ONE ECOSYSTEM, TWO STRUCTURES OF GOVERNANCE: OLD GROWTH FOREST PRESERVATION IN BRITISH COLUMBIA AND ALASKA

Jessica Brooks
PhD Student
Forest Resources Management
University of British Columbia
jebrooks@interchange.ubc.ca

George Hoberg
Professor
Forest Resources Management
University of British Columbia
george.hoberg@ubc.ca

CONFERENCE DRAFT – COMMENTS WELCOME

PAPER TO BE PRESENTED AT THE ANNUAL CONFERENCE OF THE
CANADIAN POLITICAL SCIENCE ASSOCIATION,
UNIVERSITY OF SASKATCHEWAN,
MAY 30-JUNE 1, 2007

INTRODUCTION

Coastal temperate rainforests are one of the rarest ecosystems on the planet. Requirements for very specific growth conditions – proximity to oceans, the presence of coastal mountains, cooler summer temperatures and high precipitation in all seasons – has meant that these forests have only ever accounted for two to three percent of the world's estimated 1.3 billion hectares of temperate forest. Historically, the world's largest contiguous tract of coastal temperate rainforest flowed along the northwestern margin of North America, from Kodiak Island in Alaska through British Columbia, the U.S. Pacific Northwest, and into California. Over time, however, 44 percent of this forest system has fallen prey to development and now the largest intact tract exists only in Alaska and northwestern British Columbia. Despite this development, this region still makes up the largest continuous tract of intact coastal temperate rainforest in the world (Wolfe et al, 1995).

This spectacular, globally distinctive ecosystem is divided by political boundaries – between the state of Alaska in the United States and the province of British Columbia in Canada. As a result of this ecologically artificial division, efforts to conserve the ecosystem have been particularly challenging. Rather than addressing the ecosystem as a whole, the two countries have had their own, quite separate but intense conflicts on each side of the border. As a result, extensive policies addressing the management of these areas have been individually established by the governments of British Columbia and the United States. Despite the identical ecosystem and remarkably similar policy problems and political conflicts on both sides of the border, the actual levels of ecosystem protection established in the two regions differs significantly. More than twice as much old growth forest wilderness is protected in Alaska as in British Columbia.

In Alaska, the Tongass National Forest has been at the centre of controversy since the 1970s. At its core, this battle is grounded in the same issue that frames much of the forest controversy around the world: conflict over what constitutes the appropriate balance between timber harvest (particularly of old growth trees) and conservation. Located in southeastern Alaska, the Tongass covers approximately 17 million acres (7 million hectares) (USDA Forest Service, 2005a). The Tongass is the northernmost reach of the largest remaining temperate rainforest in the world and contains extensive old growth timber, fisheries, wildlife, mineral and scenic resources (Nie, 2006; Everest et al. 1997). The battles fought over the Tongass have been fierce, highly adversarial, and from a conservationist perspective, extremely successful, with current levels of protection standing at approximately 80 percent (Hoberg 1997; USDA FS, 1997).

Across the border in British Columbia's "Great Bear Rainforest" (GBR), the battles have been fought over a shorter time period than those of the Tongass, but both the intensity and the context within which they occurred were very similar. Located on the central and north coast of British Columbia the GBR occupies approximately 16 million acres (6.4 million hectares) of land and is the same coastal temperate rainforest ecosystem as the Tongass (BC Ministry of Agriculture and Lands, 2006; Hoberg et al, 2004). The GBR houses major populations of 6 Pacific salmon species, 20 of the world's salmon species, provides habitat for a range of wildlife, including the rare 'Spirit Bear' a white black bear, and contains much of the last old growth temperate forest in Canada (ForestEthics, 2006a). In February of 2006 the Province of British Columbia announced that protection levels for the GBR would be set at 1.8 million hectares (~4.5 million acres), or approximately 33 percent of the total area. While this level of protection has been viewed as a resounding success by government and environmentalists alike, in a

comparison with the adjacent Tongass National Forest, the disparity in outcomes is both enormous and puzzling.

This paper begins with a brief overview of the three component factors used in the analytical framework, namely ideas, actors, and institutions. A structured comparison of the two case studies is then presented, focusing on the process used to develop policies and the resulting outcomes in the Tongass and the Great Bear Rainforest. The final section examines potential explanatory variables within the analytical framework, and assesses their relative influence in explaining the policy divergence between the Great Bear Rainforest and Tongass protected areas outcomes. We conclude that while there were important economic differences that contributed to the divergent outcomes, the institutional differences reflected in the combination of legalism and more centralized federalism were critical to the more protective outcome in Alaska.

This paper focuses on how the two countries dealt with the conflict between environmental and economic values in land use planning in these two areas. In both jurisdictions, relations between "colonial" governments and aboriginals have also been extremely important, and a full accounting of these cases would need to include a detailed treatment of the role of aboriginal groups. While this analysis touches on aboriginal issues in passing in several instances, they are considered beyond the scope of this analysis.

ANALYTICAL FRAMEWORK

Within contemporary debates, analyses of public policy processes and associated outcomes tend to be loosely situated within a framework of three broad categories of intersecting factors: ideas, actors, and institutions (Hoberg 2001; Howlett and Ramesh 2003; Harrison, 2002). Scholars differ on the relative importance of each of these factors in explaining outcomes. Structured comparative case studies such as those addressed here provide insights into the relative importance of different explanatory factors as a key explanatory variable.

In theory, one might reasonably expect that outcomes in environmental policy making between Canada and the United States would be similar. Both countries are highly developed economically, and have many shared values. The problems faced, the structure of interests at stake, the policy instruments available, and the scientific knowledge relied on are all frequently very similar (Rabe and Lowry, 1999). However, disparity in environmental policy outcomes between the countries happens frequently (Banting, Hoberg, and Simeon 2002).

Policy results from the complex interaction of ideas, actors, and institutions. The influence of ideas on public policy has gained increasing prominence over the past several decades. Perhaps the most influential conceptualization of the role of ideas has been that of Goldstein and Keohane (1993), who identify three distinct types of ideas that are relevant to policy: world views, principled beliefs and causal ideas. As an organizing set of ideas, world views (also referred to as ideologies) tend to be diffuse in nature and help people to make sense of complex realities. Such sets of ideas do not translate easily into specific perspectives on policy, however, due largely to the broad-reaching nature of their focus. Principled beliefs and causal ideas, however, are far more likely to exert a direct influence on both problem recognition and policy content (Goldstein and Keohane 1993; Howlett and Ramesh, 2003). Principled beliefs are normative ideas that provide guidance on how to determine right from wrong action. Causal ideas, on the other hand, speak largely to means, or in other words, assign cause and effect by

strengthening our understanding of a particular relationship. Within the context of public policy, arguments utilizing both principled beliefs and causal ideas are put forward by various interests and are framed to highlight the political position being advocated. The resulting body of knowledge both informs decision-makers while also acting as a constraint on policy-making (Hoberg, 1998).

In this study, we would generally expect ideas to be a force for convergence. Interest groups and policy makers were influenced by the same ecosystem science on both sides of the border.

The second major category of explanatory factors is interests, or actors, which are those individuals and organizations that play a key role in both the development and implementation of public policy. One of the more influential approaches for understanding actors and their role in the policy process is that of policy networks. Simply defined, a policy network is the pattern of interaction among and between interest groups and state institutions (Atkinson and Coleman, 1992; Hoberg, 2001). Actors differ in the strength of their ability to influence policy outcomes, and the success of these actions will often depend on the nature and strength of the resources that they are able to bring to bear on a policy issue. In their efforts to influence policy, actors adopt strategies of influence that are frequently influenced by ideas and, especially, by institutions (Baumgartner and Jones 1991).

In our study here, the role of actors in explaining outcome is a function of the relative balance of power between the competing interests at stake. If we look at the key axis of conflict as between environmentalists and the timber industry, if the balance of power between these two groups is similar in the two jurisdictions, they should be a force for convergence. However, if one group has a greater comparative resource advantage in one jurisdiction, we would expect them to be a force for divergence. We test the proposition that *the greater the regional economic dependence on forestry, the lower the level of preservation will be.*

The third category of variables we analyze is institutions. Definitions as to what constitutes an institution vary within the policy studies literature. Crawford and Ostrom (1992) view institutions as "enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world. The rules, norms, and shared strategies are constituted and reconstituted by human interaction in frequently occurring or repetitive situations" (582). Other definitions, however, are not quite so encompassing. Peter Hall, for example, describes institutions as "the formal rules, compliance procedures, and standard operating practices that structure the relationship between individuals in various units of the polity and economy" (in Howlett & Ramesh, 2003: 44). We adopt a somewhat narrower definition here: institutions are the "rules and procedures that allocate authority over policy and structure relations among various actors in the policy process" (Hoberg, 2001: 11).

While there is lively debate within the political science literature on exactly how much institutions matter in the policy-making process, there is a general agreement that they have a significant influence on both the resources that are available to actors and the strategies that they adopt (Hoberg, 2000). As a result, the institutional differences between Canada and the United States may be an important force for divergence in these cases.

Despite enormous pressures for integration and convergence, the US and Canada retain remarkably different political institutions. The fundamental differences between the parliamentary and presidential systems of government manifest themselves in the environmental

policy domain in two core differences: the degree of legalism and the relative centralization of the two countries' federal arrangements. The US system is characterized by what has variously been called "adversarial legalism" (Kagan 1991) or "pluralist legalism" (Hoberg 2000), consisting of the following three elements:

1. formal administrative procedures with widespread access to information and rights to participation for all affected interests;
2. organized environmental groups with access to courts; and
3. nondiscretionary government duties *that are enforceable in court* (Hoberg 2000, 29 emphasis added).

Broadly speaking, the US system is characterized by adversarial legalism, minimal executive discretion in policy interpretation, and judicial rulings (Salazar and Alper, 2000).

The US also has a much more centralized system of environmental management than in Canada. The federal government generally plays a much larger role in environmental regulation. In the case of forest policy, the level of jurisdiction depends on land ownership. Nation-wide, approximately two thirds of the forested land base is under private ownership (USDA Forest Service, 2006a), which is regulated by state governments. In the Western US, a much higher fraction of forestland is under federal ownership and control, especially through the system of National Forests with the US Forest Service. In Alaska, virtually all forestland is under US Forest Service control.

Unlike the United States, forest management in Canada is characterized by executive-centred bargaining, and far less centralized. Where the American system actively separates the legislative and executive braches of government, the Canadian parliamentary system combines them. The absence of an independent legislature means that Canadian governments shy away from the non-discretionary duties that characterize American environmental law. Canadian laws typically provide broad grants of authority in "enabling" legislation, but don't bind the Crown to any specific actions. Because the government has so much more discretion, there is little room for the courts to play a role in forcing government action. Instead, Canadian policy development relies far more heavily on negotiation between interest groups and government than does the American process (Rabe and Lowry, 1999; Hoberg 2000). Canadian environmental policy is generally much more decentralized than in the US, and this pattern is reflected in forest policy. Forest policy is dominated by provincial governments, largely through their constitutional control over land.

These institutional differences have the potential to contribute to divergent outcomes. Perhaps the most significant effect of legalism is that governments are more highly constrained by interest groups. The policy implications of those constraints depend on the balance of the legal tools held by the competing interests in a particular policy dispute. This paper will test the proposition that "*Because of the pro-environment structure of American forest law, the greater legalism is the United States is an advantage for US environmentalists over their BC counterparts"* (Hoberg 2000, 38). The effect of different levels of decentralization depends on the balance of interests at the different levels of government. In considering the balance between forest industry and environmental attitudes, in many cases the closer one gets to where the

economic benefits of timber extraction are, the more likely one is to have pro-industry views. Alternatively, the further away one is from direct economic benefits of forest harvesting, the more environmentally oriented one is likely to be. In his study of US forest policy at different levels of jurisdiction, Koontz found that forests under federal control were managed to higher environmental standards than those under state control (Koontz 1997; 2002). This paper tests the hypothesis that "*the more decentralized the jurisdiction, the less preservationist the policy outcomes is likely to be"* (Hoberg 2000, 39).

The remainder of this paper will explore the impacts of ideas, actors and institutions, and in turn, external influences on these, on the processes and resulting protected area policies for the Great Bear and Tongass rainforests. The following section provides case study descriptions of the events surrounding the two forests and is followed by an analysis of the policy processes and consequent outputs. Data used in the case studies is drawn from the time period in which the key protection policies for the regions were established and in the case of employment statistics, focuses on those sectors that are/were most likely to be impacted by changes in the resource policy environment.

CASE STUDIES

THE GREAT BEAR RAINFOREST: A CASE OF COLLABORATION

British Columbia has a significant historical tradition intimately linking its economy with forestry. This coupling, however, has been fraught with political tension and conflict, most particularly over the course of the past three decades (Wilson 1998; Cashore et al 2001). Following a path characterized by conflict, negotiation, and collaboration, the case of the Great Bear Rainforest is a prime example of BC's 'war in the woods' and offers unique insights into the process of policy formation within the Canadian context.

Dubbed the 'Great Bear Rainforest' by environmentalists during their decade long fight to protect the region from logging, this 15.5 million acre forest area is located on the central and north coasts of British Columbia and in conjunction with the Tongass makes up the longest stretch of intact temperate rainforest remaining in the world (Prescott-Allen, 2005; ForestEthics, 2006b). High rates of rainfall, mild temperatures and a diverse and rugged terrain have combined to create a wonderfully rich and varied ecological environment. The rainforest contains some of the world's oldest and largest trees, provides habitat for grizzly and black bears, including the white coated Kermode bear (also known as the Spirit Bear), wolves, mountain goats and black tailed deer. Hundreds of species of birds inhabit the forests, several of which are globally important seabird species such as the marbled murrelet, and Pacific salmon spawn in the region's numerous rivers and streams (2005; Coast Forest Conservation Initiative, 2006). About 60 percent of the region is forested, approximately half of which is comprised of old growth[1] trees (>250 years) (CCLRMP, 2004; Rainforest Joint Solutions Project, 2006)

Regional and Policy Context

The coastal population of 35,000 is both low and isolated, with many of the small communities that hug the shoreline accessible only by boat or air (Riddell, 2005). Although

[1] This statistic is for the Central Coast LRMP region and does not account for the North Coast LRMP area.

remote, these communities are home to many of the region's local First Nations, who have both a historical and, through the BC treaty process, legal interest in the land.

Developing aggregated statistics for the Great Bear Rainforest region is complicated by the fact its borders do not conform to a consistent set of political boundaries and by differences in the years for which appropriate types of data sets are available. Separate statistics for the central and north coasts, however, indicate that as whole, regional employment is dominated by resource industries and the public sector.

Table 1: Distribution of 2001 Central Coast and 1996 North Coast

Direct Employment and Average Annual Income by Major Resource Sector

Employment Sector[2]	Central Coast % of labour force (n=2,456)		North Coast % of labour force (n=9,972)	
	Total Employment	Average Annual Income	Total Employment	Average Annual Income as % of Total Regional Income ($270.7 mill)
Forestry	15%	13%	20%	22%
Fishing	19%	11%	24%	15%
Mining	0%	0%	0.3%	0.2%
Tourism	13%	6%	15%	8%
Other[3]	53%	70%	41%	55%

CCLRMP (2006: 6-7); Tamblyn and Horn (2001: 13)

As indicated in Table 1, at 15 percent for the central coast and 20 percent for the north, forestry comprises a significant proportion of resource-based employment for the region and provides a higher average annual income than any of the other resource-based industries (13 and 22 percent for the central and north coast respectively).

This forest dependence presents many challenges to the region, as provincially the forest industry is struggling with a number of issues. The cost of producing lumber on the coast is, on average, higher than in all other North American lumber supply regions. Between 1992 and 2001 the cost of logging along the coast has risen from $67 per m^3 to $108 per m^3 (Lefebrve et al, 2003). The decline of the Asian market in the late 90s pushed BC to expand existing trade relationships for timber products, particularly with the United States. This reliance on US

[2] Non-basic sector employment statistics are allocated to the basic sector from which they arise.
[3] The Other category includes public sector employment, which is the single largest employment sector for the broader regions within which the Great Bear Rainforest is located.

markets has been facing growing constraints due to the softwood lumber dispute, however, and access has become increasingly restricted. Coupled with rising international competition and decreasing forest stock it is not surprising that employment in the forest sector has dropped substantially from its peak in the 70s and 80s (BC Stats, 1998; Cashore et al, 2006; Prescott-Allen, 2005). Regional forest operations in the region average lower net revenues than in comparable ecosystems elsewhere in the province (Pojar 1999).

Fishing occupies a higher proportion of regional employment at 19 and 24 percent for the central and north coasts respectively than does forestry. In terms of income, however, it plays a lesser role, particularly along the north coast. A traditional coastal resource sector, fishing is currently limited due to past depletion of stocks, although it still plays an important role in the subsistence economy, as does locally gathered food.

At 13 and 15 percent of total employment (although significantly less with respect to income), tourism is thought to operate below potential, but is gradually increasing as visitors are drawn to the region's dramatic landscapes and rugged coastline. As indicated in Table 1, mineral development is of minimal economic importance to the area and generally surrounded by uncertainty, while offshore oil and gas exploitation is currently barred by a moratorium. Overall, only a relatively small proportion of the benefits derived from developing the region's natural resources flows back to local communities and First Nations. Unemployment is high and economic development opportunities are hampered by inadequate access to markets, lack of capacity and infrastructure, and the geographical remoteness of the region (Prescott-Allen, 2005).

Preserving the Great Bear Rainforest: From Conflict to Collaboration

The strategies employed by environmental groups in the GBR were strongly influenced by past campaign experiences in the Clayoquot Sound region of Vancouver Island. As Shaw discusses, BC citizens attempted to influence forest policy by using civil disobedience to "convince the government that the democratic will of the people of the province was for the protection of the region" (Shaw 2004, 378). Despite hundreds of arrests in Clayoquot Sound, however, the Province remained firm in its commitment to retaining an industrial forest economy for the region, a commitment that prompted what has proved to become one of the most effective strategies in contemporary BC environmental politics.

After failing to receive any significant commitment for change from the government, BC environmentalists re-focused their efforts from civil disobedience to shifting the venue of the campaign out of the provincial arena and into the international marketplace (Pralle 2003). Conducted primarily through the use of consumer boycotts, this strategy proved to be enormously successful and served as the catalyst for the creation of the development and application of new and innovative resource management policies for Clayoquot Sound (Hoberg and Morawski 1994). The success of this strategy in influencing regional changes in provincial forest policy played a significant role in shaping the Great Bear campaign.

During the 1990s the then New Democratic Party government initiated a multi-stakeholder system of land-use planning in most regions in BC. Although this system has evolved with the passage of time, the general intent and current framework of the Land and Resource Management Planning process (LRMP) is to establish resource management strategies at the sub-regional level. The province adopted the goal of protecting 12 percent of the provincial land base from all forms of resource extraction (Wilson 1998; 2001).

While the LRMP process has generally been highly successful, it was very challenging in the case of the North and especially Central Coast planning tables that covered the Great Bear Rainforest region. Frustrated with the 12 percent cap on protected areas and the government's 'talk and log' approach to negotiations, environmentalists refused to participate in the planning tables when they were initiated. First Nations, already upset by prolonged treaty negotiations throughout the province, were displeased with their classification as 'stakeholders' in the face of a 1997 Supreme Court ruling establishing that aboriginal Rights and Title in BC had never been extinguished and that First Nations have unresolved claim to vast tracts of land, including those in the Great Bear region (Riddell 2005: 68).

Frustrated by the government sponsored process, environmental groups redirected their focus to the type of campaign that had proven to be so successful in Clayoquot Sound (Hoberg et al, 2004). Beginning in 1997 a consortium of several environmental groups organized a campaign designed to shift the venue within which the Great Bear Rainforest issue was housed from a government sanctioned, provincial-level process into the public and international arenas. In addition to creating the appealing name "Great Bear Rainforest" for the region, strategies utilized in the campaign included the marketing of the Spirit Bear, a charismatic mega-fauna that quickly came to serve as a global symbol for the Great Bear Rainforest; demonstrations; and most importantly, an international boycott campaign designed to hit the forest industry where it hurt the most – in their wallets (Rainforest Solutions Project, 2006a). Responding to pressure from consumers and the environmental campaigners, large retail purchasers such as Home Depot, Ikea and Lowe's began to go public with announcements of intentions to cease purchasing wood derived from environmentally sensitive areas. All told, cancelled contracts with BC wood suppliers working in the GBR totalled over $300 million (Riddell, 2005).

Although the forest industry initially denied the presence of a problem, the move by retailers soon forced them to take the environmental criticisms seriously. By the spring of 1999 several large forest companies grouped together to form the Coast Forest Conservation Initiative (CFCI) and proposed a 'cooling off' period wherein they would cease logging activity in the GBR in return for a cessation of the international market campaign (Hoberg et al, 2004). Talks between the CFCI and several domestic and international environmental groups (who later banded together to form the Rainforest Solutions Project) began in fall of the same year with the concept of ecosystem-based management (EBM) as a new approach to forest management taking a central role. Negotiation between the two groups continued until 2001, with a parallel process involving the relevant First Nations.

Finally, on April 4, 2001, an interim agreement involving industry, environmentalists, First Nations and the Province of British Columbia was signed. While this agreement did not constitute a final land-use plan, it established agreement on several key issues, including:

- protected areas covering 21 percent of the region
- deferment of development in 11 percent of the region, pending additional studies
- the establishment of a $10 million mitigation and transition fund for local communities
- the development of an ecosystem-based management approach to regional resource management
- an agreement between the Province and eight local First Nations to develop a new mechanism for reconciling aboriginal and crown title in land use planning

- the establishment of an independent science team – the Coast Information Team (CIT) (Hoberg et al, 2004)

Table 2: Timeline of Events Leading up to the Great Bear Agreement
Source: *Rainforest Solutions Project, (2006a)*

Year	Event
1995	Great Bear environmental campaign begins
1996	Government of BC initiates Central Coast LRMP. Environmental non-governmental organizations (ENGOs)refuse to participate.
1997	ENGOs organize international market campaign.
1998	ENGOs negotiate with coastal forest companies to implement temporary moratorium on logging in intact valleys in exchange for participation in the CCLRMP.
1999 (March)	ENGOs negotiate with Province to sit at CCLRMP in exchange for no upper limit on protected areas and additional environmental and economic studies. Market campaign continues.
1999 (Nov.)	Four major ENGOs begin negotiations with four major coastal forest companies for a moratorium on logging in intact valleys in the GBR while land use planning is underway (Joint Solutions Project).
2000 (March)	Eight coastal First Nations endorse the idea of ecosystems based management.
2000 (May)	ENGOs and forest companies reach an agreement wherein logging companies implement a moratorium on logging in exchange for a cessation of the market campaign.
2000 (July)	ENGOs and forest companies (Coast Forest Conservation Initiative) establish the Joint Solutions Project.
2000 (Nov.)	Newly elected Liberal government endorses the Great Bear Rainforest Interim Agreement
2000 (Dec.)	CCLRMP reconvenes to continue work on land use designations.
2001 **April 4th**	All parties at the CCLRMP reach agreement on an **interim agreement** on protected areas, logging moratoria, an EBM framework, funds for economic transition, and the establishment of an independent scientific panel (CIT). Agreement is endorsed by provincial government. CCLRMP continues.
2002	North Coast LRMP convened.
2003	CCLRMP reaches consensus.
2004 (spring)	Government to government discussions between the Province and First Nations about the GBR begin.
2004 (June)	NCLRMP reaches conditional consensus.
2004 (July)	BC government accepts recommendations from the LRMP tables on protected areas. Formal government-to-government negotiations begin.
2005 (Feb.)	NCLRMP achieves consensus.
2006 **February 7th**	BC Government announces first of the permanent land-use designations in the GBR.

Between 2002, the year in which it became operational, and 2004 when it completed its work, the Coast Information Team played a pivotal role in the land use planning process for the coastal LRMP tables. Funded by the provincial and federal governments, environmental groups, and forest products companies, the CIT was charged with the role of bringing independent information (science, traditional and local knowledge, and community experience) and analyses to the coastal planning process, and to design an ecosystem-based management plan for the specifically intended for use by the coastal LRMP tables to aid in the development of recommendations for land use decisions in the Great Bear Rainforest.

Table 3: Land Use Designations for the Great Bear Rainforest

Status	Land Use Designation	Acres (millions)	Percentage	Aggregate Percentage
Protected	Existing & New Protected Area	4.5	28%	**33%** **(protected)**
Minimal Development	Biodiversity Area	.7	5%	
Not protected	Ecosystem-Based Management Operating Area	11	67%	**67%** **(not protected)**

Source: *Rainforest Solutions Project, (2006b);BC MAL (2006)*

On February 7th, 2006 the Provincial Government announced its land-use decisions for the Great Bear Rainforest. The announcement made the front pages of the New York Times, Washington Post, and Los Angeles Times, and the two most prominent activist groups on the issue, Greenpeace and ForestEthics, both declared victory on their campaign webpages. Great Bear region (CIT, n.d.). The compendium of information developed by the CIT was

Under the new land use designations Protected Areas[4] will be exempt from commercial forestry, major-hydro electric developments and mineral exploration. The Biodiversity Areas are to be established as mining/tourism areas with commercial harvesting prohibited. Due largely to the lack of a historical presence and complications arising from difficulties in accessing markets, mining is not expected to have any significant impacts on the region. The Ecosystem-Based Management Operating Areas will be managed according to a new, more ecologically sensitive system of planning and practices. The detail of that framework have not yet been resolved; the parties to the agreement undertook to do so by March 2009 (BC Ministry of Agriculture and Lands, 2006). Despite the fact that an implementation process has still to be established for 67 percent of the region, clear protection has been established at 33 percent of the total area of 15.5 million acres (BC Ministry of Agriculture and Lands, 2006a; ForestEthics, 2006b).

[4] Subject to a few minor exemptions as a result of government to government negotiations between the Province and First Nations.

No public data seems to be available on the fraction of old growth forest that is proteced. Data supplied to us by the Rainforest Solutions Project suggests that representation of old growth in protected areas is certainly not any higher than the regional level of protected land, and possible significantly lower. Of the 6,355,000 hectares in the Central and North Coast areas, 58% is forested, but only 13% of the region is in the so-called "timber harvesting land base", which reflects those areas that are considered economically operable. These economically operable areas are frequently also the most ecological productive. The total fraction of protected forest mirrors the 33% of the overall protected land area, but only 15% of the timber harvesting land base is set aside.[5]

The Great Bear Rainforest is a revealing case study of new modes of governance in BC forest policy conflicts. Environmentalist were not satisfied with their influence in government-sponsored multi-stakeholder processes. Through strategic venue shifting to take advantage of international market pressures, environmentalists were able to force industry and government to accommodate their views, and as a result they gained a substantial amount of protection for old-growth coastal rainforests in BC. How do their accomplishments compare to their counterparts across the border in Alaska?

TONGASS NATIONAL FOREST: PRESERVATION THROUGH LEGISLATION AND LITIGATION

Overall, the United States has little left in the way of large tracts of wild landscapes. The Tongass National Forest represents some of last and best of its kind, and has been the focus of ongoing protection efforts since the 1970s. Many of the same interests that were represented in the Great Bear Rainforest are also present in the Tongass. However, the group strategies and policy process show considerable divergence from those adopted by their Canadian counterparts.

Created in 1907 by Teddy Roosevelt, the Tongass is the largest national forest in the United States (SEACC, n.d.). The 17 million acres of this forest are distributed over most of the more than 22,000 islands of the Alexander Archipelego and a narrow strip of mainland, and occupy almost 80 percent of the land base of the southeastern Alaskan panhandle (Nie, 2006; Everest, 2005). An eastward flow of warm ocean currents in the Gulf of Alaska creates a maritime climate, giving the Tongass heavier precipitation and milder climates than might be expected that far north (2005). In combination with the unique island geography this has created a beautiful and wild region that is home to numerous plant and animal species, including brown (grizzly) and black bear, mountain goats, and wolves. The archipelago and mainland also support one of the world's most productive and highly valued salmon fisheries (2005). Approximately 60 percent of the region is forested, 56 percent of which is old-growth (>150 years). The remainder of the region includes habitats such as ice fields, muskeg and mountainous terrain (USDA FS, 1997b; Everest et al, 1997).

Regional and Policy Context

Much like the Great Bear, the population of the Tongass is both low and isolated. Approximately 73,000 people live in the region, the majority of whom are located in the cities of Juneau (the state capital), Ketchikan, and Sitka. The rest inhabit small villages scattered throughout the region. Of these cities and communities only three are connected to the mainland by roads (Nie, 2006; Szaro et al, 2005; USDA, 2003). The Tongass is also the traditional home

[5] Information supplied by Tom Green of the Rainforest Solutions Project.

of several American aboriginal peoples, including the Tlinglit, Haida and Tsimsian – many of the same groups found in the Great Bear Region.

The history of protected areas policies for the Tongass is discussed in detail below, however, it should be noted that the current land use management plan for the Tongass and its interpretations of protectionist policies and associated land use designations were established in 1997. In order to provide an analysis that is reflective of conditions at the time in which the key land use strategies for the region were completed, statistics used in this case study are drawn from data of that time.

The economy of southeastern Alaska was, and remains, highly complex and heavily dependent on the multiple resources of the Tongass. Detailed economic analyses of the region are difficult as they are often skewed by the domination of Juneau in aggregate statistics, a city whose fortunes are largely independent of the rest of region's due to the importance of state government employment (Robertson, 2004).

During the time period under analysis, approximately 23 percent of direct employment in southeastern Alaska was linked to natural resource-dependent industries, and 25 percent of the total income for the region derived from the same sectors (see Table 4). (Everest, 2005; Allen et al, 1998; USDA FS, 1997b).

Fishing and processing were and (continue to be) a vital component of the regional economy, as evidenced by their capture of 40 percent of resource dependent employment. At the time of the 1997 Tongass Land and Resource Management Plan (TLRMP), however, the industry had begun to experience decline as a result of the growing success of commercial farming of Atlantic salmon in Canada and Chile. This particular issue has persisted well into current times; in the 1980s Alaska was a major force in global salmon markets with contributions hovering at 50 percent; by 2000 that percentage had dropped dramatically to 20 (USDA FS, 1997b; Kruger, 2005; Crone, 2005).

While mineral exploration and development supplies only a small fraction of regional employment and accounts for only two percent of resource dependent jobs, it has a long history in Alaska. In 1997 there were 13 identified mineral deposits in the Tongass that were known to be economically viable, with an estimated net value of approximately $25.6 billion (USDA FS, 1997b: 3-464). More recently, however, mineral exploration and development has also decreased due to low metal prices and rising costs leading to an overall decline in industry expenditures (Crone, 2005).

Unlike the resource sectors, tourism and recreation have been steadily growing in the region. In the ten years prior to 1997, tourism and recreational use of the Tongass National Forest more than doubled, and at 34 percent of resource dependent employment at the time of the TLRMP were second only to the combined weight of fishing and seafood processing (USDA FS, 1997b). As regional tourism has continued to increase, the Inside Passage in particular has become one of the most visited areas in the state and is subject to a great deal of cruise ship traffic (Kruger, 2005). Such increases, (cruise ship or otherwise) both in 1997 and now, have had several spin-off effects for the Tongass regional economy, gradually leading to increases in government, retail and service employment (Robertson, 2004). The overall impact of these changes has been a decreasing reliance on resource extraction and (primarily fisheries) processing, and an increasing dependence on tourism and other non-manufacturing activities.

Table 4: Distribution of 1995 Southeast Alaska Direct Employment and Average Annual Income by Major Resource Sector

Employment Sector	% of labour force (n=37,307)		
	Total Employment		Average Annual Income as % of total regional income ($1,153.0 mill)
	% of resource dependent	% of total (n=8580)	
Resource Dependent	**23%**	-	**25%**
▪ Salmon Harvesting	▪ 21%	▪ 5%	▪ 4%
▪ Seafood Processing	▪ 19%	▪ 4%	▪ 4%
▪ Mining	▪ 2%	▪ 0.5%	▪ 1%
▪ Recreation & Tourism	▪ 34%	▪ 8%	▪ 8%
▪ Wood Products	▪ 24%	▪ 6%	▪ 8%
Other[6]	77%		75%

Source: *Final Environmental Impact Statement: Tongass National Forest Land Management Plan, 1997(USDA FS, 1997b: 3-3441-3-3443)*

In 1995, forestry accounted for 24 percent of resource dependent employment and 8 percent of the region's total average annual income. At the time, the forest sector was in decline, and has weakened still further since then. In 1990, approximately 440 million board feet were harvested on the Tongass, but by 1997 that had fallen to 110 million board feet, a 75% decline (and by 2005, had plummeted further to 50 million (USDA Forest Service 2007, 3-248)). Although strongly linked to the specific political processes at work in the Tongass, there are a number of other factors that are also relevant. Traditionally, Japan has been the primary market for Alaskan forest products. In 1994, for example, Japan accounted for approximately 93 percent of Alaska's lumber exports and 75 percent of its log exports (USDA FS, 1997b). Much as has been the case in British Columbia, however, the Asian recession decreased demand for Alaskan timber and increased price sensitivity in the Japanese market. Changes to Japanese building codes following the 1995 Kobe earthquake also resulted in green hemlock, a major Alaskan export, losing favour to kiln-dried lumber, a product that is far more immediately accessible from Scandinavian markets (Crone, 2005).

[6] The Other category includes government employment, which accounted for 32% of total southeastern Alaska employment in 1995, and services, which captured 40% of total employment during the same time period (USDA FS, 1997b).

Closer to home, throughout the 1990s and at roughly the same time as international forces were at work, three pulp mills in southeastern Alaska shut down, leading to a loss of over 1500 jobs and eliminating the primary market for low-grade and utility logs and local markets for mill residues from lumber production (USDA FS, 1997b; Crone, 2005; SEACC, 2003).

In much the same way as the Great Bear Rainforest, the Tongass has also been a difficult terrain from which to access markets. Although more recent than the time period under scrutiny, a 2001 study by Robertson and Brooks (in Crone, 2005: 219) offers a useful analysis, finding that southeastern Alaska functions at a comparative disadvantage in the forest products sector due to higher factor costs and the lower productivity of factor inputs. In fact, the longevity of the forest industry in the Tongass has been due in large part to massive subsidies, below-cost sales and extensive efforts by the US Forest Service to create a stable economic base (Hoberg, 2001b). These last factors are also key to understanding the evolution of the process used to protect the Tongass, and are explored in further detail below

Preserving the Tongass: The Role of Congress and the Courts

Only 55 percent of the land managed within the Tongass is forested. Of this, the primary battle is concerned with approximately 300,000 acres of high productivity old growth, which many argue is the 'biological heart' of the Tongass (Nie, 2006; van Heese and Mead, 2005). Many of those involved in the conflict surrounding the Tongass represent the same interests as those found in the BC case: environmentalists, government, industry and aboriginal peoples. The processes at work in the Tongass, however, diverge considerably from those at play in the British Columbia.

To understand how the protected areas in the Tongass were developed the key rests in understanding the Congressional legislation that governs the region. As Nie (2006: 7) discusses, much of the conflict that has occurred in the Tongass is the direct result of a "legacy of various ideas, laws, rules and deals that were made over the years for reasons that are now being challenged." Vague and often contradictory language used in the governing legislation allowed for the domination of timber-oriented management strategies and as a result, eventual judicial interpretation thereof.

Historically the US Forest Service (FS) has held the assumption that national forest policy should promote community economic development and that the most expedient way by which to achieve this was through the provision of a continuous supply of timber to local mills (Bates, 1993). As a result, when commercial timber harvesting in the Tongass began in the 1950s the FS signed two extraordinarily long, 50 year contracts guaranteeing timber harvest rights to two companies in exchange for the construction and operation of regional pulp mills. Conducted under the auspices of the 1947 Tongass Timber Act (TTA), these contracts ignored existing Haida and Tlinglit land claims and instead established a timber-first management regime where economic values dominated (Hoberg, 2001b; SEACC, n.d.).

The issue of land claims came to a head in 1971 with the creation of the Alaska Native Claims Settlement Act (ANCSA). The ANCSA established one regional, two urban and 10 village Native corporations and allowed these corporations to select more than half a million acres of Tongass land. Although general provisions for sustainable harvesting were contained in the legislation, these went unenforced. With their shareholders in mind, the corporations selected some of the most commercially viable lands in the region and began a program of aggressive harvesting that liquidated the extensive old growth (Nie, 2006; SEACC, n.d.).

At approximately the same time as ANSCA came into effect national legislation was being passed in the form of the 1970 National Environmental Policy Act (NEPA), followed closely by the 1976 National Forest Management Act (NFMA). These two pieces of legislation had a profound impact on the FS and the way that it conducted business. Most significantly, NEPA imposed requirements for all federal level projects with potentially significant environmental impacts to prepare environmental impact statements, while the NFMA had two major components: 1) the protection of a wide range of values in forest land and the management of wildlife habitat such that 'viable populations' of species were maintained, and 2) that all national forests develop and follow updated management plans (Hoberg, 2001b). This first NFMA provision in particular has proven to have particular significance on national forest management, as a series of court rulings in the Pacific Northwest during the late 1980s and early 1990s determined that the 'viable populations' requirement of the NFMA was to be a significant consideration in the design of resource management plans (Hoberg, 2001b). Unsurprisingly, this ruling had tremendous implications for land use management both within the FS and for those who would challenge land-use in the court systems, with impacts that reached far beyond the forests of the Pacific Northwest (Hoberg, 2001b; SEACC, n.d.)

In the wake of the NFMA, the first land management plan in the US was created for the Tongass in 1979. The plan recommended that 5.4 million acres of the Tongass be set aside as wilderness. This recommendation was validated by Congress the following year, through the enactment of Alaska National Interest Land Conservation Act (ANILCA). The result of extensive and lengthy political bargaining ANILCA set aside huge tracts of the Alaskan wilderness for conservation purposes, but also included a number of provisions that fuelled political conflict over the next decade (Nie, 2006). Much of the wilderness set aside was rock and ice, which, when paired with the other provisions of the Act, left much of the forest's timber available for harvesting. ANILCA guaranteed industry a timber supply of 4.5 million board feet of timber per decade and a permanent appropriation of $40 million a year in subsidies (SEACC, n.d.). In addition, it exempted the Tongass from those requirements under the NFMA that provided the basis for environmental regulation of forest practices. As Hoberg (2001b: 73) has pointed out "although it did much to protect wilderness, ANILCA represented an explicit effort to insulate forestry in the Tongass from the new pluralist forestry regime." The structure and language of the act clearly ranked timber management as the dominant value on 'non-wilderness' lands, and served as the focussing point for many environmental groups over the course of the following ten years (Nie, 2006).

Controversy around the Tongass increased in the 1980s. Reflected in the court rulings of the Pacific Northwest, the rise of conservation biology as a credible science coupled with the growing ability of non-governmental organizations to collect and analyze their own technical information meant that environmental groups were able to challenge agency decisions using scientific information (Wondolleck and Yaffee, 2000). The Southeast Alaska Conservation Council, a coalition of 18 southeastern Alaska conservation groups, used this changing environment to their advantage, playing a dominant role in the Tongass controversy. While the use of science was key to their campaign strategy, they also coupled it with a successful bid to shift the Tongass conservation question from a regional administrative process, to one that targeted the broader American public (SEACC, n.d.). Captured by the image of the Tongass as a 'last great place' the American people were extremely vocal in their demands for wilderness protection. As a result, environmentalists were successful in shifting the venue back to the US Congress.

Largely as a result of the work conducted by environmental groups, in 1990 the Tongass Timber Reform Act (TTRA) was created to amend ANILCA and 'correct' the timber-first regime that had dominated the region (Nie, 2006: 19). In doing so it eliminated the Tongass' exemption from the environmental requirements of the NFMA and established 100 foot buffer zones on each side of fish-bearing streams (Hoberg, 2001b). Additionally, it added five new wilderness areas and a further addition to a previously protected area for a total of 296,000 acres. Twelve further areas were also designated to retain their roadless and wildland characteristics (USDA FS, 2003). Although the bill did not repeal the original contracts established under the TTA, it modified them in such a way so as to enhance multiple-values management, reduce high-grading of old growth trees, and promote fair competition within the southeastern Alaskan forest economy. In addition to this it repealed the artificially high timber targets and the $40 million appropriations (SEACC, n.d.; Nie, 2006b).

The TTRA, NEPA and the NFMA have served as the focal point around which contemporary controversy have revolved. These acts and the intent contained within them are assessed against the Tongass forest plans by various interests and challenged or supported accordingly. At the end of the day, the language contained within the acts and its subsequent interpretations by the FS have resulted in several court challenges at the instigation of environmental groups and in numerous administrative appeals by a range of interests.

As the legal appeals were being pursued, the Alaskan delegation in Congress was working to protect the southeastern Alaskan forest industry through the use of "riders" to appropriations (spending) bills in Congress. Add-ons to bills that are being voted on by Congress, riders are frequently used in controversial cases such as those exemplified by the Tongass in order to circumvent the normal legislative process. In attaching a rider to a bill it becomes part of the larger policy package that is voted on by government. Rather than contest one provision of the entire bill, riders are often left in order to keep government running and to pass the relevant act (Nie, 2006). Such tactics mean that the provisions captured within the rider are rarely opened up to debate or majority-agreement building. With several minor exceptions, these efforts were turned back due to opposition from other members of Congress or President Clinton (Hoberg 2001b; Nie 2006).

In 1997, a revised Tongass management plan was issued. This revision resulted from years of analysis that was directly affected by the litigation in the US pacific northwest of the spotted owl and other old-growth dependent species. In response to those developments, the region established an Interagency Viable Populations Committee (VPOP) for the express purpose of identifying species whose viability might be threatened by certain forest management prescriptions, and to design a conservation strategy for the Tongass (USDA FS 2006d; Nie, 2006: 253). The new plan dramatically increased protected areas, adding an additional 7.1 million acres. The plan provided for the protected of 70% of the remaining productive old growth in the region.

Table 5: Land Use Designations for the Tongass National Forest

Status	Land Use Designations	Acres (millions)	Percentage	Aggregate Percentage
Wilderness & National Monument Established primarily through ANILCA and TTRA		5.9	35%	**78%** **Non-Development LUD's:** Land use designations that do not permit commercial timber harvest and generally maintain the integrity of the existing old-growth ecosystem.
Protected areas	Wilderness			
	Wilderness National Monument			
	Non-wilderness National Monument			
Natural Setting Established primarily through the 1997 TLRMP		7.2	43%	
Protected areas	Research Natural Area			
	Remote Recreation			
	Special Interest Area			
	Old-growth Habitat			
	Enacted Municipal Watershed			
	LUD II			
	Semi-Remote Recreation			
	Wild River			
	Scenic River			
	Recreation River			
Moderate Development		1.1	6.7%	**22%** **Development LUD's:** Designations permitting timber harvest and conversion of some old-growth to early-to mid-successional regulated forests.
Not protected	Experimental Forest			
	Scenic Viewshed			
	Modified Landscape			
Intensive Development		2.5	15%	
Not protected	Timber Production			
	Minerals			

Source: *Tongass Land and Resource Management Plan, 1997 (USDA FS, 1997)*

On the timber side, the 1997 Tongass forest plan also set the maximum logging level at 267 million board feet per year, a figure more than twice the timber harvests around that time, which raised the ire of environmentalists and led to a series of administrative and court challenges that have yet to be resolved. As well, many groups felt that it still fell short in the protection of key areas of ecological sensitivity. These concerns led to the filing of 33 separate administrative appeals and two lawsuits. A new Record of Decision (ROD) was released in 1999 expanding protection by removing a further 40 watersheds from the timber base and further reducing the allowable sale quantity of timber (Hoberg, 2001b; SEACC, n.d., USDA FS, 2006b). More recently in August of 2005, a Ninth Circuit Court of Appeals decision found that the FS had made a fundamental error in calculating market demand for Tongass timber. This error "fatally infected its balance of economic and environmental considerations rendering the Plan for the Tongass arbitrary and capricious in violation" of law (ARC, 2005: n.p.). As a result, the entire Plan is currently undergoing further adjustments and updates and was opened for public comment in March, 2006 (USDA FS, 2006c). While the battle over the "roadless rule" has potentially significant implications, thus far it has not resulted in any relaxation of wilderness protection on the Tongass. (Anderson, 2006; AWC, n.d.; USDA FS, 2005b).

Establishing the exact levels of protection established in the Tongass is somewhat complicated by the sheer number of designations that have been assigned to the area. Forest Service literature, however, has worked to simplify the process by generalizing the land uses into four broad areas: Wilderness and National Monument, Natural Setting, Moderate Development and Intensive Development. These four categories and their associated land use designations are outlined in Table 4.

Despite certain allowances for mineral exploration, the first two categories, Wilderness and Natural Monument and Natural Setting, are generally considered protected from timber harvest and other industrial activity. These categories make up 78% of the Tongass National Forest land base. 34% of the Tongass National Forest land base was originally covered by "productive old growth." Of that original amount of old growth, 67% is set aside in reserves. An addition 18% is protected by the "standards and guidelines" on the Forest Plan (US Forest Service 2007, p. 3-141). As a result, protection in the Tongass is considerably more than twice that provided in the Great Bear Rainforest.

COMPARATIVE ANALYSIS

Despite facing common problems on the same ecosystem, the policy outcomes for the protection of old growth forests in the two jurisdictions are very different. This divergence is particularly striking given how similar the problems were in the two jurisdictions. Both governments faced intense conflicts between environmentalists and the forest industry over how much of what areas should be logged or preserved. Both "colonial" governments were confronted with serious challenges to their authority by aboriginal groups. Both governments faced the dilemma of how to provide economic development for remote rural areas. The forest industry in both jurisdictions faced comparable difficulties: a very high cost environment, in large part due to a topography that created daunting operational challenges, aggravated by a long distance from markets. The collapse of the Asian market in the 1990s was a common external economic factor. How can the framework of ideas, actors, and institutions help explain the divergent outcome?

ACTORS

Both cases have a similar distribution of interest groups. Forest industry groups were well-organized and well-entrenched in both areas, and had powerful political allies who supported economic development through timber harvesting. Environmental values were represented by advocacy groups. In Alaska, efforts were led by the Southeast Alaska Conservation Coalition, but supported by national groups in Congressional lobbying and litigation. In the Great Bear Rainforest, provincial environmental organizations such as the Sierra Club of BC played a role, but there was a much larger presence of international environmental organizations, particularly Greenpeace and the US-based group ForestEthics. Environmental groups on both sides of the border were effective in forcing governments to change their policies to represent environmental values more effectively.

Unfortunately, measures are not available to compare the relative amount of political resources of the environmental movements in the two jurisdictions, but there are readily measurable differences in the underlying power of the forest industry in the two jurisdctions. The Great Bear Rainforest region of BC was more timber-dependent than the Tongass region of Alaska. The forest industry accounts for 15 percent of total employment in the Central Coast region of BC, and 20 percent in the North Coast region. In southeastern Alaska, the population had access to a more diverse economic base that was not necessarily dependent on resource extraction for its long-term health. The region was less resource dependent generally, with a higher fraction of employment in government and service sectors. Forest industry employment at the time of the pivotal 1997 plan accounted for only six percent of total employment. Regionally-based tourism was on the rise, fuelled by the cruise ship boom. This is especially significant with respect to forest conservation as it seems likely that many of these tourists will have been drawn to the region as a direct result of its natural beauty. As a result, considerable value has been placed on keeping southeastern Alaska wild.

The comparative analysis confirms the hypothesis stated earlier, that the greater the level of regional economic dependency on forestry, the lower the level of preservation will be. Economics matters.

IDEAS

Ideas, and their influence, are notoriously hard to measure. In these cases, the most significant role of ideas appears to be in how environmentalists chose to frame the issue, and how science was used in the planning process. In the Alaska case, environmentalists were successful in their efforts to bring the issue to national attention by framing the Tongass as American's last great remaining wilderness, in the words of Roderick Nash "a living link to the national past and to the roots of the national character" (Nash 2001: 307). In the BC case, environmentalists appealed to both a domestic and an international audience through the evocative label given to the region, and the elevation of the Kermode or "spirit bear" to near iconic status. As in the case of Alaska, they also emphasized the distinctive wildness of the region as an increasingly scarce and precious resource, but in the BC case the argument was framed in global terms rather than American terms. It is hard to tell whether environmental groups in one case were able to frame their issue more appealingly than in the other.

Science-based causal ideas, particularly conservation biology and landscape ecology, played an important role in policy development in both cases. In the 1990s, the Tongass was the subject of a spill-over from the dramatic changes in national forest policy the developed in the

Pacific Northwest in the early Clinton years. Court decisions there forced the agency to utilize conservation biology to develop plans to ensure the maintenance of "viable populations" of species. When the Tongass National Forest applied a similar approach, it led to a substantial increase in protected old growth.

Through the Coast Information Team, the same set of scientific principles of conservation biology, and the specific strategy of using the protection of old growth forest as a "coarse filter" strategy to protect forest dependent species, were analyzed. The "scientific basis" document and the studies that supported it relied on much of the same theory and some of the same evidence about species-habitat relations that the Tongass science did (CIT 2004b). But it was clearly used in significant different ways. A common body of knowledge cannot explain such divergent outcomes in environmental protection. To provide a proper explanation, how science was interpreted and used in the policy process needs to be examined. In the Great Bear Rainforest, the science and its application were negotiated; in Alaska, they were based on rules – in particular the viable population rule of the National Forest Management Act regulations. This difference is caused by institutions.

INSTITUTIONS

The core institutional differences of legalism and federalism had profound impacts on the outcomes in these cases, sometimes in combination. Most importantly, institutions influenced the strategies adopted by interest groups, and therefore the resources they were able to bring to bear to influence policy. One important interest group strategy is "venue-shifting" (Baumgartner and Jone 1993; Pralle 2003), and the institutional framework frequently determines what kind of venue-shifting opportunities are available. In the case of Alaska, the federal government has always been relevant because it was National Forest land. Historically, however, the politics of Tongass forest policy was dominated by the local forest industry, the pro-industry Alaska delegation in Congress, and the sympathetic regional office of the Forest Service. Environmentalists made some progress in cracking through this "iron triangle" in the early 1970s through court action, but much of the action over the Tongass continued to be fought in Congress (Hoberg, 2001b). The 1979 Alaska National Interest Land Conservation Act set aside large areas for wilderness, but still left large swaths of old growth rainforest open for harvesting This "timber bias" was partially corrected in the 1990 Tongass Timber Reform Act, which set aside more old growth areas as wilderness, imposed more stringent regulations on harvesting, and reduced allowable harvest levels significantly (Nie 2006). The institutional facts that the Tongass was under federal jurisdiction and that Congress, as an independent legislative body, plays such a critical role in environmental policy provided environmentalists with an opportunity to shift the venue to the level of national politics, an opportunity they seized effectively.

Since 1990, Congress has played a lesser role in Tongass forest policy, and the judicially-supervised planning process has taken over. Through the threat of litigation, environmentalists were able to leverage the remarkable policy changes in the Pacific Northwest to bring about additional old growth forest protection in the 1997 plan, and then used administrative appeals and court action to force the Forest Service to stick to the plan and in some cases expand the level of environmental protection.

In British Columbia, because forest and land use policy are dominated by provincial jurisdiction, environmentalists seeking to protect the Great Bear Rainforest did not have the strategic option of "nationalizing" the issue to overcome the more pro-timber inclinations of the

region. Because of the discretionary nature of BC forest law, they also did not have the option of appealing to the courts to force the provincial government to act. They were left with an invitation to participate in a multistakeholder bargaining process. Recognizing their disadvantages within the BC context, they adapted the highly innovative strategy developed in the Clayoquot Sound campaign of appealing to the international marketplace. They targeted large scale purchasers of forest products, and threatened them with boycotts unless they stopped buying products from the Great Bear region. This strategy proved to be highly successful. The forest industry believed its ability to market products from the region would be damaged, so they entered into negotiations with environmental groups to increase old growth rainforest protection in the Great Bear region.

While remarkable in comparison to the pre-existing status quo in BC, the conservation achievements of the Great Bear Rainforest campaign seem far less impressive when compared to the Tongass case. The internationalization strategy was successful in altering the incentives of the forest industry and the BC government, and the process was a model for consensus-based collaborative natural resource management. But it did not result in as much protection of old growth forests as the nationalization and judicialization strategies of the Alaskan advocates.

One final factor to consider is the mysterious absence of activist driven emulation, which frequently serves as one of the most powerful forces for policy convergence, especially such similar and proximate countries such as Canada and the US (Hoberg 1991; Banting, Hoberg, and Simeon 2002; Howlett 2001). Given the fact that the major developments in the Tongass case occurred earlier, it is quite striking that there is no evidence of any rhetorical use of the higher levels of protection across the border. One would have thought that BC environmentalists could have used the Tongass model as leverage to justify higher levels of protection.

CONCLUSION: INSTITUTIONS MATTER, BUT SO DO ECONOMICS

In the case of old growth coastal temperate rainforest protection in North America, the policy outcomes are clearly divergent. Despite working in the same ecosystem, using similar science, and facing similar ecological and operating conditions, significant differences emerged in the levels of protection of old growth forest. It is impossible to operationalize and measure many of the variables that might have influenced this divergent outcome, but two clearly seem to have played a significant role. First, the Central and North coast regional economy of British Columbia is significantly more dependent on the forest industry than the regional economy of southeastern Alaska. Second, the institutional structures underlying the US forest policy regime, particularly legalism and a more centralized federalism, gave environmental groups sources of leverage in Alaska that were not available to their BC counterparts.

In reviewing the two cases, the institutional differences and their consequences are remarkable. Forest policy in the Tongass has been dominated by the US Congress and the courts. In the Great Bear Rainforest case, it is notable how irrelevant both the federal government and legislatures at any level have been. Instead, BC environmentalists focused on major corporate buyers on BC forest products in the international marketplace. In contrast, there is no evidence in the case material of international appeals or campaigns by Tongass activists.

It is not possible to determine whether the economic factors underlying the greater power of the forest industry are more or less important than the institutional differences. Counterfactual

analysis may yield some insights (Fearon 1991). Consider first the hypothetical that there was no difference in forest industry dependence – that the Alaskan industry played as big a regional role as the BC one did. This greater dependence would presumably have been reflected in increased political pressure to resist environmental demands to protect more forest from harvesting. But it is hard to imagine the Alaskan politicians working any harder to protect their local industry than they already did. Seemingly every new plan or environmental initiative to strengthen environmental protection in the region was met with a proposed appropriations rider in Congress to circumvent it. But time and time again, environmentalists were able to use their political resources in Congress to prevent the riders from passing.

Next consider the hypothetical situation where BC environmentalists had US style institutions. Would they have been able to be more effective? It is certainly plausible that they would have been. If the national legislature in Canada played a role, it seems likely that more protection could have resulted. If the preferences of Ontario voters were given equal weight to BC voters, the regional forest industry would probably have seemed less formidable. If BC environmentalists had a non-discretionary population viability rule like the one in US regulations, it is likely that the science could have been mobilized, under the watchful eyes of courts, to justify significantly more protection. Indeed, it is instructive that in the case of BC where courts have played a significant role, i.e. aboriginal rights, government and industry interests have been trumped by previously marginalized actors.

With only two cases and so many potentially explanatory variables, it is impossible to give precise weightings to any explanatory variables. In this case, the importance of economic dependence on the forest sector and the striking institutional differences both seem to be important divergent forces.

REFERENCES

Allen, Stewart D.; Robertson, Guy; Schaefers, Julie. 1998. *Economies in transition: an assessment of trends relevant to management of the Tongass National Forest*. Gen. Tech. Rep. PNW-GTR-417. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 101 p.

Alaska Rainforest Campaign (2005). *Rainforest Logging Plan Fatally Flawed: Errors Give Forest Service Chance to Fix Longstanding Tongass Mismanagement.* Accessed April 22, 2006. Available from: http://www.akrain.org/Resources/TLMPOverview

Alaska Wilderness Campaign (no date). *The Tongass: America's Largest National Forest.* Accessed April 22, 2006. Available from: http://www.alaskawild.org/campaigns_forests.html#Tongass

Anderson, Michael (2006). *Legal Status of the Roadless Area Conservation Rule.* Policy Brief. Prepared by the Wilderness Society. Accessed July 7, 2006. Available from: www.ourforests.org/fact

Atkinson, Michael M. and Coleman, William D. (1992). *Policy Networks, Policy Communities and the Problems of Governance.* Governance, 5 (2): 154-180.

Bates, Sarah F. (1993). 'Public Lands Communities: in search of a community of values,' *Public Land Law Review,* 14(81): 81-112.

Baumgartner, Frank R. and Jones, Bryan D. (1991). 'Agenda Dynamics and Policy Subsystems,' *The Journal of Politics,* 53 (4): 1044-1074.

BC Ministry of Agriculture and Lands (2006). *Province Announces a New Vision for Coastal BC.* News Release. February 7, 2006. 2006AL0002-000066. Victoria: Ministry of Agriculture and Lands.

BC Ministry of the Environment (2006). *British Columbia Leads in Creation of Protected Areas.* News Release, April 24, 2006. 2006ENV0028-000477.Victoria: Ministry of the Environment.

BC Stats (1998). *Asian Fallout Has British Columbia Exporters Relying Heavily on US Markets.* Accessed April 2, 2006. Available from: http://www.bcstats.gov.bc.ca/pubs/exp/exp9808.pdf

Brackley, Allen M.; Rojas, Thomas D.; Haynes, Richard W. 2006. *Timber products output and timber harvests in Alaska: projections for 2005-25.* Gen. Tech. Rep. PNW-GTR-XXX. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Cashore, Benjamin, McDermott, Constance and Levin, Kelley (2006). *The Shaping and Reshaping of British Columbia Forest Policy in the Global Era: A Review of Governmental and Non-governmental Strategic Initiatives.* Paper prepared in preparation for keynote address to Association of BC Forest Professionals Annual General Meeting, Victoria, BC, Canada Feb 22 to 24, 2006.

Coast Forest Conservation Initiative (2006). *Coastal Land Use Agreements: Backgrounder.* Accessed March 29, 2006. Available from: http://www.coastforestconservationinitiative.com/announcement/pdf/

CIT (2004). *EBM Planning Handbook*. Accessed August 22, 2006. Available from: www.citbc.org

CIT (2004b). *The Scientific Basis of Ecosystem Based Management*. Accessed August 22, 2006. Available from: www.citbc.org

CIT (n.d.). *About CIT.* Accessed August 23, 3006. Available from: www.citbc.org

Cortex Consulting (2001). *A Quick Reference: British Columbia's Timber Tenure System.* Accessed on March 29, 2006. Available from: http://www.for.gov.bc.ca/hth/timten/documents

Crawford, Sue E.S. and Ostrom, Elinor (1992). *A Grammar of Institutions.* American Political Science Review, 89(3): 582-600.

Crone, Lisa K. (2005). 'Southeast Alaska economics: A resource abundant region competing in a global marketplace,' *Landscape and Urban Planning,* 72: 215-233.

David Suzuki Foundation (no date). *Temperate Rainforests.* Accessed on July 18, 2006. Available from: http://www.davidsuzuki.org/Forests/Forests_101/

Everest, F.H. (2005). 'Setting the Stage for the Development of a Science-Based Tongass Land Management Plan,' *Landscape and Urban Planning,* 72: 13-24.

Everest, Fred H.; Swanston, Douglas N.; Shaw, Charles G., III; Smith, Winston P.; Julin, Kent R.; Allen, Stewart D. (1997). *Evaluation of the use of Scientific Information in Developing the 1997 Forest Plan for the Tongass National Forest*. Gen. Tech. Rep. PNW-GTR-415. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Fearon, James D. (1991). 'Counterfactuals and Hypothesis Testing in Political Science.' *World Politics,* 43 (2): 169-195.

ForestEthics (2006a). *The Great Bear Rainforest: The Road to Victory.* Accessed on March 16, 2006. Available from www.forestethics.org

_____ (2006b). *The Great Bear Rainforest Agreement: A Backgrounder.* Accessed on April 2, 2006. Available from www.forestethics.org

Goldstein, Judith and Keohane, Robert O. (1993). 'Ideas and Foreign Policy: An Analytical Framework,' in Judith Goldstein and Robert O. Keohane (eds), *Ideas and Foreign Policy: Beliefs, Institutions and Political Change.* New York: Cornell University Press.

Harrison, Kathryn (2002). 'Ideas and Environmental Standard-Setting: A comparative study of regulation of the pulp and paper industry. *Governance: An International Journal of Policy, Administration, and Institutions* 15(1): 65-96.

Hoberg, George, Morishta Scott and Paulsen, Adam (2004). *The Great Bear Rainforest: Peace in the Woods?* Accessed on March 16, 2006. Available from www.policy.forestry.ubc.ca

Hoberg, George and Morawski, E. (1997). 'Policy Change Through Sector Intersection: Forest nd Aboriginal Policy in Clayoquot Sound.' *Canadian Public Administration,* 40 (3): 387-14.

Hoberg, George (2001a). "Policy Cycles and Policy Regimes: A Framework for Studying Policy Change," in Benjamin Cashore, George Hoberg, Michael Howlett, Jeremy Rayner and Jeremy Wilson, *In Search of Sustainability: British Columbia's Forest Policy in the 1990s.* Vancouver: UBC Press.

_____ (2001b). 'The Emerging Triumph of Ecosystem Management: The Transformation of Federal Forest Policy. In C. Davis, ed. *Western Public Lands and Environmental Politics.* Colorado: Westview Press.

_____ (2000). 'How the Way We Make Policy Governs the Policy We Make,' in D.J. Salazar and D.K. Alper (eds). *Sustaining the Forests of the Pacific Coast: Forging Truces in the War in the Woods.* Vancouver, Toronto: UBC Press.

_____(1998). *Distinguishing Learning From Other Sources of Policy Change: The Case of Forestry in the Pacific Northwest.* Prepared for delivery at the Annual Meeting of the American Political Science Association. Boston, Sept. 3-6.

_____(1991). "Environmental Policy: Alternative Styles," Michael M. Atkinson ed., *Governing Canada: Institutions and Public Policy.* Toronto: Harcourt Brace Jovanovich Canada Inc.

Howlett, Michael and Ramesh, M. (2003). *Studying Public Policy: Policy Cycles and Policy Subsystems.* Ontario: Oxford University Press.

Howlett, Michael (2001). 'Beyond Legalism? Policy Ideas, Implementation Styles and Emulation-Based Convergence in Canadian and U.S. Environmental Policy.' *Journal of Public Policy,* 20 (3): 305-329.

Imperial, Mark T. (1999). 'Analyzing Institutional Arrangements for Ecosystem-Based Management: Lessons from the Rhode Island Salt Ponds SAM Plan.' *Coastal Management,* 27: 31-56.

Kagan, R.A. (1991). 'Adversarial Legalism and American Government.' *Journal of Policy Analysis and Management,* 10 (3): 369-406.

Koontz, Thomas N. (1997). 'Differences Between State and Federal Public Forest Management: The Importance of Rules,' *Publius: The Journal of Federalism,* 27 (1): 15-37.

_____ (1998). *Using the IAD Framework to Explore Devolution of Public Forest Management.* Prepared for the APPAM Twentieth Annual Research Conference, The Grand Hyatt Hotel, New York City. October 29-31.

_____ (2002) *Federalism in the Forest: National versus State Natural Resource Policy.* Washington, DC: Georgetown University Press.

Kruger, Lisa E. (2005). 'Community and landscape change in southeast Alaska,' *Landscape and rban Planning,* 7: 235-249.

Nash, Roderick Frazier (2001). *Wilderness and the American Mind.* Fourth edition. New Haven and London: Yale University Press.

Nie, Martin (2006). Governing the Tongass: National forest conflict and political decision making.' *Environmental Law,*36 (2): 395-480.

Pierce Lefebvre Consulting and D.A. Ruffle & Associates Ltd. (2003). *Analysis of Woodflow in the Coast Region: Final Report, August 27th 2003***.** Presented to the B.C. Ministry of Sustainable Resource Management. Available at www.citbc.org

Pojar, Jim; Rown, Chuck; MacKinnon, Andy; Coates, Dave and LePage, Phil (1999). Silvicultural Options In The Central Coast: A Report Prepared for the Central Coast Land and Coastal Resource Management Plan. Available at: www.citbc.org

Pralle, Sarah B. (2003). 'Venue Shopping, Political Strategy and Policy Change: The Internationalization of Canadian Forest Advocacy.' *Journal of Public Policy,* 23 (3): 233-260.

Prescott- Allen, Robert (2005). *Coast Information Team Review Report.* www.citbc.org.

Rabe, Barry G. and Lowry, William R. (1999). "Comparative Analyses of Canadian and American Environmental Policy: an introduction to the symposium," *Policy Studies Journal,* 27(2): 263-266.

Rainforest Solutions Project (2006). *History of the Campaign.* Accessed on April 3, 3006. Available from:www.savethegreatbear.org

Riddell, Darcy (2005). 'Evolving Approaces to Conservation: Integral Ecology and Canada's Great Bear Rainforest,' *World Futures,* 61: 63-78.

Robertson, Guy (2004)**.** **'**Economic growth and change in southeast Alaska'. In: Mazza, R., tech. ed. *Economic growth and change in southeast Alaska.* Gen. Tech. Rep. PNW-GTR-611. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 1-32.

Salazar, Debra and Alper, Donald K. (2000). 'Institutions,' in D.J. Salazar and D.K. Alper (eds). *Sustaining the Forests of the Pacific Coast: Forging Truces in the War in the Woods.* Vancouver, Toronto: UBC Press.

Shaw, Karena (2004). 'The Global/Local Politics of the Great Bear Rainforest,' *Environmental Politics,* 13 (2): 373-392.

Southeastern Alaska Conservation Council (2003). *Taxpayer Losses and Missed Opportunities: How Logging and Road Building in the Tongass National Forest Cost Taxpayers Millions.* Available from: www.seacc.org

Southeastern Alaska Conservation Council (no date). *The Tongass.* Accessed April 3, 2006. Available from: www.seacc.org

Stone, Deborah A. (1989). "Causal Stories and the Formation of Policy Agendas," *Political Science Quarterly,* 104 (2): 281-300.

Szaro, Robert C.; Boyce Jr., Douglas A. and Puchlerz, Thomas (2005). 'The challenges associated with developing science-based landscape scale management plans,' *Landscape and Urban Planning,* 7: 3-12.

Tamblyn, Greg C. and Horn, Hannah (2001). *Current Conditions Report: North Coast Land and Resource Management Plan.* Prepared for Prince Rupert Interagency Management Committee, Smithers, B.C. March, 2001.

USDA Forest Service (2006a). 'Quick Facts,' *Cooperative Forestry.* Accessed March 28, 2006 from: http://www.fs.fed.us/spf/coop/

USDA Forest Service (2006b). *Tongass National Forest.* Accessed April 6, 2006. Available at: http://tongass-fpadjust.net/index.htm

USDA Forest Service (2006c). *Tongass National Forest: Public Involvement.* Accessed April 22, 2006. Available from: http://tongass-fpadjust.net/FPA_PublicInv.htm

USDA Forest Service (2005a). '*FAQs*.' Accessed March 16, 2006 from: http://www.fs.fed.us/r10/tongass/forest_facts/faqs/resources.shtml#4

USDA Forest Service (2003). *Tongass Land Management Plan Revision: Final Supplemental Environmental Impact Statement, Roadless Area Evaluation for Wilderness Recommendations.* Accessed June 26, 2006. Available from: http://www.tongass-seis.net/seis/pdf/Volume_I.pdf

USDA Forest Service (2002). *Tongass National Forest: Forest Land Use Statistics.* Accessed April 6, 2006. Available from: http://www.fs.fed.us/r10/TLMP/F_PLAN/FPCHAP3.PDF

USDA Forest Service (1997a). *'Tongass National Forest Land and Resource Management Plan,'* USDA FS. Available from: http://www.fs.fed.us/r10/TLMP/F_PLAN

USDA Forest Service (1997b). *'Final Environmental Impact Statement: Tongass National Forest Land Management Plan Revision,'* USDA FS. Available from: http://www.fs.fed.us/r10/TLMP/FEIS/FEIS_COV.PDF

USDA Forest Service (1997c). *Record of Decision: Tongass National Forest Land and Resource Management Plan: Plan Revision: Alaska.* Accessed July 22, 2006. Available from: http://www.fs.fed.us/r10/TLMP/ROD/ROD_COV.PDF

USDA Forest Service (2007). *Tongass Land and Resource Management Plan, Draft Environmental Impact Statement Plan Amendment*, R10-MB-602a, January 2007. Available from http://tongass-fpadjust.net/Documents/Draft_EIS.pdf. Accessed May 21, 2007

Van Heese, Willem W.S. and Mead, Bert R. (2005). Extensive, Strategic Assessment of Southeast Alasks's Vegetative Resources,' *Landscape and Urban Planning,* 7: 25-48.

Wilson, Jeremy (2001). 'Experimentation on a Leash: Forest Land Use Planning in the 1990s.' In Benjamin Cashore, George Hoberg, Michael Howlett, Jeremy Rayner and Jeremy Wilson (eds.) *In Search of Sustainability: British Columbia Forest Policy in the 1990s.* Vancouver: UBC Press. 31-60.

Wilson, Jeremy (1998). *Talk and Log: Wilderness Politics in British Columbia.* Vancouver: UBC Press.

Wolfe, Edward C., Mitchell, Andrew P. and Schoonmaker, Peter K. (1995). *The Rainforests of Home: An Atlas of People and Place.* Erin L. Kellogg (coordinating editor). Portland, Oregon: Ecotrust, Pacific GIS and Conservation International.

Wondolleck, Julia M. and Yaffee, Steven L. (2000). *Making Collaboration Work: Lessons from Innovation in Natural Resource Management.* Washington, D.C.: Island Press.