THE RISE AND FALL OF A MODEL FOREST[1]

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CLAYOQUOT SOUND is well known in British Columbia for its temperate rainforest, as home of the Nuu-chah-nulth peoples, and for its "war in the woods" over land use and logging practices. It has been inscribed in the imaginations of British Columbia and the world as an old-growth treasure, a culturally modified landscape, a site of conflict, a tourism destination, and an object of research. Today, its people and ecosystems continue to navigate a shifting terrain of committees, meetings, panels, and programs, constantly redefining the meaning of their place and defining where its future might lie. Such activities produce stories of change enacted by many characters. One story little told among the others is that of the Long Beach Model Forest (LBMF), a federally funded experiment based in Clayoquot. In 1993, the Long Beach project began as one of ten sites across the country intended to provide working models of sustainable forestry in each of the major "forest regions" of Canada.[2] Direction and sponsorship for this Model Forest Program came from Natural Resources Canada and Forestry Canada.[3] While the nine other model forests were funded for three five-year periods from 1993 to 1998, 1998 to 2002, and 2003 to 2008, the LBMF was "cancelled," or ceased to exist, after 2002. Local newspapers chalked up the death of the model forest to internal structural issues, infighting, and an inability to meet federal expectations.[4] Like other Clayoquot stories, this one had its share of controversy and disappointments. Unlike the stories of 1993, when thousands massed in the Sound to protest

[1] I thank Graeme Wynn, R.A.J. McDonald, Matt Dyce, Norma Dryden, and two anonymous referees for comments on an earlier draft of this article.

[2] Forestry Canada, *Background Information and Guidelines for Applicants: Canadian Model Forest Program* (Ottawa: National Advisory Committee on Model Forests, Government of Canada, 1991).

[3] The forest service branch of Natural Resources Canada is currently known as the Canadian Forest Service (CFS). At the Model Forest Program's inception in 1991, it was Forestry Canada. Service title at date of archived document or event discussed is utilized in this article.

[4] "Legacy of War in Woods Helped Kill Model Forest on Vancouver Island: Report," *Canadian Press,* 14 April 2002.

forestry company MacMillan Bloedel's harvesting plans there – an occasion remembered for the protest camp at the "Black Hole" in the middle of an extensive clear-cut, for the women of Clayoquot standing up for old-growth, and for counter-protests from logging families whose livelihoods were at stake – the LBMF story has not been recounted. The LBMF's nine years of existence are not catalogued by the Canadian Forest Service (CFS), in secondary literature, or through any regional memoir. To some, the LBMF is understood as a failure, as another bureaucratic project that caused trouble and came undone.[5] Yet there is more to its life and death. The silence around its demise demands a postscript.

This article examines the history of the LBMF in order to suggest that the particular conjuncture of 1993-2002 and the distinct context of Clayoquot Sound made this model forest a site of noteworthy interactions between federal and provincial priorities, and between multiple local visions of what Clayoquot was and should become. While there are many stories to be told here, I focus on the ways in which Forestry Canada's plans to "model" scientifically the best practices of a more sustainable forestry were instead refracted locally by the LBMF in ways that confounded the very goals of the Model Forest Program.[6] In the end, this story is less a testimony to the power of science and technology to bring about sustainable development of forests than it is an illustration of the complex and inherently social processes that are part of natural resource management.

SUSTAINABLE DEVELOPMENT IN A FOREST NATION

The LBMF was established at a time of great change in Clayoquot Sound and in forestry around the world. Its story was shaped by the clash between interpretations of sustainability that differed between scales (from international governance to small settlements) and between emphases on technical, social, cultural, scientific, and many other elements of sustainability. Many have attempted to unpack and define "sustainable development," with varying degrees of success.[7] Sustainable development

[5] "Splits Threaten Long Beach Model Forest," *Alberni Valley Times,* 31 August 1993.

[6] These other stories could include in-depth personal accounts of working for the LBMF as it did cycle through a number of different staff and board members in an often-contentious fashion. I have chosen not to focus on this aspect of the LBMF, although there is much evidence of interpersonal dynamics from its meetings and other workings.

[7] John Dryzek addresses the different ways in which environmental problems are defined and discussed. J. Dryzek, *The Politics of the Earth: Environmental Discourses* (Oxford: Oxford University Press, 2005).

is commonly characterized in international political discourse as that which "meets the needs of the present without compromising the ability of future generations to meet their own needs."[8] This definition, which was provided by the United Nations' Brundtland Commission, speaks to the great challenge of addressing environmental, economic, and social goals in tandem. In 1987 it was radical in that it explicitly linked issues of environment and development. Yet it was also reformist in that it advocated growth and industrial activity as a solution to both environmental degradation and poverty. Following the Brundtland Commission, the 1992 Rio Declaration recommended market economies as necessary for environmental protection. This "liberal environmentalism" also called for great improvements in efficiency and technology.[9] The geographer and student of sustainability John Robinson has identified "a technology/individual responsibility axis" in order to focus thinking about sustainable development. He sees a "side" of sustainable development that argues for technological fixes to environmental problems and a "side" that, instead, seeks to change assumptions, values, and behaviours.[10] The technological-fix side emphasizes collective socio-political policies and institutional change. And, for Robinson, the radical and reformist elements in UN policy both stand on this "pragmatic side of the technology/individual responsibility axis."

In the 1990s, this reformist and technological agenda motivated Canada's federal forest sector as well as the UN. The federal sector has a long history of sustaining the industrial productivity of Canada's forests through an emphasis on science and technology. This emerged, to all intents and purposes, in response to concerns about the depletion of forests produced by the intensive exploitation on the part of the pulp and paper industry at the turn of the twentieth century.[11] Great quantities of timber were being harvested from eastern Canada's forests as the conservation movement began to gain purchase in the United States, yet there was little knowledge either of how much forest remained in Canada or of its capacity to regenerate.

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[8] World Commission on Environment and Development (WCED), *Our Common Future* (Oxford: Oxford University Press, 1987).

[9] S. Bernstein, *The Compromise of Liberal Environmentalism* (New York: Columbia University Press, 2001).

[10] J. Robinson, "Squaring the Circle? Some Thoughts on the Idea of Sustainable Development," *Ecological Economics* 48 (2004): 369-84, quote on 373.

[11] M. Howlett and J. Rayner, "The Business and Government Nexus: Principal Elements and Dynamics of the Canadian Forest Policy Regime," in *Canadian Forest Policy: Adapting to Change*, ed. M. Howlett, 23-64 (Toronto: University of Toronto Press, 2001).

This served as the impetus for the creation of a new position in the Department of the Interior, that of chief inspector of timber and forestry. In 1899, Elihu Stewart was the first to hold this position. He was instructed to ensure the protection and management of federal forests through scientific measures. The CFS traces its origin to these developments, although it was called the Dominion Forestry Branch in those early years. Stewart organized a department oriented towards conservation, which he defined as propagation (seedlings and tree planting) and protection (from fires and disease/insects). In this view, conservation was "a judicious system of cutting the timber required for use so as to retain for all time a continuous supply from those districts that are better adapted for the growth of timber than for agricultural purposes."[12]

From 1899 until 1930, the forest service implemented conservation measures on a wide range of lands. It conducted tree planting across the Prairies and firefighting and fire prevention in Alberta and British Columbia. In 1930, with the return of jurisdiction over natural resources to the Prairie provinces, the role of the federal forest service on a land base of its own was considerably reduced. The following two decades were a time of structural disorganization, but the service still had a strong research agenda. In 1949, the Canada Forestry Act reinforced the service's roles and responsibilities by defining them in legislation.[13] This act "provided for national forests and forest experimental areas; it sanctioned the forest products laboratories; it enabled the federal government to offer assistance to provinces and private owners in protection and development of forestlands with a view to the conservation and advantageous utilization of forest resources; and, finally, the Act authorized negotiation of agreements with provinces for forest protection activities, inventories, silvicultural research and other forestry work."[14] The federal forest service was thus enshrined as the source of research on forest health and regeneration.

However, federal forestry was also somewhat weak. By the 1970s, Canada was lagging behind its competitors in the international forest products economy. The United States and Sweden had comparatively strong federal forest services and well-organized research programs. Not until the 1990s did international discourses about the need for better

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[12] E. Stewart, cited in K. Drushka and B. Burt, "The Canadian Forest Service: Catalyst for the Forest Sector," *Forest History Today* (Spring/Fall 2001): 20.

[13] R.P. Gillis and T. Roach thoroughly document the forest service's struggles, from 1930 to 1949, to have its role sanctioned in this manner. See their *Lost Initiatives: Canada's Forest Industries, Forest Policy and Forest Conservation* (Westport, CT: Greenwood Press, 1986), 237-48.

[14] Gillis and Roach, *Lost Initiatives,* 248.

technology and efficiency gains begin to resonate effectively within Canada. The result was a stronger federal forest service mandated to produce more research. In particular, it assumed responsibility for developing and disseminating new technologies for forest management, such as remote sensing, geographic information systems (GIS), and computerized decision support systems.

THE SOCIAL "SIDE" OF SUSTAINABILITY?

The Model Forest Program was one of a number of programs and strategies implemented by the federal forest sector to move Canada towards more sustainable forest practices. These focused, overwhelmingly, on the technological side of sustainability, to the relative neglect of its social and cultural dimensions. These form the "value-change" side of John Robinson's conceptualization of the sustainability axis. In his view, "a series of deep-lying questions about the purpose and meaning of human life and its relationship to the natural world" underlie many debates about sustainability. By this account, "these are profoundly moral and political issues, which require thoughtful deliberation and collective resolution. And on those issues, the principles of democracy imply that every citizen has equal expertise."[15]

The "equal expertise" of citizens sounds like an ideal basis for the resolution of environmental problems. Yet this "expertise" is expressed by citizens with an array of values and goals, many of which may be incommensurable. The cultural significance of conflicts surrounding forestland in rural places like Clayoquot Sound lies in the emergence of opposing forces: the rural loggers and their families who depend on forestry work; First Nations who want land rights to their traditional territories; and environmentalists who want to preserve nature and stop logging. This story has become familiar to many across British Columbia. Focal points of conflict emerged "valley-by-valley" when environmentalists and/or First Nations protested clear-cut harvesting plans in old-growth forested watersheds through the 1980s and 1990s. In Clayoquot Sound, forest company MacMillan Bloedel proposed clear-cut logging on Meares Island in 1980 and was opposed by environmentalist and First Nations groups, who argued for the island's scenic and cultural importance. By 1985, this alliance was successful in blocking logging. While there were confrontations in the Kootenays and other places in the interior, the movements around coastal forests were most successful

[15] Robinson, "Squaring the Circle?", 380.

when they tapped into international environmentalist concern. They used direct action techniques and a savvy media presence, which stood in particular contrast to the publicity efforts of forest companies, to get a worldwide audience. This international strategy ensured that Clayoquot Sound stood above all other areas when conflict flared again, and, in 1993, it culminated with a major reworking of land use in the region.[16]

The "war in the woods" and other major events in the recent history of BC forest policy have been well-documented. Political science perspectives on policy and change have been offered by George Hoberg, Jeremy Wilson, Benjamin Cashore, and others. Cashore et al. conclude that, while environmental activism has shifted the playing field somewhat by opening decision-making processes to many stakeholders, there are still many limitations to "real change" in the BC forest sector. The case of Clayoquot, where land-use plans for the area were substantially rewritten following protests, is cited as an exception.[17] Geographer Maureen Reed examines the cultural impact of changes to rural landscapes in the era of multi-stakeholder land-use planning in British Columbia under the Commission on Resources and Environment, established in 1992 and operating through 1996. Although her work most directly concerns the experiences of women in forestry families and communities, she offers a broad view of life on Vancouver Island in a time of change and conflict.[18] Others have examined "wars in the woods" in a transnational context, comparing how the United States and Canada differed in their policy responses to logging protests.[19]

Another important contribution, less noticed in the context of BC forests than in the context of environmental history research is of particular relevance to the conflicts of Clayoquot. Richard White's essay, entitled "Are You an Environmentalist or Do You Work for a Living?" is concerned with work and nature and with how, because its followers identify with nature through play and spiritual regard for all species, modern environmentalism so often "distrusts" industrial labour in the forest. Yet, White points out, it is not only those who toil directly in the forest who are responsible for altering it. According to him, "coming to

[16] The primary documentation of Clayoquot-based conflicts has been archived in a collection of Clayoquot Documents accessible at: http://web.uvic.ca/clayoquot/clayoquotDocuments.html (viewed 9 August 2006).

[17] B. Cashore, G. Hoberg, M. Howlett, J. Rayner, and J. Wilson, eds. *In Search of Sustainability: British Columbia Forest Policy in the 1990s* (Vancouver: UBC Press, 2001).

[18] M. Reed, *Taking Stands: Gender and the Sustainability of Rural Communities* (Vancouver: UBC Press, 2004).

[19] D. Salazar, and D. Alper, eds. *Sustaining the Forests of the Pacific Coast: Forging Truces in the War in the Woods* (Vancouver: UBC Press, 2002).

terms with modern work and machines involves both more complicated histories and an examination of how *all* work, and not just the work of loggers, farmers, fishers, and ranchers, intersects with nature. Technology, an artifact of our work, serves to mask these connections."[20] Some environmental movements fall prey to these "masking" effects by ignoring the ways in which forestry work is itself a kind of relationship with nature. Support for absolute logging bans also elides the issue of workers' livelihoods. In Oregon and Washington, for example, workers and their families counter-protested that they, rather than spotted owls, were becoming an endangered species.[21] In remote and forest-dependent communities, a halt to logging could mean a halt to income for a significant proportion of the local population, who had few other options.[22] While younger workers could often relocate to active logging sites, older workers often found themselves "too young to retire and too bloody old to work" in a new trade.[23] Relocation, retraining, and education are not the only issues, however, for members of communities that are moving away from a resource-based economy. Capital may continue to flow into some regions, such as Clayoquot, due to increased tourism, but a tourist economy brings decidedly different kinds of cultural and social conditions. Many who had laboured in the woods were uncomfortable with the idea of labouring in service, particularly since these new jobs often came with lower wages. They were, in the eyes of some of those formerly engaged in logging, part of an economy built around playing, rather than truly working, in nature.

These tensions of work and play, in nature and in changing times, proved central to the difficulties that the LBMF experienced in Clayoquot Sound. Yet the LBMF also became a site for new kinds of work and play for regional residents, at times exciting and at times confounding. To see this side of the story requires an examination of what the LBMF *did*

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[20] Richard White, "Are You an Environmentalist or Do You Work for a Living?" in *Uncommon Ground: Toward Reinventing Nature*, ed. William Cronon (New York: W.W. Norton and Company, 1995), 182.

[21] T. Satterfield, *Anatomy of a Conflict: Identity, Knowledge, and Emotion in Old-Growth Forests* (Vancouver: UBC Press/Michigan State University Press, 2002).

[22] See T. Barnes and R. Hayter, "Economic Restructuring, Local Development, and Resource Towns: Forest Communities in Coastal British Columbia," *Canadian Journal of Regional Science* 17, 3 (1994): 289-310; J. Kusel, S. Kocher, J. London, L. Buttolph, and E. Schuster, "Effects of Displacement and Outsourcing on Woods Workers and Their Families," *Society and Natural Resources* 13 (2002): 115-34; T. Beckley, "Community Stability and the Relationship between Economic and Social Well-Being in Forest-Dependent Communities," *Society and Natural Resources* 8 (1995): 261-66.

[23] T. Barnes, R. Hayter, and E. Hay, "Too Young to Retire, Too Bloody Old to Work: Forest Industry Restructuring and Community Response in Port Alberni, British Columbia," *Forestry Chronicle* 75 (1999): 781-87.

do rather than what it *did not* do. It is my hope that, by reviving this story, I will be able to secure its place in the increasingly dense history of Clayoquot Sound as well as to ensure that it is not entirely discounted as a learning experience. Tales of confusion and conflict must be part of our transition to different, arguably more complex, ways of seeing the world and its future.

MODEL FORESTRY IN THE 1990S

The Model Forest Program was funded as part of Environment Canada's Green Plan for a Healthy Environment. The Green Plan of 1990 involved a national agenda that emphasized the need for a Canadian leadership role in international forestry issues through the provision of "high-quality environmental science, education and information. In this vision, scientific and technological research and development provide the basis for our understanding of the problems and our efforts to find workable solutions."[24] Nonetheless, political scientists such as Kathryn Harrison, Peter Morrison, and others have argued that the Green Plan was an ineffective agent of "real change." In their assessments, its resources were spent on projects popular with Canadian citizens, such as parks and research, and it lacked both regulatory capacity and specific financial commitments.[25]

The Model Forest Program, although funded by Environment Canada, was managed by Forestry Canada. The program, which consisted of a network of ten forests, was intended to demonstrate the variety of values that forests might possess, "such as wildlife, biodiversity, watersheds, fisheries and carbon pools, in addition to the essential component of fibre or timber."[26] The federal minister of forestry, Frank Oberle, announced a national competition in which proposals for the establishment of a model forest would be accepted until December 1991. Initially, an advisory committee was to select eight projects to represent the major forest regions of Canada as well as the various types of land tenure and uses.[27] In the end, ten forests were established.

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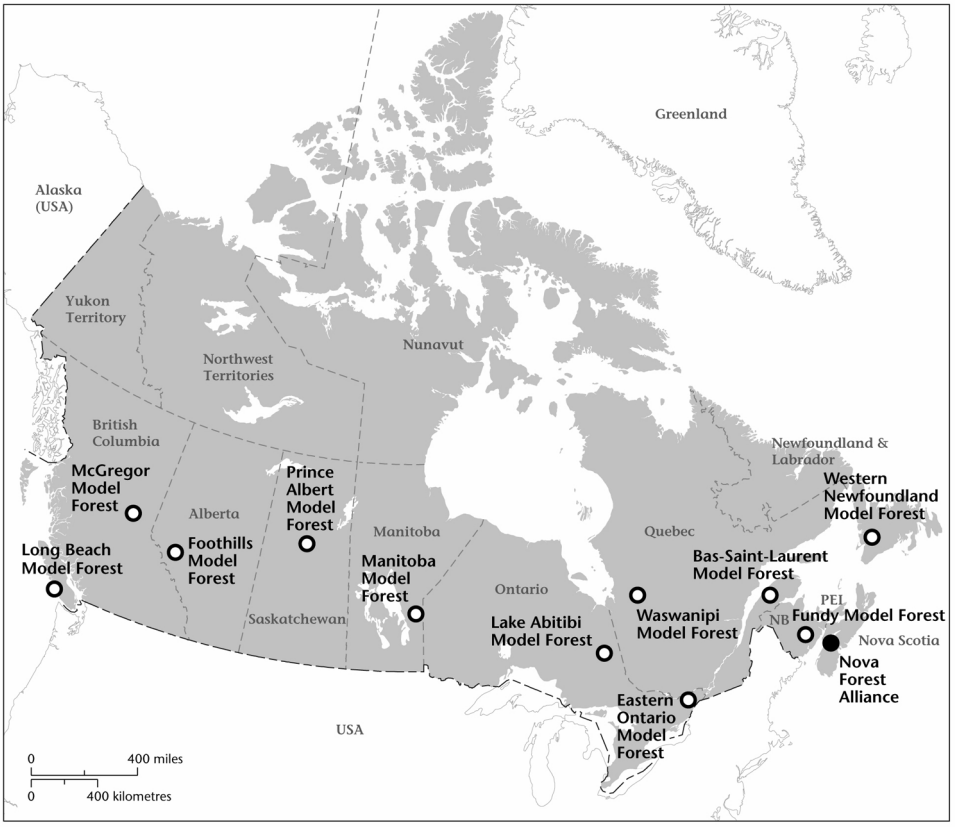
[24] Environment Canada, *Canada's Green Plan: Canada's Green Plan for a Healthy Environment* (Ottawa: Minister of Supply and Services Canada, 1990), 17.

[25] K. Harrison, *Passing the Buck: Federalism and Canadian Environmental Policy* (Vancouver: UBC Press, 1996); P. Morrison, "Canada's Green Plan: An Expression of the Popular Will?" in *Shades of Green: Environmental Attitudes in Canada and Around the World*, ed. Alan Frizzell and Jon Pammett, 55-74 (Ottawa: Carleton University Press, 1997).

[26] Forestry Canada, *Background Information and Guidelines for Applicants*.

[27] Forestry Canada, *Canada's Model Forest Network: Proposed Sites* (Ottawa: National Advisory Committee on Model Forests, Government of Canada, 1992).



Map 1. Canadian Model Forest Network at Inception. Cartography by Eric Leinberger.

Collectively, the Model Forest Network covered nearly six million hectares of forest land and involved some 250 different groups.[28] Each proposal required a plan for collaboration among local stakeholders, such as First Nations communities, industry, and local residents. The goals for each model forest were to bring together previously disparate groups, to model best practices, and to lead the way for more sustainable forestry across Canada.[29] Model forests had to be about active forest management; each of them needed to have ongoing forest harvesting

[28] Forestry Canada, *Model Forests: Summary of Proposals* (Ottawa: National Advisory Committee on Model Forests, Government of Canada, 1992); Hugh Walker Consulting Enterprises, Ltd, *First Nation Participation in Canada's Model Forest Program* 1992–1997*: Accomplishments and Opportunities*, report prepared for the Enhanced Aboriginal Involvement Initiative of Canada's Model Forest Program, Saskatoon, Saskatchewan, 1998.

[29] E.A. Holmes, *LLI and Databases Common across the Canadian Model Forest Network: A View to Possible Information Sharing and Networking Opportunities*, unpublished report to the Canadian Forest Service, Government of Canada, 1998.

operations and at least one major industry partner. However, they had no territorial authority and no control over land-use planning for their regions. In effect, model forests were new bodies superimposed upon existing regional landscapes, the intention being that those involved in them would consult, organize, and advise the different actors in a given area. Model forests were the federal government's acknowledgment of changing times. Forestry was no longer only the realm of scientists and bureaucrats but, rather, needed to be articulated through multiple visions and values.

Each model forest was organized through a memorandum of understanding between the province in which it was located and Forestry Canada. In many cases, provincial governments dictated the precise nature of this relationship.[30] British Columbia and Ontario, in particular, forced Ottawa to agree that their model forests would not initiate policy change or redirect industry within their boundaries. Ottawa's position was that model forests would slowly implement institutional change through their research and local partnerships.[31] The nature of such "change" and the work that each model forest could do would be shaped by its local context.

In British Columbia, a highly structured tenure system and the entrenched business-government relationship made it particularly difficult to implement change. Moreover, legislation such as the province's Forest Practices Code could, and did, "overtake and affect" Model Forest activities.[32] British Columbia's wilderness politics made many wary of multi-stakeholder planning processes and, especially, of the possible ramifications of federal intervention for forest management in Clayoquot Sound. Thus, the LBMF was an entity nestled between layers of varied political circumstances involving Canada, British Columbia, Vancouver Island, and Clayoquot Sound.

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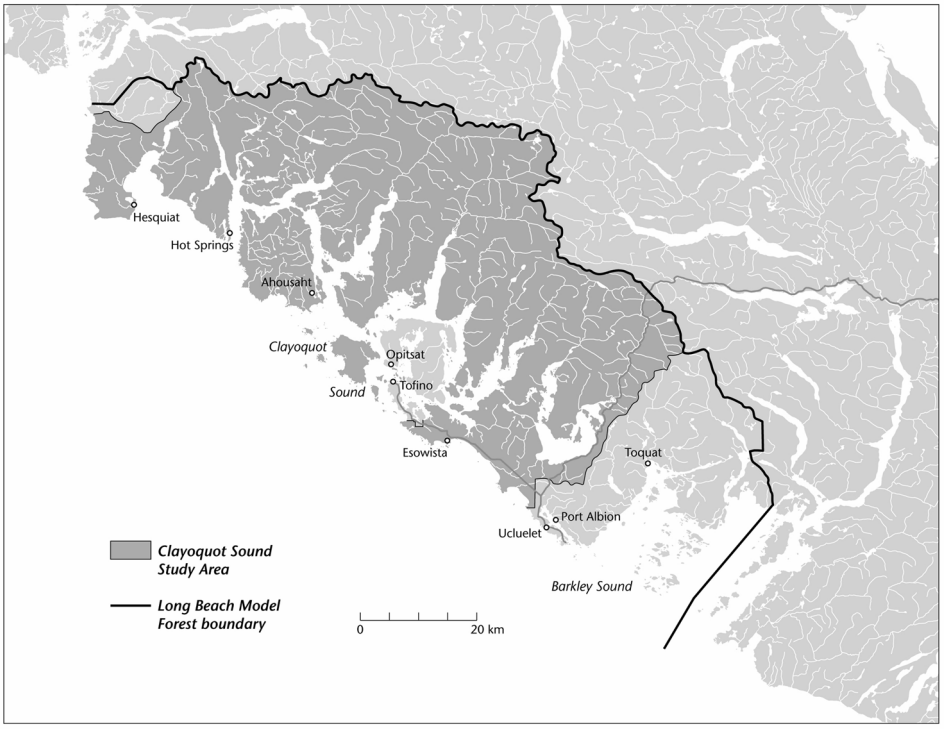
[30] J. Beyers, "The Forest Unbundled: Canada's National Forest Strategy and Model Forest Program, 1991-1997" (PhD diss., York University, 1998). Beyers extensively covers the development of the Model Forest Program and its work in several provinces and should be consulted for more in-depth information on the program.

[31] Forestry Canada, *Background Information and Guidelines for Applicants*.

[32] Gardner-Pinfold Consulting Economists, Ltd., *Evaluation of the Canadian Model Forest Program: Prepared for the National Advisory Committee for the Model Forest Program Evaluation* (Canadian Model Forest Network, 1996). Another Model Forest, the McGregor Model Forest, was located in British Columbia's northern interior. It did not seem to share many of the issues that the LBMF experienced, and it was funded throughout the entire Model Forest Program.



Map 2. Area of the Long Beach Model Forest. Cartography by Eric Leinberger.

OTTAWA COMES TO CLAYOQUOT

The LBMF proposal was one of twelve submissions from British Columbia in response to the federal minister's nationwide call for model forest proposals. Prepared and submitted jointly by the Regional District of Alberni-Clayoquot (RDAC) and the Clayoquot Sound Sustainable Development Strategy Steering Committee (CSSDSSC) in February 1992, this proposal encompassed electoral district "C" of the Regional District. It included the settlements of Hesquiaht, Hot Springs, Ahousaht, Opitsat, Tofino, Esowista, Ucluelet, Port Albion, Ittatsoo, and Toquaht.[33] The area also contained three provincial parks, tree farm licences (TFLs) held by MacMillan Bloedel and Interfor, timber licences[34] held by Canfor, a

[33] LBMF, *Orientation Background Information Package, Proposed Long Beach Model Forest* (Port Alberni: RDAC-CSSDSSC, 1993).

[34] A Timber Licence is a type of area-based tenure that is no longer issued; the land in question would revert back to the government once harvested and reforested. See BC Ministry of Forests and Range, *Glossary of Forestry Terms in British Columbia*, available at: http://www.for.gov.bc.ca/hfd/library/documents/glossary/ (viewed 12 July 2007).

forest licence held by Coulson Forest Products, a woodlot licence held by the Ahousaht Band, and harvesting activities on Crown land (the Arrowsmith Timber Supply Area), which were allocated for timber sales under the Small Business Forest Enterprise Program of the Ministry of Forests.[35]

Decreased forestry-related employment was a major concern for the LBMF region.[36] According to independently contracted consultants Gardner-Pinfold, approximately three hundred workers had lost their jobs due to reduced harvest operations in the Ucluelet area alone. Following the massive protests of the summer of 1993, a panel of experts, drawn from Nuu-chah-nulth communities and an array of scientific disciplines, had convened to produce a series of reports and recommendations for future harvesting operations in Clayoquot. Their work, known as the *Report of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound*, unequivocally stated that Nuu-chah-nulth knowledge and land use needed to be at the forefront of the region's future, and it advised that significant research on forestry impacts, monitoring, and baseline conditions was required.[37] The provincial government implemented all of the Scientific Panel's suggestions. This radically transformed the environment of Clayoquot Sound from what might be considered a classic "working forest" into a landscape studied and discussed by scientists, planners, community leaders, and others. This transition was novel and exciting for some, but for many it meant the loss of livelihoods.

The fallout from reduced harvesting played out not only in Clayoquot communities but also in the LBMF as it struggled to create a representative stakeholder structure and to lay out a clear set of objectives. From the start, there were no strong relationships with industry partners nor were there any direct links with any harvesting activities. Instead, LBMF staff opted to base their activities on monitoring and scientific assessments that were in line with the Scientific Panel's recommendations. In 1996, Gardner-Pinfold Consultants commented: "it is only fair to note that some people in the area object very strongly to this approach." According to the *Alberni Valley Times*, the LBMF was "another overlap of federal-provincial responsibility with money borrowed on the

[35] RDAC-CSSDSSC, *Proposal for "Area C Model Forest" to the Canadian Model Forest Program* (Port Alberni, BC, 1992).

[36] Gardner-Pinfold, "Evaluation of the Canadian Model Forest Program," 24.

[37] Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, *Report of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, 31 January* 1995. (Victoria, BC: Crown Publications, 1995).

federal level doing marginal work … this federal program is a subsidy for no-work [rather than for unemployed forest workers]." In the words of one area reporter:

> Instead of giving the loggers something to do it is hiring many of the people who opposed the Model Forest in the beginning … Ottawa has such a low presence out here perhaps they dearly want a way to show taxpayers they are doing something for us with all the money we give them. However, enough is enough. The Model Forest is no different than any of the short-term, marginal-worth job creation schemes coming out of Parliament these days. The added rub out here is what is happening to our forest industry while some people play around in the woods on the federal payroll.[38]

The use of the phrases "no-work" and "play around in the woods" offer telling echoes of Richard White's question: "Are you an environmentalist or do you work for a living?" Anyone who is not logging is merely "playing"; their relationship to the forest is one that involves "no-work." In suggesting that "it would be better to transfer the funding and the focus to an area where the forest is still working," this reporter endorsed the forest-practices-oriented mandate of the Model Forest Program and his understanding of his community's need for viable employment.

SCIENCE AND SUSTAINABILITY: THE ROLE OF THE SCIENTIFIC PANEL

Although the LBMF's priorities were often controversial and were characterized as scattered and unclear, its activities had two distinct emphases. One was the scientific research agenda, criticized as it was for its lack of linkages to industry and for its inadequate use of "cutting-edge" technology (a federal Model Forest Program goal), while the other was social and cultural sustainability (see next section).

A review of LBMF documents from 1993 to 2002 shows a "scientific" focus as staff coordinated, and often directly funded, an array of projects. Most projects emphasized the expansion of knowledge of forest ecosystem processes: identifying inventory needs and relevant indicators; studying the effects of forestry practices, natural disturbances, and climate changes; looking at the effects of "ecosystem status" on cultural, social, and economic structures; expanding knowledge of the role of riparian areas within the coastal temperate rainforest watersheds; and

[38] "Model Forest No Help to Alberni-Clayoquot," *Alberni Valley Times,* 4 November 1996.

researching watershed restoration and the types of partnerships that might make restoration projects possible.[39] The Scientific Panel for Sustainable Forest Practices in Clayoquot Sound had stressed the need to study and monitor baseline conditions in the forest. From 1996 to 1999, research was species-inventory-oriented and was not explicitly linked to actual forest practices in conjunction with logging operations. Projects focused on determining local-level indicators of biodiversity in wetlands, hydroriparian areas of headwater streams, and inland old-growth stands.[40] All of this was compatible with the Scientific Panel's recommendations for the acquisition of baseline data, monitoring, paying attention to biodiversity, and providing greater riparian protection.[41]

This early activity produced valuable understandings of ecological conditions in Clayoquot Sound, but it was not well coordinated with the province's own efforts to implement the Scientific Panel's recommendations. In 1997, the BC Ministry of Forests indicated its support for the LBMF but noted that this would be contingent upon the LBMF's willingness to work in closer partnership with the provincial team in charge of implementing outcomes from the Scientific Panel.[42] Far more consequentially, however, the LBMF's panel-related research did not fit with Ottawa's goals for the Model Forest Program. In 1998, the Model Forest Network organized a federal advisory group to survey the LBMF's work and to make recommendations for its improvement. While all model forests were undergoing an expected funding review at this point, the LBMF warranted special concern. This group observed that "the LBMF clearly lacks a sustainable forest management focus… [and that] research programs, although they cover a broad range of subjects from hydroriparian ecology to ethnobotanical work, focus very little on the forest or forest management per se."[43] The group also warned that the LBMF needed to "focus on the forest," reduce the number and scope of its goals and objectives, and formulate a clear vision statement.

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[39] Long Beach Model Forest Society (LBMFS), *Long Beach Model Forest: The First Six Months. Annual Report 1994-1995* (Ucluelet, BC: LBMFS, 1995); LBMFS, *Summary of Projects 1995-1996* (Ucluelet, BC: LBMFS, 1996).

[40] LBMFS, *Monitoring the Impacts of Forest Practices on Ecosystems of the West Coast of Vancouver Island: Project Reports* (Ucluelet, BC: LBMFS, 2001).

[41] Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, *Report of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound, 31 January 1995* (Victoria, BC: Crown Publications, 1995).

[42] Greg Bach, "Letter to Wally Samuel," LBMFGM, file 10624/ LBMF 97-98, BC Ministry of Forests, Government of British Columbia, 13 June 1997.

[43] Canadian Model Forest Network, *Report of Advisory Group on* LBMF *to the* LBMF *Board of Directors* (Ottawa: Advisory Group LBMF, Canadian Forest Service, Government of Canada, 1998), 5.

In response, the LBMF directors and staff attempted to alter their mandate and research program.[44] Ongoing efforts to implement the recommendations of the Scientific Panel were retained but in ways that were more explicitly linked to forest practices. The first step involved establishing a partnership with the BC Ministry of Forests and Range, Pacific Rim National Park, and community representatives in order to build a comprehensive monitoring strategy. Together, these groups established permanent research plots and collected data from them both before and after harvest. Iisaak Forest Resources, a joint venture company involving MacMillan Bloedel and five Nuu-chah-nulth groups that was formed in 1999, harvested the plots. The results allowed assessment of the immediate effects of Iisaak's variable retention harvesting and provided baseline information on the attributes of coarse woody debris, windthrow, and dwarf mistletoe in coastal forest conditions.[45] Researchers also worked to identify criteria and indicators of sustainable forest management through holding workshops that involved a range of stakeholders.[46]

For all the efforts to reorient its research, the focus of the LBMF remained firmly centred on the ecological dimensions of forest practices rather than on elements of interest to bottom-line forest industry participants.[47] The research program did not involve any strategic landscape-level projects, although a proposal for future work listed several.[48] The LBMF ran workshops to discuss types of criteria and indicators for forest management, but it produced a suite of localized criteria that required visits at the stand level rather than remote-sensed indicators at the landscape level.[49] The CFS would have preferred remote sensing as this was one of the advanced technologies it hoped to promote through the Model Forest Program. The LBMF also made extensive use of students and youth interns in its research, which required the scientific research coordinator to play a mentorship role.[50] This, too, was regarded as insufficient and unnecessary by the CFS, although the

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[44] LBMFS, Minutes of Board of Directors' meeting, 18 February 2000, Ucluelet, BC, LBMF Society, 2000; "Model Forest Funding Withheld Pending Revamp," *Westerly News*, 19 May 1999.

[45] LBMFS, *Monitoring the Impacts of Forest Practices*.

[46] LBMFS, *LBMFS Criteria and Indicators Workshop Proceedings, November* 12–13, 1998 (Ucluelet, BC: LBMFS, 1998).

[47] CMFN, *Long Beach Model Forest–Phase II Evaluation Report* (Ottawa: Canadian Forest Service, Government of Canada, 2002).

[48] LBMFS, *Long Beach Model Forest Society Revised Phase II Proposal Submitted to Natural Resources Canada* (Ucluelet, BC: LBMFS, 1998).

[49] LBMFS, *LBMFS Criteria and Indicators Workshop Proceedings*; LBMFS, *Criteria and Indicators and Monitoring Programs: Report on Progress, October* 2001 (Ucluelet, BC: LBMFS, 2001).

[50] CMFN, *Long Beach Model Forest–Phase II Evaluation Report*.

LBMF research coordinator argued that she spent "a substantial amount of time mentoring and supervising young scientists as a result of the LBMF's mandate to build capacity for sustainable forest management within the local community."[51]

SOCIAL AND CULTURAL SUSTAINABILITY IN CLAYOQUOT

In setting priorities, the LBMF was guided not only by the task it was conducting but also by the human and social dimensions of its activities; that is, by who was doing the work. After scientific research, its second clear emphasis was on social and cultural sustainability. The LBMF formulated and funded projects in response to local concerns about capacity and employment, in the wake of significant economic and cultural changes to its region, and as an organization operating in Nuu-chah-nulth territory.[52] The lasting impacts of the "war in the woods" included increased tourism as well as all kinds of research. While this did offer potential new resources, it may also have created a legacy of exclusion, interview fatigue, marginalization, and, eventually, distrust.[53] Recognizing the disconnect between locals and the research being conducted, the LBMF endeavoured to build community capacity, to conduct research *in* and *for* the Sound, and to develop a skilled pool of local people. "Some people wonder if we're going to be decision-makers, but we're not, we're just providing education and training and information to the communities," remarked the LBMF's general manager in 1997.[54] This comment seems to downplay the importance of the LBMF by suggesting its inability to take concrete action, but it also points to its commitment to the local, social, and cultural meanings of sustainability.

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[51] LBMFS, *Comments on CFS Long Beach Model Forest–Phase II Evaluation Report* (Ucluelet, BC: LBMFS, 2002).

[52] For a more complete discussion of the work that the LBMF did in Clayoquot Sound communities, see E.J. Davis, "Legacies at Long Beach: Sustainability and Strategy in the Canadian Model Forest Program" (MA thesis, University of British Columbia, 2007), chap. 5.

[53] The LBMF played a role in developing some research protocol to lessen this, such as the 1996 guidelines for TEK research. More recently, the Clayoquot Alliance for Research, Education, and Training at the University of Victoria produced a document entitled *Standard of Conduct for Research in Northern Barkley and Clayoquot Sound Communities*. This was developed under the guidance of a working group that included members of the local community and the central region Nuu-chah-nulth First Nations. It is meant to guide Clayoquot Alliance-sponsored research in ways that are mutually beneficial to communities, First Nations, and universities alike. It is available at http://www.clayoquotbiosphere.org/documents/science/CLARET_StdConV1.1_05.pdf (viewed 15 March 2007).

[54] LBMF General Manager Wally Samuel, quoted in "Model Forest Feels It's Finally on Track," *Westerly News,* 16 November 1995.

To this end, the LBMF undertook numerous projects on the social side of sustainability, especially with Nuu-chah-nulth communities.[55] Dealings between the LBMF and Nuu-chah-nulth may not have been entirely harmonious, and there is evidence that some Nuu-chah-nulth were unsure about working with the model forest. Chiefs and other interested people who attended an annual LBMF meeting in 1997 suggested that, although LBMF projects had been of use to their people, the LBMF needed to foster broad community cooperation. They also indicated that they lacked a clear sense of what enhanced Aboriginal involvement meant in the LBMF, and they expressed concern about the efficacy of the model forest.[56] Regardless, there was clearly a local and Aboriginal focus to much of the LBMF's work, and some Nuu-chah-nulth groups worked more closely with the LBMF than did others. For example, the Hesquiaht First Nation received support for rediscovery summer camps, a sea urchin management project, forest training, a cedar bark project, and an integrative project entitled "Managing for a Living Hesquiaht Harbour."[57] The LBMF board had a Nuu-chah-nulth co-chair and funded initiatives for GIS training, summer camps, salmon enhancement, and watershed research.

Even more notable was a project in 2000 to document *Hahuulthi*, the Nuu-chah-nulth's system of hereditary ownership and control of traditional territories (also translated as a long-standing system of resource use and management).[58] *Hahuulthi* implies that chiefs are responsible for the land and the sea as well as for their tribal members. This project warrants a closer examination. The Scientific Panel had urged the recognition of *Hahuulthi* as an essential aspect of future co-management of regional resources, asserting its hope that "Clayoquot Sound [might] become a model for including traditional ecological knowledge and interests of indigenous peoples in sustainable ecosystem management."[59] Anthropologists such as Paul Nadasdy, however, have critiqued the notion of "inclusion" of traditional ecological knowledge (TEK) such as *Hahuulthi* in co-management arrangements with bureaucratic natural

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[55] Nuu-chah-nulth Tribal Council, "Statement of Interests by the Tla-o-qui-aht, Hesquiaht, Toquaht, and Ucluelet First Nations Regarding the Long Beach Model Forest Society," statement to the LBMF Board of Directors, 1993. Several Nuu-chah-nulth groups made their expectations of the model forest known to the Board of Directors from the start of the Model Forest's activities.

[56] LBMFS, *Chronology and Narrative of First Nations Involvement in the Long Beach Model Forest, 1992–1997* (Ucluelet, BC: LBMFS, 1998).

[57] LBMFS, *Summary of Projects 1995–1996*.

[58] LBMFS, *The Meaning and Practice of Hahuulthi: Its Applications for Sustainable Resource Management. Project Update, October 2000* (Ucluelet, BC: LBMFS, 2000).

[59] Scientific Panel, *Report of the Scientific Panel on Sustainable Forest Practices*, ix.

resource systems. In his work on the relationships between governmental bodies and the Kluane First Nation in the Yukon, Nadasdy points to how Aboriginal knowledge, which is experiential and contextual, is isolated, processed, and either treated as token or translated out of context in ways that are potentially damaging to Aboriginal land use. While he focuses on what may be an irrevocable difference between governmental and Aboriginal resource use under state structures, he does advocate that power be devolved to First Nations so that they can make decisions rather than just recommendations. Nadasdy also suggests that the ways in which TEK is shared and used should be guided by Aboriginal peoples – for example, by talking about knowledge where it is made rather than within an office or by recognizing that TEK cannot be produced as data in response to preconceived queries.

The LBMF's project was designed around interviews, research, workshops, and presentations, and its purpose was to gather and assess the meanings and practices of *Hahuulthi* under the direction of Nuu-chah-nulth staff. Twenty-five interviews were conducted with elders and hereditary chiefs. By allowing Nuu-chah-nulth themselves to guide the *Hahuulthi* project, the LBMF treated *Hahuulthi* as a genuine system of knowledge rather than as "an object for science" to extract.[60] Nadasdy does warn against the outcomes of these types of projects, arguing that "rather than being holistic, oral, qualitative, and intuitive, TEK artifacts tend to be categorized, written, quantitative, and analytical."[61] While the *Hahuulthi* project did produce written reports, it also produced conferences and workshops that emphasized the concepts discussed in the interviews, the point being to share elders' knowledge with other Nuu-chah-nulth. These were entirely structured around Nuu-chah-nulth activities, such as traditional feasts and gift-giving ceremonies.[62] While this project cannot and should not be valorized as

[60] P. Nadasdy, *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon* (Vancouver: UBC Press, 2003), 11. Other works on the question of "traditional ecological knowledge" and the ways in which co-management can ignore power dynamics and cultural practices include C. Butler, "Historicizing Indigenous Knowledge: Practical and Political Issues," in *Traditional Ecological Knowledge and Natural Resource Management*, ed. C. Menzies, 107-26 (Lincoln, NB: University of Nebraska Press, 2006); J. Inglis, ed., *Traditional Ecological Knowledge: Concepts and Cases* (Ottawa: International Development Research Centre, 1993); P. Nadasdy, "The Politics of TEK: Power and the 'Integration' of Knowledge," *Arctic Anthropology* 36, 1-2 (1999): 1-18; P. Nadasdy, "The Case of the Missing Sheep: Time, Space, and the Politics of 'Trust' in Co-Management Practice," in *Traditional Ecological Knowledge and Natural Resource Management*, ed. Charles Menzies, 127-52 (Lincoln, NB: University of Nebraska Press, 2006).

[61] Nadasdy, "The Politics of TEK," 9.

[62] LBMFS, 2000-2001 *Long Beach Model Forest Annual Report* (Ucluelet, BC: LBMFS, 2001).

exemplary, it does show that the LBMF considered the power dynamics in the Clayoquot region and attempted to put Aboriginal people in charge of the process of talking about and sharing their knowledge.

In 2002, the LBMF organized another knowledge-based project that focused specifically on the issue of wildlife inventories. Between 1996 and 1999, the BC Ministry of Forests and the Ministry of Environment, Lands, and Parks had conducted a multi-phase operational inventory of baseline wildlife conditions, which would eventually enable watershed-scale planning (as recommended by the Scientific Panel). During the inventories, Nuu-chah-nulth groups were asked to identify cultural resources and culturally important areas within their traditional territories. However, as a Hesquiaht representative pointed out in 1997, they were consulted on this wildlife inventory only in a minimal way. Researchers organized interviews to ask about changes in populations of Roosevelt Elk and black bear, yet failed to mention numerous other species that the Nuu-chah-nulth did not hunt, such as marbled murrelets, songbirds, and amphibians. This omitted the significance of all kinds of species to Nuu-chah-nulth, rendering their contributions piecemeal. It also served to compartmentalize bits of their complex, interconnected relationship with the environment of Clayoquot Sound. Recognizing the importance of Nuu-chah-nulth knowledge in its entirety, the LBMF obtained funding for a pilot project to learn about Aboriginal perceptions of all species of wildlife. This project resembled the government's original inventory project in that it queried causes of population decline and possible conservation objectives. But, as the lead author indicated, LBMF staff also "wanted to demonstrate respect for Nuu-chah-nulth views and traditional ecological knowledge and gather suggestions for how to include these in planning future inventories and land use practices."[63] The LBMF's final report concludes that the Nuu-chah-nulth believed that the distribution of much of the area's wildlife was shrinking and that its diversity was declining, and they related this to logging practices. Nuu-chah-nulth participants also stated that they were willing to continue to share these perspectives as a way of being involved in resource planning and decision making.

The *Hahuulthi* documentation and the wildlife inventory demonstrate that social learning and respect between stakeholders are possible. Even as scholars like Nadasdy suggest the irreconcilability of Aboriginal and bureaucratic perspectives in natural resource management, they also

[63] LBMFS, *First Nations' Perspectives on Wildlife Inventories in Clayoquot Sound* (Ucluelet, BC: LBMFS, 2000), 5.

point to examples of "better practices." And perhaps these LBMF projects might be considered as models. In this vein, geographer Bruce Braun offers cautious praise for the work of the Scientific Panel, commenting that "it refused to abstract the forest from its cultural surrounds … this was an ecology that included rather than excluded people."[64] The equal participation of Nuu-chah-nulth and the extensive consideration of their values effectively "reinscribed Nuu-chah-nulth territorialities onto a landscape that had been discursively emptied more than a century earlier."[65] While entirely different endeavours such as the Scientific Panel and the *Hahuulthi* project should not simply be conflated, Braun's assessment of the panel's approach to incorporating different kinds of knowledges may also apply to some LBMF activities. For all of its missteps and internal conflicts, the LBMF "had its moments" when it supported illuminating and challenging work on sustainability on British Columbia's west coast.

CLOSURE AND CONSTERNATION

In 2002, the CFS evaluated all its model forests as it moved through a five-year cycle of funding renewal. After the first of such reviews in 1998, the LBMF had been told to "move to the forest" and to develop a clear mandate and manageable goals. The 2002 review judged these actions and found that they did not occur to the extent expected by the federal government.[66] The evaluation committee wrote in its report that "the Long Beach Model Forest has struggled to find its way through significant internal and external turmoil … [multi-stakeholder planning] requires that personal agendas be set aside in favour of achievement of common purpose – something that cannot be imposed and which has not happened in the case of the Long Beach Model Forest."[67] While the other model forests were renewed until 2008, the LBMF was removed from the program.

To many, this conclusion made sense and was a welcome end to an entity that they believed had caused more trouble than it was worth. The LBMF had not brought back any of the forestry jobs lost in the 1990s, and it had opened the forests of the Clayoquot Sound to other types

[64] B. Braun, *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast* (Minneapolis: University of Minnesota Press, 2002), 262.
[65] Braun, *The Intemperate Rainforest,* 263.
[66] "LBMFS Gets Failing Grade in Gov't Report," *Westerly News,* 12 December 2001.
[67] CMFN, *Long Beach Model Forest–Phase II Evaluation Report*.

of research and employment – to "no-work," by some standards. There can be no doubt of the LBMF's failure to meet Model Forest Program goals, and federal money was spent in unintended ways. There is little utility in suggesting that the LBMF was an ideal institution or that the CFS treated it unfairly. However, its history yields a good deal of insight into the complexities of sustainability, both "then" and now. In order to relate to communities and to work cohesively towards new goals, the social elements of sustainability cannot be implied, assumed, or otherwise written out.[68]

In the case of the Model Forest Program, the CFS made its vision of model forests evident in numerous press releases and promotional documents. Ostensibly, model forests would represent new partnerships. But, above all, these communiqués were characterized by the repeated use of a single word: "model." By "model" the CFS meant to imply a neatly bounded space of experimentation, from which results could be offered to the world with a high degree of confidence. This confidence rested on the cognitive licence granted not only to forestry experts and other scientists – the people authorized to operate inside the experimental "model" space – but also on what underlies the knowledge-production system of science as a whole: the belief that models represent and equate to real conditions outside the bounded spaces of study.[69] But the CFS, through the Model Forest Program, did more than assume that its experimental spaces produced expert knowledge about trees. It also applied scientific logic and the language of neutrality to socio-cultural dimensions within its space. For all the CFS directives given to model forests regarding science, they received little support for conflict resolution and little specific advice about how to function as part of established communities. The emphasis was on a sustainability made possible by better science, more technology, and the sharing of information and techniques. In Clayoquot, the Model Forest Program succeeded, at times, in bringing a range of divergent and even hostile stakeholders together across the shifting terrain of new forest management practices and reduced logging; however, it did not do enough to prevent its demise. Thus, this story also asserts local priorities and visions of sustainability within an organization structured along federal lines and constrained by provincial limitations. Simply put, the presence of a model forest opened space for discussion. It was fundamentally and inescapably fraught, however, with

[68] L. Buttolph and S. Doak, *The Integration of Knowledge in Place-Based Ecosystem Management* (Portland, OR: Ecotrust, 2000), vi.

[69] Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press, 1987).

tensions regarding what constituted "real work" in the forest and with the challenge of dealing with many social and cultural changes to local landscapes.

CONCLUSION

Seeking forest sustainability means seeing the landscape in a new light, and it requires innovation both in how we know the forests and in how we manage them. The sum of the LBMF experiment clearly demonstrates that forest-planning processes must account for social needs and community concerns. This argument has been made by countless scholars and activists. However, it is worth discussing this recommendation with an eye to the role of work in the woods. In 1998, the LBMF was told by an advisory group that it should "move to the forest" and realign its work because its projects were not truly linked to forest management. But the LBMF was already deeply entrenched in the forest in another sense. The LBMF, much to the exasperation of many, was like an opening in a dyke, through which the muddy waters of forest politics in Clayoquot Sound threatened to rush. It gave money and a soapbox to a contentious and forward-thinking region of British Columbia. And this only served to increase the swirling tensions. Just as many in the Sound latched onto the LBMF and tried to steer it towards change, the province made sure that it had no political teeth. First Nations and others recognized this from the start, exhausted as they were from myriad failed processes that had occurred over the previous twenty years, and they were frustrated by the "uselessness" of the LBMF. Simply put, the people of Clayoquot Sound and surrounding areas were not willing to try any more vague projects that would not visibly work for them. The abstract mandate of the Model Forest Program had not found a very comfortable home on the west coast of Vancouver Island, where it was subject to more questioning than was any other model forest site in Canada.[70]

Yet it is this essence of confusion and criticism that encapsulates all dealings with forests. Forests can no longer be regarded as simple spaces of resource extraction or wilderness. They are actual places, composed of people, materials, processes, bodies, and desires – all situated in their own contingent historical experience. To manage such an assemblage, even for a single use such as timber, is to consider a very complex world: labour relations, community viability, ecosystem health, watershed properties, tenure, and law are merely a few of the issues that must be

[70] LBMFS, *Minutes of Board of Directors' Meeting, February 11th,* 1998 (Ucluelet, BC: LBMFS, 1998).

considered. The forest is not known only by those who walk among its trees wielding spiritual treatises or power tools. It is also known through various other interpersonal, social, and cultural relationships. The spectres of work and community are sites of experience and knowledge, and these must also be taken into account when considering how we relate to forests and what we want from them.

It has been said that all environmental problems and all environmental politics are local. Forestry is both a global and a local thing. It is shaped by the practice of local politics, influenced by outsiders, and enabled, at times, by organizations such as Model Forests; however, whatever happens is largely executed by residents with vested personal experience in places like Clayoquot Sound. The interaction of the materialist structures of environmental politics and the social power of local politics creates both real and imagined landscapes, such as the complex post-modern forest that I have described. As R. Lipschutz points out: "Those landscapes reflect decades or centuries of patterned and organized human activity … but those landscapes can be changed, either deliberately or accidentally, and we make those changes with some imagined goals in mind."[71] These imagined goals vary across scales, leading to an inevitable "messiness" in multi-stakeholder planning – a messiness that will only increase as pressures on existing resources increase. And much research remains to done on the recent experiences of multi-stakeholder planning in British Columbia. As environmental historian Jay Taylor comments, geographers and social scientists have gone far in explaining conflicts over places like the Great Bear Rainforest on British Columbia's coast: "Still missing, though, is the sort of nuanced attention to details that historians, more than practitioners of any other discipline, bring to scholarly discussions … The personal and environmental contingencies of negotiations, alliances, and agendas, the things historians specialize in tracing with care, are not just epiphenomena but vital pieces to this puzzle."[72] Thus, the LBMF story is not merely a minor historical account; rather, it is salient to our understanding of intergovernmental processes that seek sustainability in the face of change.

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[71] R. Lipschutz, *Global Environmental Politics: Power, Perspectives, and Practice* (Washington, DC: CQ Press, 2004), 135.

[72] J. Taylor, "Boundary Terminology," *Environmental History* 13, 3 (2008): 454-81.