that giving local communities greater control over local resources will result in a merger between conservation and development is the *myth*. If nature is to be protected it must be protected for its intrinsic values and for the aesthetic pleasures it may bring.

Yet, Guha (1989, 1996) argued that the implementation of deep ecology, or a preservationist wilderness agenda, is causing serious deprivation in the Third World and other forms of environmentalism manifest themselves differently with a greater emphasis on equity and integrating ecological concerns with work and human activities. Likewise, Colchester (2000) stated that to overcome these shortcomings of classic or conventional conservation, more radical approaches of conservation based on bottom-up processes of decision-making should be given serious attention. Indigenous peoples (a categorization usually applied to subaltern or Third World peoples) should be worked with as people with legitimate rights to the ownership and control of their natural resources. It is possible that such issues are equally applicable in any context where human-environment interactions take place, regardless of typologies and conventional notions of developed and undeveloped.

Of course, the reapplication of frames and theoretical concepts into new areas necessitates a new understanding and contextualization of vastly different historical processes that affected resource access and the political and economic constellations. Yet, without reinterpreting previous theories, how states and communities interact, and the political motivation behind resource allocation/usage, a danger exists of essentializing these topics and relegating them only to the domain of a North-South divide. Such a static approach misses the picture of development, resource use, and conservation on a global scale. Increasingly the colonial and pre-modern divisions of the world, the nation-states, and its people are dissolving to postmodern forms of human movement, capital flows, and transnational identities. In the process previous divisions and typologies are complicated. Essentially people are interconnected in global contexts by forces far more complex than dualities can grasp (Kearney 1995).

Applying this framework of conservation and resource use to New Zealand it is possible to view how differential levels of political influence affected resource use and access. That is, while community segments on the West Coast sought to continue logging activities, the locus of New Zealand's population residing in Auckland or Wellington predominately viewed native forestry negatively. The centralization of conservationists in the country's two main cities affected the Labour party drafting a conservationist position onto their election campaign. In this respect the native forests on the West Coast were formed by both local West Coast communities (not all of whom of course were Timberlands Proponents) and individuals and groups spread throughout New Zealand who formed their understanding of the forests based not necessarily on direct interaction but on information distributed through print, media, and social networks. A variety of communities—split along several lines of contention regarding sustainability, resource use, and biodiversity protection—were engaged in creating the forests as they saw fit and competing for which interpretation of nature and human placement therein would be acted upon. Yet, in this process they were all concerned with protecting the biodiversity levels within and dependent

upon native forests. However, the question remains of whether it is possible to harmonize social needs and economies with the environment. Is this possible within existing social institutions, economies, and political frameworks?

Both groups claim that it is. Timberlands Proponents posit that unlike modern constructions, with a separation between the realms of biophysical and human, there should be a new land ethic comprised of a continuity between the natural and human spheres. They state that only through the recognition that humans are part of the environment and will practice extractive activities, though not necessarily detrimental ones, will sustainable development be possible and the nature/culture dichotomy be dissolved.⁸ Protection of natural resources cannot consist entirely of conventional measures of natural park expansion. Native Forest Action and Royal Forest and Bird Society, on the other hand, cite that logging activities are not the only means to become integrated into the land and achieve sustainable development. As pointed out, it is not necessary to sustainably use every resource.

What complicates these positions, however, is that global political-economic linkages ensure that one country's national policies on sustainable development are not solely contained within that country. The Labour government's decision to stop all native forest harvesting and failure to explore other viable options may have wider implications. There is a possibility of shifting tropical wood extraction out of New Zealand into another country. While the Forest Stewardship and Certification Program is a beginning to determine if imported timbers are harvested sustainably, this program may be abused and become ineffectual.⁹ What is needed more than anything in New Zealand is further exploration into generating national plans for sustainable development with native timbers and not relying on the steady growth in radiata pine plantations (Figure 3), which are frequently more ecologically damaging and economically precarious.¹⁰ This is entirely possible. While Timberland Proponents and Conservationists disagreed on several issues, there was overlap between the groups. Forming multilateral agreements between forestry and conservation

groups, as well as having all groups interactively participate in open-audits to ensure that the forestry is in fact conducted sustainably, could be a possible recourse in New Zealand. Additionally, initiating a host of government sponsored plantation forestry sectors relying on a polyforestry approach using newly planted or transferred rimu and beech trees is a viable option with numerous ecological and biodiversity benefits. In the end, tropical forest management and biodiversity protection would be the product of negotiations and joint actions between the state, NGOs, and logging communities and would not be left under the jurisdiction of one entity. This in many ways would generate the types of accountability and transparency demanded by some groups and needed with a long-term natural resource management program.

Conclusion

What has become complicated in this debate over native forest harvesting, besides the interaction of varying conceptualizations on nature, is both the means to fulfill societal needs for timber and to protect a unique collection of New Zealand floral and faunal biodiversity. All individuals, regardless of group affiliation, maintained that their position on native forest harvesting was the appropriate course to move beyond destructive clear-cutting or overcut activities and simultaneously ensure continued biodiversity levels. The means were simply different as were the causes of the problems at the outset.

Perhaps what is needed in New Zealand is a shift in natural resource conceptualization for all groups involved in the debate, with a concurrent reexamination of essentialized images on conservation and logging activities. Conservation programs that cease any extractive activity should not be viewed as only being beneficial to the environment and logging activities should not be viewed as only being detrimental to an ecosystem's health and integrity. There are numerous ways to interpret nature and what is an appropriate utilization of natural resources. Having the view of nature couched in terms of natural park expansion and monocrop plantation forestry serve as the archetype for an entire country, marginalizes those individuals or groups that hold alternate conceptualizations. The

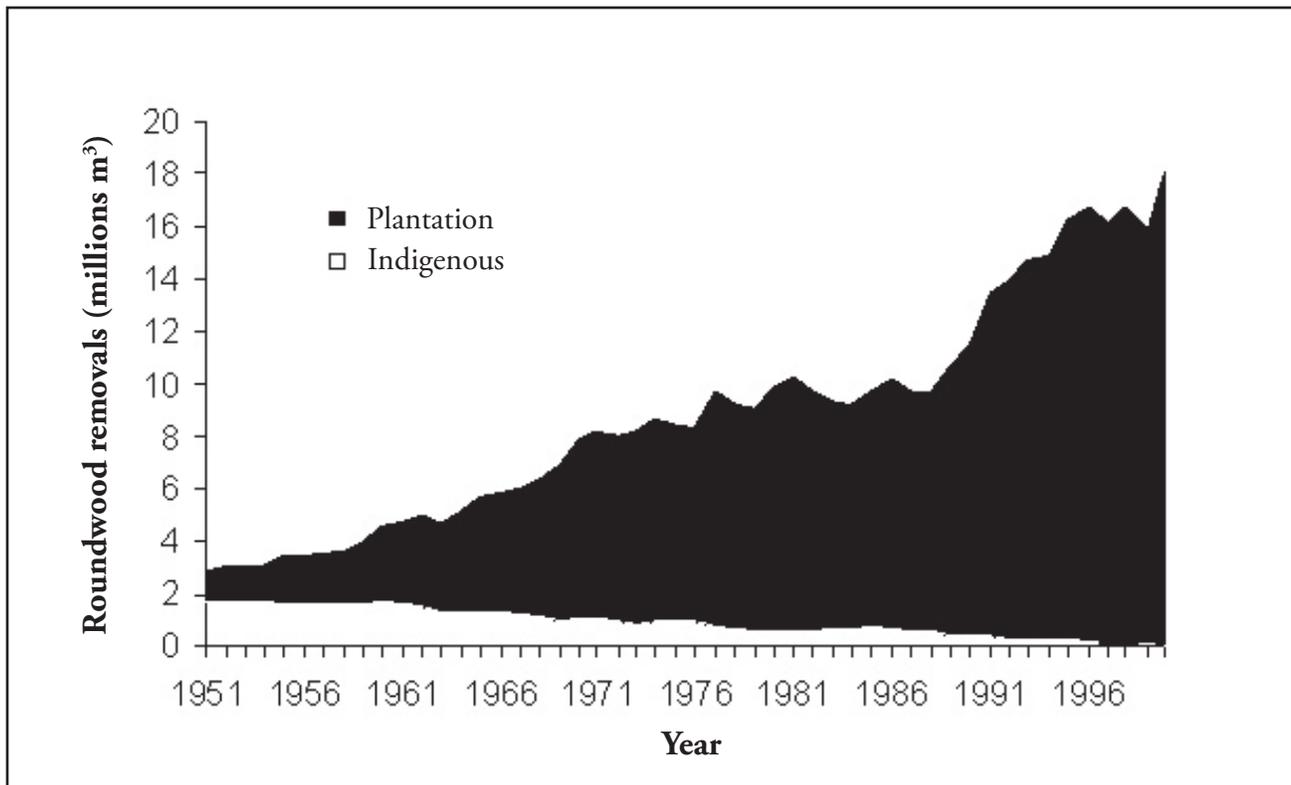


Figure 3. Historical rate of roundwood removals (in millions m³) from New Zealand indigenous and plantation forests. (Source: New Zealand Ministry of Agriculture and Forestry 2002)

result is to further fractionate groups, increase social tensions, and limit the possibilities in generating new types of forestry management.

Just as there is a danger in interpreting the values of nature only through international markets or as a commodity, it is just as dangerous to think that its antithesis is the remedy (Carlassare 1994; Gupta and Ferguson 1992; Parajuli 1998; Peluso 1995; Rodman 1993). Nature is more complicated and the role of humans as a constituting part of nature adds to such problematics, which cannot be solved with dualities. Based on this—the intricate and changing relationships between the biophysical and human spheres—each human-environment interaction should be contextualized and examined appropriately. In the case of New Zealand's native forests and human interactions, essentialized images of nature, the ecological integrity of the forest, and humans' placement therein need reevaluation (Ellis 1996).

Should New Zealand native forests be protected from extractive industries that may actually benefit

wildlife and biodiversity while supplying timbers to a growing population, thus adding further dimensions to conventional notions of conservation and the timber industry? Or should monocrop radiata pine plantations only be utilized for timber needs as opposed to possible government sponsored polyforestry approaches utilizing rimu and beech species that would contribute to biodiversity levels and connect fragmented forests? It has become abundantly clear that environmental problems are deeply complex. It is difficult to unravel environmental problems scientifically, but accompanying social and political aspects further complicate their structure. The idea that there is a single root cause, and thus a single solution, to the problem of endangering native forests and biodiversity levels through logging is missing larger and more intricate connections between social, political, economic, and ecological structures. Because environmental problems are each the result of a multiplicity of causal factors there can be no one comprehensible solution to them all (Ellis 1996).

In New Zealand it is necessary to move beyond these essentializations and create a more open and fruitful dialogue between conservationists and the logging community. By viewing a nature that is no longer partitioned as protected or unprotected, pristine or spoilt, it is hoped that a more inclusive understanding can emerge on how humans and the environment interact—an understanding which moves beyond long-held notions of human placement within nature.

Acknowledgements

I would like to thank those in New Zealand who participated in this study and allowed me the opportunity and pleasure to learn from you. Without your candor and openness this study would not have been possible. All errors or omissions remain the sole responsibility of the author. This study was made possible with financial support from the National Science Foundation's Ethnographic Research Training Grant.

Gregory Stephen Gullette, University of Georgia,
Department of Anthropology, Baldwin Hall,
Athens, Georgia 30602

Notes

- ¹ An 'overcut' is best defined as harvesting all of the trees that are economically lucrative, but does not quite involve clear-felling a forest.
- ² Then the Labour and Alliance parties held between them 59 of the 120 seats in Parliament, but also had the support of the Green Party (with seven seats) on issues of confidence and supply, or loosely defined as an agreement between parties for support on legislative issues.
- ³ The Department of Conservation does have a stipulation that plants may be removed from Department of Conservation estate if they are to be used in traditional Maori practices.
- ⁴ At the time of the Labour government's decision to withdraw the beech scheme from Timberlands West Coast Ltd. statement of intent, Timberlands West Coast Ltd. was undergoing a resource consent process established in the New Zealand 1991 Resource Management Act (RMA). According to the RMA (Section 5-2), sustainable management is: "managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social,

economic, and cultural wellbeing and for their health and safety while sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; safeguarding the life supporting capacity of air, water, soil, and ecosystems; and avoiding, remedying, or mitigating any adverse effects of activities on the environment."

- ⁵ While Timberlands West Coast Ltd. had set out to conduct a resource consent process under the 1991 Resource Management Act (RMA) regarding the sustainability of its Beech Scheme, Conservationists argued that within the Resource Management Act (specifically Section 6) there were stipulations that enabled and called for their direct action regarding resources on the west coast. Section 6 of the Resource Management Act states: "In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for ... matters of national importance."
- ⁶ The active involvement of the New Zealand government in the promotion of or involvement with forestry is not without precedent. Forestry was vigorously promoted by the New Zealand Forest Service and considerable time was devoted to highlighting the benefits of forestry as a land development option. The government later initiated a host of programs to create industry growth (e.g., the Forestry Encouragement Loans, 1962; Forestry Encouragement Grants, 1969; Forestry Encouragement Grants, 1982).
- ⁷ See for example the work by Fairhead and Leach (1995) where the authors generated a counter narrative for Kisidougou and the Ziama Forest reserve, which relied on historical analysis of actual forest growth and illustrated that the environmental crisis of modernity was in fact a construction of myth and political forces.
- ⁸ For example, this approach of combining resource use, conservation, and biodiversity protection, which ultimately find their bases in the capitalist market, would challenge the assertion by Escobar (1999) of a capitalist regime of nature where nature is objectified through the spread of capitalism and its associated activities and where the individual holds an alienated view of nature. For Timberlands Proponents there would be a melding of these different 'regimes of nature,' most notably between the organic and capitalist.
- ⁹ This possibility is analogous to the abuse of national parks in Central America, whereby numerous parks are in reality "paper parks" that lack any prescriptive measures to ensure environmental protection, sustainable development, and local participation in the planning/implementing processes.
- ¹⁰ See for example, the implementation of scientific forestry in Prussia and Saxony in the late eighteenth century that created strict rows of monocultures designed for forestry management and calculable volumes of wood, despite the ecological instability or damaging effect as opposed to alternate forms of polycultures or agroforestry (Scott 1998).

References

- ADAMS, J.S., AND T.O. McSHANE.
1992 *The myth of wild Africa: Conservation without illusion*. Berkeley: University of California Press.
- APPADURAI, A.
1998 *Modernity at large: Cultural dimensions of globalization*. Minneapolis: University of Minnesota Press.
- BERNARD, H.R.
1995 *Research methods in anthropology*. Walnut Creek, CA: Altamira Press.
- BORGSTROM, B.E.
1997 "The way the world is going: The society-nature dichotomy in development rhetorics," in *Nature and society in historical context*. Edited by M. Teich, R. Porter, and B. Gustafsson, pp. 332-346. Cambridge: Cambridge University Press.
- BRANDON, K., AND M. WELLS.
1992 Planning for people and parks: Design dilemmas. *World Development* 20:557-570.
- BRYANT, R.L.
1998 Power, knowledge and political ecology in the third world: A review. *Progress in Physical Geography* 22(1):79-94.
- BÜHRS, T.
1993 *Environmental policy in New Zealand: The politics of clean and green*. New York: Oxford University Press.
- CARLASSARE, E.
1994 Destabilizing the criticism of essentialism in ecofeminist discourse. *Capitalism, Nature, Socialism* 5(3):50-66.
- CHRIS PERLEY AND ASSOCIATES.
2001 Unpublished manuscript. Dunedin, NZ: Chris Perley and Associates, Forest and Natural Resource Consultants.
- COLCHESTER, M.
2000 "Salvaging nature: Indigenous peoples and protected areas, in *Social change and conservation: Environmental politics and impacts of national parks and protected Areas*. Edited by K.B. Ghirmire and M.P. Pimbert, pp. 97-131. United Kingdom: Earthscan Publication Limited.
- CRONON, W.
1995 "Introduction: In search of nature," in *Uncommon ground: Toward reinventing nature*. Edited by W. Cronon, pp. 23-56. New York: W.W. Norton & Co.
- DEPARTMENT OF CONSERVATION.
2001 *New Zealand Department of Conservation Newsletter* (May).
- DESCOLA, P.
1996 "Constructing natures: Symbolic ecology and social practice." In *Nature and society: Anthropological perspectives*. Edited by P. Descola and G. Palsson, pp. 82-102. London: Routledge.
- EFFORD, M.
1999 Analysis of a model currently used for assessing sustainable yield in indigenous forests. *Journal of the Royal Society of New Zealand* 29(2): 175-184.
- ELLEN, R.F.
1996 "The cognitive geometry of nature: A contextual approach," in *Nature and society: Anthropological perspectives*. Edited by P. Descola and G. Palsson, pp. 103-23. London: Routledge.
- ELLIS, J.C.
1996 "On the search for a root cause: Essentialist tendencies in environmental discourse," in *Uncommon ground: Toward reinventing nature*. Edited by W. Cronon, pp. 256-268. New York: W.W. Norton & Co.

- ESCOBAR, A.
1996 "Constructing nature: Elements for a poststructural political ecology," in *Liberation ecologies: Environment, development, social movements*. Edited by R. Peet and M. Watts, pp. 46-68. London: Routledge.
- ESCOBAR, A.
1998 Whose knowledge, whose nature? Biodiversity, conservation, and the political ecology of social movements. *Journal of Political Ecology* 5:53-81.
1999 After nature: Steps to an antiessentialist political ecology. *Current Anthropology* 40(1):1-30.
- FAIRHEAD, J., AND M. LEACH.
1995 False forest history, complicit social analysis: Rethinking some West African environmental narratives. *World Development* 23(6):1023-1103.
- GREENBERG, J.B., AND T.K. PARK.
1994 Political ecology. *Journal of Political Ecology* 1:1-12.
- GUHA, R.
1989 Radical American environmentalism and wilderness preservation: A third world critique. *Environmental Ethics* 11(1):71-84.
1996 "The environmentalism of the poor," in *Between resistance and revolution: Cultural politics and social protest*. Edited by R. Fox and O. Starn, pp. 17-39. New Brunswick: Rutgers University Press.
- GUPTA, A., AND J. FERGUSON.
1992 Beyond culture: Space, identity, and the politics of difference. *Cultural Anthropology* 7(1):6-23.
- GUYER, J., AND P. RICHARDS.
1996 The invention of biodiversity: Social perspectives on the management of biological variety in Africa. *Africa* 66(1):1-13.
- HOFFMAN, A., AND M. VENTRESCA.
2002 *Organizations, policy and the natural environment: Institutional and strategic perspectives*. Stanford: Stanford University Press.
- JOHNSON, J.
1990 *Selecting ethnographic informants*. Newbury Park: Sage Publications.
- KEARNEY, M.
1995 The local and the global: The anthropology of globalization and transnationalism. *Annual Review of Anthropology* 24:547-65.
- LANDCARE RESEARCH.
1998 Evaluation of model evidence for sustainability in Timberlands West Coast Beech Plans. Landcare Research Contract Report LC 9899/032. Dunedin, NZ: Landcare Research.
- LEASE, G.
1995 "Introduction: Nature under fire," in *Reinventing nature?: Responses to post-modern deconstruction*. Edited by M. Soulé and G. Lease, pp. 3-15. Washington, DC: Island Press.
- LEWICKI, R., B. GRAY, AND M. ELLIOTT.
2003 *Making sense of intractable environmental conflicts: Frames and cases*. Washington, DC: Island Press.
- MERCER, D.
1995 *A question of balance: Natural resources conflict issues*. Sydney: Federation Press.
- MINISTRY OF AGRICULTURE AND FORESTRY.
1998 Green audit. Wellington, NZ: New Zealand Ministry of Agriculture and Forestry.
2001 Tropical timber imports, Furniture imports vs. natural timber production. Wellington, NZ: New Zealand Ministry of Agriculture and Forestry Statistics.
2002 Roundwood removals from New Zealand indigenous and plantation forests. Wellington, NZ: New Zealand Ministry of Agriculture and Forestry Statistics.

- MOORE, D.
1996 "Marxism, culture and political ecology: Environmental struggles in Zimbabwe's Eastern Highlands," in *Liberation ecologies: Environment, development, social movements*. Edited by R. Peet and M. Watts, pp. 125-147. London: Routledge.
- MOORE, D.
1998 Clear waters and muddied histories: Environmental history and the politics of community in Zimbabwe's Eastern Highlands. *Journal of Southern African Studies* 24(2):377-403.
- NEUMANN, R.P.
1995 Ways of seeing Africa: Colonial recasting of African society and landscape in Serengeti National Park. *Ecumene* 2:149-169.
1997 Primitive ideas: Protected area buffer zones and the politics of land in Africa. *Development and Change* 28:559-582.
- NORTON, D.
2003 "Sustainable forest management in New Zealand," in *A transition to forest sustainability*. Edited by D. Lindenmayer and J. Franklin, pp. 47-63. Canberra: CSIRO Publishing.
- NORTON, D., AND I.L. JAMES.
2001 Helicopter-based natural forest management for New Zealand's Rimu (*Dacrydium cupressinum*, Podocarpaceae) Forests. *Forest Ecology and Management* 155(1):337-346.
- OATES, J.F.
1997 *Myth and reality in the rainforest: How conservation strategies are failing in West Africa*. Berkeley: University of California Press.
- O'LEARY, R., AND L.B. BINGHAM.
2003 *The promise and performance of environmental conflict resolution*. Washington, DC: Resources for the Future Press.
- PARAJULI, P.
1998 Beyond capitalized nature: Ecological ethnicity as an arena of conflict in the regime of globalization. *Ecumene* 5(2):186-217.
- PEET, R., AND M. WATTS.
1996 "Liberation ecology: development, sustainability, and environment in an age of market triumphalism," in *Liberation ecologies: environment, development, social movements*. Edited by R. Peet and M. Watts, pp. 1-45. London: Routledge.
- PELUSO, N.L.
1992 "Coercing conservation: The politics of state resource control," in *The state and social power in global environmental politics*. Edited by R. Lipschutz and K. Conca, pp. 46-70. New York: Columbia University Press.
1995 Whose woods are these? Counter-mapping forest territories in Kalimantan, Indonesia. *Antipode* 27(4):383-406.
- POSEY, D.
1998 "Diachronic ecotones and anthropogenic landscapes: Contesting the consciousness of conservation," in *Advances in historical ecology*. Edited by W. Balee, pp. 104-118. New York: Columbia University Press.
- RAINBOW, S.
1993 *Green politics*. New York: Oxford University Press.
- RICHARDS, L.
1999 *Using NVivo in qualitative research*. Newbury Park: Sage Publications.
- ROCHE, M.
1990 *History of New Zealand forestry*. Wellington: New Zealand Forestry Corporation.

- RODMAN, J.
1993 "Restoring nature: Natives and exotics," in *The nature of things: Language, politics, and the environment*. Edited by J. Bennett and W. Chaloupka, pp. 139-153. Minneapolis: University of Minnesota Press.
- SCOTT, J.C.
1998 *Seeing like a state*. New Haven: Yale University Press.
- SOPER, K.
1996 "Nature/'Nature,'" in *Futurenatural: Nature, science, culture*. Edited by G. Robertson, M. Mash, L. Tickner, T. Putnam, J. Bird, and B. Curtis, pp. 22-34. London: Routledge.
- STEINBERG, P.F.
1992 Consensus by design, policy by default: Implementing the Convention on Biological Diversity. *Society and Natural Resources* 11:375-385.
- WEAVER, S.
1999 Integrating forest conservation and development in the Buller. Wellington: Native Forest Action, Inc.
- WILLIAMS, R.
1980 "Ideas of Nature," in *Problems in materialism and culture*. Edited by R. Williams, pp. 67-85. London: Verso.