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Sociology's Potential to Improve Forest Management
and Inform Forest Policy

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Table of Contents

Sociology's Potential to Improve Forest Management and Inform Forest Policy

Introduction

The social context within which forest managers operate today differs dramatically from

that which existed fifty, thirty, or even ten years ago. Both government (public) and corporate

(private) forest management decisions are coming under increased public scrutiny. A single,

dominant forest management regime has existed in North America from the age of Fernow and

Pinchot until today. That management regime is characterized by close relations between

government regulators and industrial users/owners of forests, and an emphasis on industrial (fibre)

uses of the vast majority of forest land. Over the last century that management regime has

undergone evolutionary change without much interest or input from the general public. Times are

changing rapidly. Environmental issues have increased in importance for the North American

public in the last quarter century. However, it is only much more recently that the traditional

paradigm of forest management has come under seige by a broad spectrum of stakeholder groups

demanding greater input in forest management decision-making.

The emerging forest management paradigm is focused on ecosystem health, the diverse

human uses of forests, and long-term sustainability. Such a paradigm will necessarily need to

draw on a wider base of scientific research to inform policy. This paper examines the potential of

sociology to contribute to improved forest management within the new framework of integrated,

ecosystem-based resource management.   Sociology can provide forest managers and policy-

makers with better information on the diversity of value orientations and interests of both "new"

and traditional stakeholder groups. Sociologists study mechanisms of public involvement as well

as instances when those mechanisms fail and overt social conflict over forest management emerges. Understanding why current management and policies work or fail from a social perspective, could help alleviate future policy stalemates and controversies over managment. Finally, sociology may also provide a better understanding of the larger societal context of forestry and forest use. This may be done at the macro level through analyses of the impact of global restructuring in the forest sector, or at the micro level, through comparative case studies of forest-dependent communities. Such analyses could help policy-makers to better understand the social dynamics of local places where their decisions have the greatest impact.

In this work, we will first review the past contributions of the social sciences (sociology in particular) to forest management. Several sociological methods that can help forest managers improve the quality of public involvement in forest planning and development will be reviewed. We also review literature on social movement and conflict and conflict resolution as they apply to forestry contexts. Further contributions to the general understanding of human interactions with forests will be examined. And finally, we will argue that Canada is particularly well situated to benefit from applied research in forest sociology.

Past sociological contributions to forest management: Forest community stability

Social science as a whole has had a very minor role in forest management over the last century. Economics was the sole social science discipline welcomed by forest managers in the old paradigm of forest management. Economists helped forest managers determine the optimal combination of inputs to maximize financial benefits from a given parcel of forest land. They also assisted with market analyses, labour studies, and other financial dimensions of forest management. While sociology arrival on the scene is virtually unprecedented, forests economists

are also redefining their traditional roles by pursuing non-market valuation methods in forestry, examining optimal forms of forest tenures, etc.

While sociology's interest in forests and forestry issues in not new, it is only in the last ten years that is has attracted much sustained attention. Social aspects of forestry have been a concern for over seventy years. Dana (1918) first tied community stability to forest management practices, and for generations community stability has been the main focus of sociological work related to human interaction with forests. Other forest-related issues were addressed from time to time. Hayner (1945) examined changes in the occupational identity and the occupation structure of loggers. Lucas (1971) compared the life cycle of Canadian forest-dependent communities to other types of resource-dependent communities.

Individual researchers have dabbled in forestry issues, but very few sociologists were able to build careers around studying human interaction with forests. While substantial resources have been invested in studying the social dynamics of agricultural systems (see Buttel, et al. 1990), relatively few institutional resources have been available to sociologists studying forestry and forest communities. As a result, sociology's past contributions to improving forest management have been marginal. Where sociologists have contributed is with respect to communities dependent upon forest resources.

Kaufman and Kaufman (1946) wrote the seminal work on community stability and timber harvests. They were sceptical whether even-flow timber harvest would guarantee sustainable communities, and their concerns were not unfounded. Other sociologists and economists have contributed to the literature on community stability (see Lee et al. 1990, LeMaster and Beuter 1989, Machlis and Force 1988, Daniels, Hyde and Wear 1991). Most of this work, which saw a

3

revival in the 1980's, was focused on quantitative measures of stability. Social stability was assumed to flow from economic stability, so indicators such as jobs and income formed the basis of analyses of community stability.

Improving on sociology's traditional mandate: Forest community adaptability

The notion of community *stability* has some inherent flaws from both a research and policy perspective. From a research perspective, it has been noted that *stability* is a highly variable concept. While it is not difficult to define,[1] it is difficult to operationalize, and as a result, there is little consensus as to what constitutes community stability even after decades of research on the topic (see Machlis and Force 1988, for a more detailed discussion).

From a policy perspective, achieving local community stability in a rapidly changing global system is increasingly untenable -- particularly in light of the fact that policy-makers have repeatedly interpreted stability to mean maintaining status quo forest uses, job and income levels, etc. Policy-makers need to recognize that survival of forest communities will depend more upon the ability of communities to *adapt* to new social and economic pressures. Thus community *adaptability* rather than community *stability*, should be the focus of both forest social science research and forest policy. Adaptability means the ability and capacity of individuals to respond to changes in the larger context of forestry -- this component of adaptability relates to human capital issues. Adaptability also refers to the ability and capacity of institutions (local governments, NGO's, unions, corporations, etc) to adjust to such changes (for further discussion see Beckley, forthcoming).

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[1]Kaufman and Kaufman defined community stability as , "orderly change, rather than a fixed condition," and emphasized that stability does not imply a static condition.

Recent sociological work on forest communities has begun to move away from the idea of community stability, and is instead focusing on the broader notion of community well-being. Well-being does entail quantitative dimensions of employment stability, population stability and income maintenance, but it also considers the capacity of communities to address social problems (Kusel and Fortmann 1991). It encompasses the notion of social cohesion, dimensions of which may be assessed both quantitatively (Force et al. 1993) and qualitatively (Beckley forthcoming). The issue of adaptability is dealt with implicitly and explicitly in this new line of research.

Forest managers' new mandates: ecosystem and integrated resource management

Past sociological work on community stability was supported by forest-managers' desire to maintain even flows of timber resources to local processing facilities. There was and is a concern among forest managers to attempt to mitigate potential negative consequences of boom and bust cycles in the forest industry. However, forest managers are now charged with two new mandates: 1)They are being asked to balance the interests and uses of a much wider clientele than they have traditionally dealt with. This involves the consideration of values and concerns that have only recently been articulated. 2) They are being told to manage entire ecosystems in a holistic manner, rather than managing only small subsets of tree, plant and wildlife species.

These two new mandates are not mutually exclusive, but by arriving simultaneously, they have put tremendous pressure on forest managers to make fundamental changes in the practice of their profession. While forest managers have been given these new responsibilities, the professional training required to deliver on this mandate is somewhat lacking. Forestry schools are struggling with how to reform the education system so that their graduates can meet the new

5

challenges imposed by the contemporary paradigm shift.[2] While it is hoped that sociological work on community stability and adaptability will continue, there is potential for sociology to contribute to many other areas of forest management and policy.

Improving public involvement in forest management: Assessing stakeholders values

When public participation is required in the traditional forest management regime, the public meeting isform that public participation usually takes.[3]   In such public meetings, participants are asked to comment on draft management plans or testify on proposed industrial developments. Very little, if any, public involvement occurs prior to the development of a draft forest management plans or in the creation of industries' development plans. Because the public is only brought in to the process toward the tail end, citizens may only have the opportunity to tinker on the margins of the management plans devised by professional resource managers. However, they have few opportunities to really influence the content, scope, or overall orientation of forest policy. In an era when few people cared about forest policy, and the set of concerned stakeholders was small, this may have been a tenable process for garnering public input. In today's polarized political climate, with a wider range of stakeholders, public meetings and public hearings are losing legitimacy in many quarters. There is some sociological work that documents the shortcomings of traditional public input mechanisms in a forestry context (Gismondi and Richardson 1991, Richardson et al 1994).

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[2] In May of 1993, the Association of University Forestry Schools of Canada sponsored a symposium in Ste. Foy, Quebec entitled, "Educating the 21st century forester." Many of the discussions there centred around how to improve training in human dimension of forestry.

[3] Areas exist, particularly in the U.S. where vast forest regions are privately owned. In such places very little public consultation regarding forest management policy is required.

A crisis of legitimacy now faces government stewards of public forest land, largely due to past poor public involvement. A recent article in the <u>New York Times</u> underscores the gap between the U.S. Forest Service's view of their role as managers and the current attitude of the public. The Forest Service organized a public forum in Seattle, WA, to ask citizens how the Forest Service might better serve them as customers. The answer? "We are not your customers...we are your owners." (Cushman 1994). In Canada, there is also growing consensus that traditional means of gathering public input are insufficient (Thompson and Webb 1994, Canadian Council of Forest Ministers 1992).

Sociologists have considerable expertise in various methods for assessing public attitudes and values. Pro-active attempts to incorporate public concerns at early stages may provide huge saving in time and money when the costs of dealing with subsequent public protest are considered. Focus groups, survey research and participant and non-participant observation are all research methods that could easily be applied to the wide range of stakeholder groups *before* draft forest management plans are drawn up or industrial development plans are made.

Focus groups are essentially group interviews, with a facilitator trying to stimulate discussion among the group, rather than a more formal interviewer/interviewee dialogue. Focus groups are gaining greater acceptance as a research tool. They are relatively cheap and may provide a fairly accurate picture of the values, concerns and interests of various groups. When the highest standards of scientific rigour in sampling are not required, focus groups could be used to provide managers with general information about non-traditional stakeholder groups with whom they may be less familiar (Kreuger 1988, Morgan 1988).

Survey research is, of course, more highly developed and more universally accepted as a

research tool within the discipline of sociology. There already exists a large literature on survey

research on various stakeholder groups in forest management. Survey research can effectively

measure and evaluate levels of concern, differences in attitudes of various stakeholder groups,

satisfaction or dissatisfaction with existing policies, and the underlying values associated with

favoured policy perspectives. One recent study compares the attitudes and values of non-

industrial private forest owners with the general public (Bourke and Luloff 1994). Such work

may reveal where lines of cleavage exist, or where similarities exist, as is the case in Pennsylvania

where attitudes toward forest management differ little between forest owners and the public.

Another recent study by a multi-disciplinary research team compared the value orientations and

associated forest policy preferences of the national public to the public of Oregon, widely

recognized as a forest-dependent state (Steel et al. 1994). Fortmann and Kusel (1990) surveyed

and compared environmental attitudes related to forestry of long-standing and new residents of

rural California. The same study compared attitudes of the general public to those of residents

defined by the U.S. Forest Service as active and interested stakeholders. Dunk (1994) conducted

forty-five open-ended interviews with loggers in Northwestern Ontario. He specifically sought

information on their views on environmental issues and their opinions of "environmentalists."

Another critical group to survey are forest managers themselves, as their values and

attitudes will likely have the most direct impact on forest policy and management. Cramer et al.

(1993) conducted a survey of value orientations and policy preferences of U.S. Forest Service

workers. They found significant differences in the attitudes and values of various line-officers

within the Forest Service and discuss the implications of those differences for future land

management decisions and the impacts they may have on resource-dependent communities.

The most thoroughly surveyed forest users are forest recreationists, though this research is seldom consulted when draft management plans are created. There are several refereed journals that specifically focus on recreational uses of forest and other natural resources.[4] Among the groups that have been studied are hunters (Kuentzel 1994) birdwatchers (McFarlane 1994), backpackers (Bultena et al. 1981), cross country skiers and snowmobilers (Jackson and Wong 1982), and others. As well, survey research has been conducted of the general public on attitudes toward specific forest resources, such as black bears (Smolka et al. 1984). Other past survey research has focused on the social carrying capacity of various recreational settings (for a review see Shelby and Heberlein, 1986). Participants of various activities are asked to rate various aspects of their experience, including perceived crowding, the overall quality of the experience, what constitutes a "successful" outing, etc. Social psychological studies along such lines have been common for years. A quick trip to the library can provide resource managers with significant insight into forest recreationists' attitudes and interests.

Participant and non-participant research -- living among one's research subjects and getting to know their perspectives from first hand experience -- could also be used to better understand stakeholder's perspectives. These methods have potential as low cost options in and of themselves, or as complements to survey research. A fair amount of ethnographic research on various types of forest users already exists and could be employed to better inform forest managers of stakeholder needs. Such research exists for groups ranging from subsistence forest users (see Brody 1982, Freeman and Carbyn 1988) to loggers and paper mill workers (see

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[4] These include the <u>Journal of Leisure Research</u>, <u>Leisure Sciences</u>, and the <u>Journal of Human Dimensions of Fish and Wildlife Management</u>.

Carroll 1989, Beckley 1994).

Social movements

As various groups within society become increasingly frustrated with the dominant forest management paradigm, some are willing to challenge that status quo in a variety of direct ways. Some are content to voice their concerns through traditional mechanisms, despite the limitations of those channels mentioned above. An increasing number, however, are expressing their concerns through more direct approaches. Twenty years ago, people chaining themselves to bull-dozers, or to "eeries" in the canopy of old growth forests were unheard of. Today, they are not uncommon occurrences, particularly where pockets of old growth forest are slated for harvest.

Sociologists have studied social movements for several decades. In particular, considerable resources have been directed toward understanding the origins and recruitment of membership in mass movements. Among the movements subjected to close sociology scrutiny are the civil rights movement (McAdam 1982), the organized labour movement (McNall, et al. 1991, Piven and Cloward 1977), the women's movement (Hermann and Stewart 1994), and the environmental movement (Humphrey and Buttel 1982).

Much of the published work on the environmental "movement" has focused on measuring environmental attitudes of the general public (Jones and Dunlap 1992, Van Liere and Dunlap 1980). This literature measures the extent of "environmentalism" more than it provides analyses of how and why people are mobilized to take direct action on environmental issues. These two issues, of course, are connected, and measuring the degree and scope of environmental attitudes may give some indication of where protest is coming from. However, measuring attitudes alone will not help predict when and where social protest may occur. Nor will such an exercise shed

light on the origin, evolution, maintenance and dissolution of such movements.

A smaller number of works have addressed social protest and direct action on environmental issues. Fortmann (1988) addresses social protest related to forestry issues in rural areas. The bulk of sociological work on environmentalism has focused on urban-based, macro-protest (collective action and mass movements). In contrast, Fortmann describes rural-based, micro-protest (individual action). Norris and Cable (1994) present a detailed case study of a local social movement centred around opposition to pollution by a paper mill in eastern Tennessee. Substantial work has also been done on environmental social movements and protests that are not directly forest related, including; toxic waste sitings (Brown and Masterson-Allen 1994, Bailey and Faupel 1993), oil spills and development (Freudenburg and Gramling 1994), and alternative agriculture (Beus and Dunlap 1991). As protest over forest management grows, as it has dramatically in many regions, it is inevitable that the discipline of sociology will turn its focus to such conflict.

This type of work is often politically charged. In 1993, a graduate student of environmental sociology from Washington State University, spent several months in jail for refusing to surrender data related to groups that in his own words "sometimes use controversial means to halt and to publicize environmental degradation" (Scarce 1993). Social movement research may potentially be used by various groups to further their political goals. Such analyses could prove useful to protesters themselves (for recruitment and other purposes) to industry (to find means to discredit or subvert protest), or by government officials (to establish means of suppressing conflict). Doing work in a politically charged context does not negate the possibility

of producing an objective analysis.[5] Such research may help us to understand why people are so

moved by the current management (or in their eyes, mismanagement) of forests that they are

willing to risk life and limb to express their concern.   Research can help us to understand why

conflict happens where it does, when it does, how social movements related to forestry play out,

who is involved, why, for how long, and so forth. Our hope is that a better understanding of such

conflict could lead to its resolution -- in everyone's best interest. We now turn to the literature

within sociology that deals explicitly with the issues of conflict and conflict resolution.

Conflict and conflict resolution

The subject of conflict has and continues to be a major concern of sociologists. An entire

paradigm within the discipline (marxist) assumes class conflict as the starting point of any analysis.

Other work has examined different types of conflict (other than class) from different theoretical

perspectives. Studies of conflict invariably address issues of power and the exercise of power (see

Duke 1976, Olsen and Marger 1993).

The majority of this literature may appear to have little utility for forest managers and

policy-makers. However, conflict over forest resources will likely increase as the traditional

consensus surrounding forest use continues to wane. The majority of forest land in North

America is publicly owned.[6] Populations in both the U.S. and Canada are increasing and demands

for new uses of forests are on the rise. Ecotourism and adventure tourism are the fastest growing

sectors in the tourist trade and rely heavily on large areas of wilderness and semi-wilderness. At

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[5] If indeed, that is the intent. Some sociological work is explicitly activist oriented. But it too, may be useful to a wide audience.

[6] Ninety-four percent of Canada's forests and thirty-two percent of the United States' forests are under government stewardship (Natural Resources Canada 1994).

the same time, the public perceives just such wilderness and semi-wilderness forests to be in decline due to over harvesting. Under such circumstances, conflict is virtually inevitable.

While some sociologists have stressed the positive functions of conflict in society (Coser 1956), others have actively sought mechanisms to reduce conflict. Sociologists are not the only, nor the most prominent, social scientists researching the area of conflict resolution. This area is also the domain of political scientists, psychologists, and others as well. A recent issue of the Journal of Social Issues was completely devoted to conflict resolution, primarily from the perspective of psychology (Boardman and Horowitz 1994). In the summer of 1994 the Natural Resource Research Group and the Extension Sociology Interest Group of the Rural Sociological Society co-sponsored a pre-meeting session entitled, "Conflict and Cooperation in Natural Resources: Rural People Speak Out." Representatives of about fifteen community activist groups attended the session and shared their experiences of both conflict and cooperation. The panel consisted of groups that represented environmentalists, church groups, Native Peoples, and unemployed loggers (Anonymous 1994). Social scientists do not have a monopoly on this subject area. Good work on conflict resolution has come from foresters as well (Johnson and Duinker 1993).

Both the theoretical work on social conflict and case studies on natural resource conflicts may contain information that could inform policy-makers and forest managers. Instructive case studies include examinations of environmental conflict in the Pacific Northwest (Foster 1993), conflict over fisheries (Beckley and Heberlein forthcoming) and mining (Gedicks 1994) in northern Wisconsin.

Natural resources and persistent rural poverty

While sociologists have a long standing interest in rural poverty, there has been a renewed focus on persistent rural poverty in recent years.[7] Of interest to forest policy-makers is a growing literature on the relationship between persistent rural poverty and natural resource dependence. The old forest management paradigm did not require natural resource policy-makers to explicitly address rural social problems through their programs. The new forest management paradigm calls for a more inclusive consideration of social dimensions of forest management. Forest policies have direct and indirect effects on rural Canadians -- not only those directly employed by resource industries,[8] and not only with respect to poverty, but involving other social issues as well.

The work responsible for initiating the new dialogue on rural poverty and natural resource-dependence is a chapter by the Rural Sociological Society Task Force on Persistent Rural Poverty (RSS Task Force) entitled, "Theories in the study of natural resource-dependent communities and persistent rural poverty in the United States" (1993). The chapter reviews four theories that help explain the persistence of rural poverty in forest, fishing, and mining-dependent communities. These include: 1) the neo-classical economic theory of human capital, 2) structural theories that focus on the restructuring of rural economies, 3) a theory on the power vase of natural resource bureaucracies, and 4) a theory on the social construction of nature. Task force participants are quick to note that this is not an exhaustive list of theoretical perspectives that deal

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[7] Largely due to the efforts of Dr. gene summers who initiated the Task Force on Persistent Rural Poverty during his tenure as President of the Rural Sociological Society, and who has promoted the findings of the Task Force in various fora (including Congressional hearings).

[8] For example, many Aboriginal People are under-represented in reosurce industries, but policies regarding those resources affect their ability to earn a livelihood from the land and thus affects their well-being.

with the issue of persistent poverty. However, it has proved a fruitful beginning as a great deal of work has appeared in the relatively short interval since the publication of <u>Persistent Poverty in Rural America</u>.

The journal <u>Society and Natural Resources</u> has answered the challenge presented by the RSS Task Force by publishing a series of articles on natural resource-dependent communities and persistent rural poverty (Humphrey 1994a, 1994b, 1994c). In the series, Freudenburg and Gramling (1994) outlinhe the empirical work that needs to be done to test the theories reviewed by the Task Force. They suggest that long-term declines in resource employment, volatility in work commodity markets, and the unscientific assumptions that form the basis of "social constructions of nature" need to be closely scrutinized by scientific sociological analyses. Peluso et al. (1994) further clarigy the discussion on persistent poverty with insightful comments on the peculiar nature of poverty in resource-dependent areas. They suggest that women and minorities are more vulnerable to poverty than others, and that attention need to be paid to differences in individual, household, and community-level poverty.

Nord (1994) outlines two typologies. The first describes five resource use regimes: subsistence, commercially exploited open access, small holdings, industrial ownership, and public ownership. He also list three types of social benefits provided by natural resources: royalty/ground rent, employment, and social integration. The nexus of these resource use regimes and the benefit streams they produce, "differentially attract and hold the rural poor and the nonpoor" (1994:205). In another article, West (1994) focuses on the role natural resource bureaucracies play in creating pockets of rural poverty. Duncan and Lamborghini (1994) examine cultural dimensions of poverty in a coal mining region in Appalachia and in a forest-dependent

15

region of northern New England. While not specifically focused on the connections between natural resources and poverty, they found that the social organization of work, the relative stability of the resource-based commodities involved, and the degree of economic diversification all play a major role in differential experiences of poverty in the two regions.

Some of the brightest minds in rural sociology in North America are currently addressing this important policy issue in their research. Unfortunately, virtually all the work is being done in the United States and assumes a U.S. policy framework. A much higher proportion of Canada's rural communities are resource-dependent. They are also more likely to be dependent upon a single resource. As a country, Canada is more dependent than the U.S. on natural resource commodities, and proportionately more Canadians live in rural resource-dependent communities. The cyclical nature of pulp and lumber markets, the collapse of the eastern fisheries, and the volatility of mineral commodities all put rural Canadians at risk of poverty. While Canada's more comprehensive social safety net has buffered many rural Canadians from poverty in the past, there is increasing pressure from within and outside government to radically restructure that safety net. What affects that might have on rural Canadians in forest-dependent communities? How do Canadian institutions (provincial forest management agencies, federal welfare agencies, etc) differ from U.S. institutions in how they mitigate or exacerbate rural poverty? And how do labour mobility, resource management, property rights, and levels of resource-dependence differ between Canada and the United States, and with what implications for rural poverty? These are all questions that Canadian sociologists could address through research, and questions for which forest policy-makers *should* be demanding answers.

Other potential contributions of sociology

Sociology may contribute to improving forest management through less direct means as well. There is a growing literature on the nature of forest-dependence at the community level. While this literature was once focused almost exclusively on the Pacific Northwest, work has been recently completed or is currently underway on communities in the Southern U.S. (Bailey et al. 1994, Bliss and Walkingstick 1994, Bliss et al. 1992), Northern New England (Beckley 1994) and central Canada (Bull and Williams 1994). The abundance of new work in this area will hopefully lead to some illuminating comparative work in the near future. Some comparative work has already revealed significant inter-regional differences in the nature and scope of forest-dependence (Howze et al. 1993, Heberlein 1994) but these are preliminary findings. While volumes of work exist that document differences in the *forests* across regions of North America, regional differences in the ways people *use and depend* on forests are still poorly understood. From a policy perspective, such differences are just as important as differences in the forests themselves and should be considered by those charged with allocating, regulating and monitoring North America's forest resources.

Many sociologists study the dynamics of complex organizations. Areas of study include; internal organizational dynamics, organizational structure, decision-making, how various functions and responsibilities are allocated, and how the parts make up the whole. As well, they study how complex organizations deal with one another, how allegiances are made through networks, and the relations between regulators and the regulated. Forest policy is driven almost completely by such complex organizations, from vertically integrated capitalist firms, to large, hierarchical state, federal and provincial agencies, to well-organized, member-based

17

environmental organizations. Being familiar with the relationships within and between such groups is critical for understanding the social constraints to policy reform *and* the forces at work to maintain the status quo.

Most people involved in forest management and policy probably feel they possess a good understanding of the values goals and tactics of their own organization, and of other organizations with whom they interact. While they often claim to be acutely aware of the inherent biases of other groups or the individuals that comprise them, they may have difficulty recognizing their own inherent biases or those of their own organization. Sociological analyses can help by providing objective viewpoints of the group dynamics involved in forest management and the interactions between complex organizations.

On a larger scale, sociologists are studying the impacts of global restructuring on local resource-dependent places. For example, Cook (1993) demonstrates that a significant increase in poverty rates in forest-dependent counties of the Pacific Northwest occurred in association with a major restructuring of the forest products sector in the 1980's, well before land was withdrawn from harvest and set aside for spotted owl habitat. Other studies have examined the social impacts of log exports, the globalization of the forest industry (Marchak 1991), and the consequences of forest-dependence at the community level given the volatility of timber commodity markets at both the national and international levels (Bull and Williams 1994). Sociologists and political scientists have also engaged in policy analyses and contemporary research on the development and/or impacts of forest policy (Pratt and Urquart 1994, Peerla 1988).

While the benefits of such macro-level analyses may seem peripheral to the immediate

needs of forest managers, there is utility in such work. Even the more theoretical work may have applications. For example, a forest products company in Saskatchewan recently commissioned a literature review on underdevelopment and dependency theory. The goal of managers there was to better understand the negative social and political effects associated with single resource communities with the hope that past mistakes in the management of "company towns" might be avoided.

The mandate for forest sociology in Canada

Canada is a forest nation. Its history is largely a tale of human interaction with forest resources from beavers and square timber to kraft pulp and protected wilderness. As greater demands are being placed on Canada's forests, it is not surprising that Canadian forest managers, policy-makers, regulators, and stakeholders are increasingly interested in studying human dimensions of forestry. The capacity for doing social science research on forest communities and forest stakeholders is growing both in the university system and government.

Two recent documents by the produced and supported by the highest level managers of Canada's forests, and endorsed by a wide range of stakeholder groups indirectly underscore the need for more social science research in the area of forestry. The first of these documents is the Final Report of the Forest Round Table on Sustainable Development (Thompson and Webb 1994). This document calls for increased and better quality public involvement and the recognition of aboriginal rights with respect to forest resources. It emphasizes the "...distinctive needs of forest and communities and cultures...." It suggests conflict resolution as in important area in improving forest management. As well, it stresses that public land use and allocation and tenure policies need to be reviewed (on an ongoing basis) so that adjustments may be made in

response to changes in societal values. Finally the document suggests that, "The costs of achieving sustainable development in the forest sector should be shared by all sectors of Canadian society. Compensation and new economic development strategies for dependent communities should be inherent components of sustainable forestry." Sociology has a long legacy of concern with just such equity issues, as well as vast expertise in community development.

The second document, "Sustainable Forests: A Canadian Commitment", is a statement by the Canadian Council of Forest Ministers (1992). This also calls for increasing public participation in forest policy development and increased participation by Aboriginal people in forest management. As well the CCFM calls for better information and assistance for private forest land owners. The council wishes to ensure a skilled and adaptable workforce, and it supports multidisciplinary efforts to improve our understanding of forests. Clearly sociologists should be a part of those multidisciplinary efforts. The above concerns of the CCFM could be addressed through sociological research on aboriginal forest management, existing structures for public involvement in forest management, labour market analyses and studies on the human capital available in forest communities, and surveys of the knowledge base and needs of private forest land owners.

Conclusion

Sociology has made some minor contributions to forest management over the years, but until very recently there was not much sustained interest in forest issues by the discipline. That situation has now changed. Sociology examines and reflects upon changes in society, and society's interest in forestry issues is clearly growing. It is therefore only natural that forest sociology is a growing area within the broader discipline. Many forest managers and policy-

20

makers are discovering the value of sociology for the first time. This paper highlights some of the past sociological work that might of use and interest to such persons.

The potential for further contributions is tremendous. The new mandate for forest managers and policy-makers to consider a broader range of staekholders presumes some knowledge of the values, attitudes, and policy preferences of those individuals and groups. Sociology can help fill the knowledge gap that currently exists in this area. Applied social science can also offer illuminating analyses on the nature, scope, causes and processes of social conflict over forest use, as well as provide some models for means to cope with that conflict.

Sociologists study individuals, small groups, communities, complex organizations, and world systems of production and exchange. The methods, theories, and unique perspectives of sociological analysis can be applied to loggers, wildland recreationists, subsistence forest users, forest managers themselves, as well as the communities in which these people live, the organizations to which they belong, and the larger geo-political contextin which their expertise is applied, their commodities are sold, and their policy preference are expressed. While sociology is sometimes criticized for its diversity of perspectives and lack of theoretical solidarity, in this instance, such diversity is a strength. The range of unexplored sociological issues ofhuman interactions with forests is great, and the application of these diverse theories, methods, and perspectives will lead to a much richer understanding of the many ways in which we depend upon forests.

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