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Community-Based Natural Resource Management: A Strategy for Community Economic Development

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Outline

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1. Introduction

Community-based natural resource management is an important strategy for community economic development (CED) in British Columbia. It embraces the principles of CED including participation, cooperation and collaboration, self-reliance and community control (CEDC 1998). Although not a new concept, the implementation of community-based natural resource management has largely been limited in Canada to wildlife and fisheries management in the North. But the concept is growing in acceptance, and is attracting the attention of politicians, policy-makers and communities.

At the core of these systems are management rights that enable communities to become partners in and greater beneficiaries of the management of local resources. The spectrum of initiatives that fall under this general definition is broad. In British Columbia alone, we see community watershed management, community forestry, fisheries co-management,

and community gardens to name but a few.

The purpose of this paper is to describe the concept of community-based natural resource management and its relation to CED. The first section will explain what is meant by community-based natural resource management (CBNRM), and why it is believed to lead to social, economic, and ecological sustainability. The second section serves as an overview of the dominant theoretical framework used to understand and evaluate CBNRM systems. Then, community forestry in B.C. will be discussed as an example of what can be achieved through CBNRM. And to conclude, a list of success factors for community forestry will be presented.

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2. Community-Based Natural Resource Management As A Community Economic Development Strategy

CBNRM embodies many of the tenets of CED. CED is defined as being:

> ...a community-based and community-directed process that explicitly combines social and economic development and is directed towards fostering the economic, social, ecological and cultural well-being of communities and regions...CED has emerged as an alternative to conventional approaches to economic development. It is founded on the belief that problems facing communities - unemployment, poverty, job loss, environmental degradation, economic instability, and loss of community control - need to be addressed in a holistic and participatory way. (CEDC 1998).

The following principles underlie CED:

> CED is an evolving, on-going process.
>
> **Equity:** CED is based on the principle of fairness and the belief that community members should have equitable access to community decision-making processes, resources and the benefits of CED projects...
>
> **Participation:** CED encourages the active participation of all members of the community in the planning, decision-making and benefits of CED initiatives, and works to remove the barriers that limit the participation of marginalized citizens...
>
> **Community -building:** CED seeks to build a sense of community by fostering

relationships of acceptance, understanding, and mutual respect.

Cooperation and collaboration: CED recognizes that there are important linkages and connections between communities and regions, and that many problems can't be addressed in isolation. CED therefore encourages relationships based on cooperation and collaboration.

S**elf-reliance and community control:** CED builds on local strengths, creativity and resource, and actively seeks to decrease dependency on, and vulnerability to, economic interests outside the community and region. Furthermore, CED supports decentralized, non-hierarchical decision-making processes that strengthen the autonomy of the individual, the community and the region.

Integration: CED recognizes that the healthy development of communities requires a holistic approach that addresses the social, economic, cultural, and ecological dimensions of community well-being.

I**nterdependence:** ED recognizes that the local community exists within the context of a larger complex web of relationships and that its decisions can have an impact far beyond its own boundaries. Therefore, CED embraces strategies that aim to benefit the local and larger community.

Living within ecological limits: CED recognizes that the social, cultural, and economic well-being of the community depends on healthy local, regional and global ecosystems, and that there are real ecological limits to human economic activities. Therefore, CED encourages processes, structures and initiatives that respect these ecological limits and supports work that is sustaining, regenerating and nurturing of both the community and the earth.

Capacity Building: CED contributes to self-reliance by encouraging the acquisition of relevant skills and the development of supportive structures and institutions.

Diversity: CED contributes to self-reliance by encouraging economic activities that are diverse and appropriate to the expressed needs within the community and region. As a result, CED looks different in each community.

Appropriate indicators: CED monitors and evaluates its progress through community-derived and appropriate economic, social, cultural and ecological indicators, rather than through conventional measures and standards. (BCWG-CED 1992)

As will be demonstrated in this paper, community-based natural resource management (CBNRM) supports these principles and can be an effective CED strategy for resource-dependent communities.

There are many definitions of the term community. In the context of this paper, "community" in CBNRM implies: "(1) an ecologically defined territorial boundary within which human settlement(s) exist, (2) a 'local' scale, (3) a degree of common interest or 'sense of place'" (Betts 1998: 3).

The central premise of CBNRM is based on the democratic maxim that those affected by a decision should participate directly in the decision-making process (Duffy et al. 1996). Decision-making at the local level can lead to locally appropriate decisions and improves the incentive to consider long term benefits of sustainable management (Notzke 1994).

However, most decisions affecting natural resources in Canada are not made by local communities but by centralized management regimes. The Canadian Constitution grants primary responsibility for lands and resources to the provincial governments. These governments oversee the management of provincial Crown land and control its use for logging, mining, recreation, grazing and other such activities (British Columbia 1996) In most cases, the government holds the authority to delegate rights to natural resources, and private firms exploit these resources (Burda et al. 1997). This is especially important for forestry in BC where 94% of the forested land base is provincial crown land (British Columbia 1996). In effect, the public must depend on these two institutions for the management and distribution of benefits derived from our resources. Bureaucratic and corporate decision-makers are often geographically removed from where the resources are located. As a result, decisions are frequently made without a sense of responsibility to the communities that depend on the resources. (Burda et al 1997).

These and many other phenomena of industrial resource extraction point to the reasons why decision-making authority regarding natural resources should be shared with communities. For example, stewardship of the land is believed to be more easily cultivated in local communities than in organizations that manage from afar. Burda et al (1997) explain:

> People who have lived in an area for a long time have the greatest knowledge of the local ecology, and of the long-term social and environmental impacts of their activities. Centralized management structures lack the flexibility and ability to respond to local conditions, while community-based management enables the people closest to the forest to manage, plan, regulate and enforce the use of the forests in their specific places. This creates feedback mechanisms for adapting quickly to changing conditions; locally established standards and policies are more flexible to these changes. Decisions can be made for the benefit of the community

> at large, and by those most affected by the decisions. (Burda et al. 1997: 89).

Herb Hammond offers another facet of this argument:

> Community control offers the opportunity for solutions which are often missed by centralized systems. Communities are the place where doing things occurs, as much as where plans are generated. Thus, the doing and the planning are often very responsive to each other because they occur in the same place, often by the same people. Constructive change is easily implemented by a balanced community process. By contrast, our centralized system focuses more on planning than on doing. Plans are based on perceived needs rather than the actual needs of communities and the forest. Communities have input which may be rejected by a well meaning industry of government planners determined to "save the community from itself". One of the big advantages of community control is the combining of place, diversity, and responsibility to protect all people in a community and to protect all parts of the forest. If we are able to achieve this community by community, a healthy central government and economy will be the result (Maki, Walter and Hutcheson 1993: sec 6.1 as cited in Fulton 1998).

Gibbs and Bromley (1989) concur with these sentiments, stating that efficiency, equity and sustainability are frequently optimized by rural communities that are dependent on collectively managed renewable resources.

CBNRM is a system that has been operating in other countries with success for generations. A growing body of research is examining community-based resources management around the world and is finding that in many cases, these regimes tend to achieve sustainable use patterns (Pinkerton 1993). These management systems fly in the face of theories such as the tragedy of the commons and the predator/prey models that are currently used by state-level managers and decision-makers. These theories assume that groups of resource users, if left unregulated by a central government, will work to maximize individual short-term gain at the expense of ecological long-term sustainability (Berkes & Farvar 1989).

On the contrary, research is finding that communities which are able to play a meaningful role in management have in many cases developed ways to prevent over-exploitation of local resources. Community-based arrangements have shown promise in improving the management of forests, fisheries, wildlife, water and other common pool resources in an ecologically and economically sustainable manner (Berkes & Farvar 1989, Gibbs and Bromley, 1989, Pinkerton 1993, Pinkerton and Weinstein, 1995).

CBNRM has been most vigorously promoted in developing countries since it can provide the long-term and grass-roots institutions that are critical to sustainable development

(Berkes & Farvar 1989). Interestingly, as Berkes & Farvar (1989) explains:

> For decades, many developing countries have been ignoring the time-tested resource-use practices of their own people, trying instead to emulate the developed countries, with their imprudence and excess in resource use. Meanwhile, scholars and resource managers in industrialized countries have been seeking new paradigms of resource use and developing a keen interest in traditional resource-use wisdom and ecological knowledge as found in some developing areas of the world (Berkes & Farvar 1989, p20).

In Canada, it is not only scholars and resource managers that are looking for alternatives. The current state of resource-dependent communities is motivating many community leaders to look for new options. Various forms of CBNRM are showing promise as strategies for CED. CBNRM systems are usually based on co-operation instead of competition and focus on the collective sharing of a resource rather than the individual attempting to maximize yield without reference to the community (Jacobs 1989). Community-based systems serve a number of CED functions including: livelihood security, access equity and conflict resolution, resource conservation, and ecological sustainability (Berkes & Farvar 1989).

As will be shown by the examples in section 4, CBNRM has the potential to meet many of the social and economic needs of communities in an ecologically sustainable manner. To gain a deeper understanding of why this is the case, common property theorists have developed a framework that describes the rights, duties, and incentives involved in natural resource use and management.

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3. Theoretical Foundations: Using a Common Property Resources Framework to Understand Community-based Natural Resource Management.

Empirical work in the field of common property resources (CPR) has shown that there is a critical link between ecological, economic and social sustainability and property rights. The notion of property rights is then of great importance to the study and practice of CED. Most debates in Canada center around whether the government or the private sector can do a better job of managing natural resources. Property rights are narrowly conceived as being either private rights or government rights. But CPR theory goes beyond these two categories, and beyond the concept of ownership, to encompass all of the bundles of rights that are relevant to and govern the management of natural resources.

Schlager and Ostrom (1993) divide property rights into three main categories: Operational

rights; collective choice rights; and constitutional rights. 1) Operational rights include access rights and withdrawal rights, which translate to the user's right to harvest from the resource, and to retain benefits from that harvest. 2) Collective choice rights include management rights, the right to exclude others, as well as alienation rights (i.e. the right to sell). And finally, 3) a constitutional right is the authority to decide who qualifies to make decisions on the granting of operational and collective choice rights.

Research in many natural resource sectors has indicated that the more complete the set of rights held by an individual or group, the more likely they are to invest in authority and develop rules that define how they exercise their rights of withdrawal (i.e. harvesting) (Schlager and Ostrom 1993). This evidence links back to the democratic maxim mentioned in section 1 that suggests that when people are faced with the consequences of their decisions, they make better decisions. This notion of incentives derived from rights is one of the most compelling arguments for community-based control of resources. It is important to note, however, that ownership (the status which involves the complete set of rights) does not guarantee that a resource will be managed and used sustainably. If an owner's discount rate is high, that is, if they value short-term gains more than expected future gains, then they may severely degrade a resource through over exploitation (Schlager and Ostrom 1992).

The concept of incentives derived from rights leads to the notion of stewardship. Stewardship is the core of CBNRM and an underlying principle of CED. Stewardship can be defined as "...the responsibility of humans toward non-human life and the Earth's life support system" (Walter 1994: 68). Pinkerton and Weinstein (1995) explain the significance of stewardship in CBNRM:

> Management systems based on stewardship focus as much on the DUTY of...communities to manage the resource for future generations as they focus on the RIGHT of communities to manage. Rights and duties are two faces of the same coin, but the difference is essential. A right is oriented toward the benefit of the current users; a duty is oriented toward future generations (Pinkerton and Weinstein, 1995:182).

In order to understand the various rights and duties associated with CBNRM, Pinkerton and Weinstein (1995) have divided management rights and duties into to six general categories. This list, as seen in Table 1 is helpful in determining which management rights and duties a community is involved in.

Table 1 Management Categories with Corresponding Functions, Rights and Duties.

Management Category	Management Function	Rights and Duties	(adapted from

1. Policy Making and Evaluation	Objectives setting, planning and education	right/duty to do long-range planning	Pinkerton and Weinstein, 1995. Table 1: Management Functions and Community Rights and Duties)
		right/duty to research key questions affecting community values	
		right/duty to educate own and larger community	These management rights and duties relate to CED in many ways. For example, by considering a CBNRM initiative using this list of rights and duties, we can begin to measure the degree of self-reliance present in a community. This self-reliance, however, depends heavily on the
2. Productive Capacity of the Resource	Monitoring	right/duty to protect resource against harmful uses	
		right of access to government information	
		right to collect own information	
		right to interpret own information in light of local knowledge	
		right/duty to enhance or restore forest productivity	
3. Compliance with Rules	Implementation and Enforcement	right/duty to enforce rules	

4. Harvesting and Resource enhancement	Assessment and Harvest Planning	right of access to government information and right to collect own right to interpret information in light of local knowledge right to make rules regarding: volume of harvest, location, timing, and harvesting techniques as well as enhancement procedures	capacity of communities to meet the challenges presented by these rights. Section 5 will briefly discuss this notion of capacity, and the qualities that communities ought to possess in order to successfully manage their natural resources. But first, CBNRM will be discussed in the B.C.
5. Resource Use Coordination	Planning the coordination of different harvest regimes	right/duty to coordinate with other users in other jurisdictions	
6. Returning Optimum value to resource sector	Planning for product quality and diversity	right to manage timing of harvests for optimum product value	

context to ground the theories discussed here in experience.

The principles of CED state that any development initiative ought to be appropriate to the unique situation of the community in question. This relates not only to biophysical and financial constraints, but also elements such as human resources and "readiness" for a particular initiative, a concept also known as community capacity. It should be recognized that not every community wants to be involved in all aspects of resource management. Most communities prefer to share different duties with a central government. This sharing of responsibilities is often referred to as co-management (Pinkerton 1993).

4. Community-Based Natural Resource Management in B.C.

The range of CED initiatives that are based on natural resources is broadening. It includes activities such as: community forestry; agroforestry; fish and wildlife co-management; locally-owned value-added business; nature-based tourism; stream stewardship and restoration projects; bioregional mapping projects; agricultural import substitution programs; community gardens; and farmers markets.

All of these are being practiced in communities in British Columbia. Community Forests will be discussed here, as forestry is a common element held by the four communities in the "Promoting CED for Forest-Based Communities" project. Many other non-forestry related examples could be explored, and may be at a later date.

Community Forestry

Community forestry is perhaps the most significant forestry-based CED initiative to emerge in Canada in recent years. It is, however, not a new concept. According to Betts (1998), S. Dana was one of the first advocates of the concept of community forestry in North America, and wrote about it in 1918. He believed that through community forestry, local people could overcome problems such as abandoned towns and declining rural populations, that were associated with the large scale forest enterprises beginning to dominate the US. at the turn of the century (Betts 1998).

Community forestry was first initiated in B.C. in the 1950s with the Mission Community Forest (Allen and Frank 1994). But it was not until the 1970s and 80s that the concept of community forestry began to more fully develop. It was during this time that public awareness of the need to protect forest ecosystems from the negative impacts of industrial logging practices began to grow. Water and soil quality, fish and wildlife habitat, and wilderness preservation all became issues of public concern. While environmentalists were focusing their attention on preservation, a growing number of people who worked in the labour movement, with communities, and with tribal councils were becoming equally concerned with responsible management of the "working forest"(Pinkerton 1993:34).

Since that time, a number of models have been developed by B.C. citizens that promote the concept of community forestry and in general, more holistic natural resource management. These include the Forest Stewardship Act, drafted by the Tin Wis Coalition in 1990 (Pinkerton 1993, Tester 1992); the Forest Industry Charter of Rights, known as the Hazelton Charter, developed by the Village of Hazelton in 1990 (Maki 1993), and most recently, the Community Forest Trust Act, described in Forests in Trust: Reforming British Columbia's Forest Tenure System for Ecosystem and Community Health (Burda et. al

1997). All of these call for more ecologically sustainable forest use and the devolution of decision-making authority to communities. They serve as blueprints for an alternative way of doing things that integrates economic, social and ecological values. The following sections will outline in more detail what is meant by community forestry.

The definitions of community forestry are as numerous and varied as the communities that are trying to implement it. At its core, community forestry is based on the local control over and enjoyment of the benefits from local forest resources. These benefits are not only monetary, but are derived from the many values associated with forest ecosystems including ecological, cultural, spiritual, medicinal, recreational, and aesthetic values. Community forestry is seen as a chance for the values and interests of local citizens to be reflected in how decisions about forest use are made (Burda et. al, 1997; Betts and Coon, 1997).

There are three major goals of community forestry: It is meant to foster community economic development; promote sustainable forestry; and be based on community participation. These three elements are briefly discussed:

1. One of the primary goals of community forestry is to enhance local economic stability. Under this system, forestry operations are run by local citizens, and the wealth generated from use of the forest tends to stay in the community rather than leaving to pay distant shareholders (Betts and Coon, 1996). As Nozick (1995) explains, in healthy communities, a dollar can circulate as many as six times before leaving the community. In impoverished communities, or communities dominated by externally-based business interests, that dollar leaves almost immediately. One of the intentions of community forestry is to provide for a relatively constant level of forestry activity, which prevents "shifting forestry" and the boom and bust cycle traditionally experienced by many forest dependent towns (Betts and Coon, 1996). In order for this to occur, the establishment of a community forest must be accompanied by structural change in the local economy capable of capturing the wealth of the forest. Promotion of more refined, value-added forest products and economic diversification is essential to meet this end.
2. As previously mentioned, people value forests for more than just timber. When communities rely on forests to meet economic, ecological and recreational needs, then real incentives exist to manage for sustainability. The community must live with the consequences of their actions. If the forest ecosystem is degraded, their livelihoods and well-being are compromised. For this reason it is believed that community forestry will result in smaller scale, ecologically sensitive forestry practices.
3. Community forestry is based on the principles of a participatory democracy, where decisions are made by people who are directly affected by the consequences of those decisions. Traditionally in Canada, only a small number of "experts" have influenced forest management decisions, but there is growing consensus that citizen participation is essential if we are to achieve sustainability. One of the primary reasons for this is the observation that individuals who are involved in decision-making are more apt to comply with and enforce the decisions made (CCNB 1995).

A number of authors have also suggested that community forestry has the benefit of ameliorating resource management conflicts at the local level (Anthony Usher Planning Consultants et al. 1994, Betts 1998, Burda et al. 1997). It has been found that resource conflicts can often be avoided when decisions are made by those closest to the resources (Harvey 1998).

A few examples of community forestry exists in B.C., including those in Mission, North Cowichan, and Revelstoke. However, excepting the North Cowichan Municipal Forest, they are all constrained by the current forestry legislation and may in the long term fall short of meeting the integrated goals of CED. Even so, there is a great deal that we can learn about the strengths and weaknesses of these examples.

The provincial legislation that governs community forests in B.C. fits the industrial model and subjects them to production oriented demands that set cutting rates higher than is ecologically sustainable in many areas. The North Cowichan Municipal Forest is the only community forest that is not subject to these demands because the land is owned by the municipality. Despite this, the municipal management authority has set a high Annual Allowable Cut (AAC), and so the forest serves a primarily productionist purpose to meet economic development goals (M'Gonigle 1996). Experience with community forestry in B.C. is now showing that in order for it to achieve its full potential, tenure reform must occur (Haley 1997). The next section will briefly discuss the concept of tenure, the need for its reform, and the current response of the provincial government to make the goals of community forestry attainable.

Forest Tenure

Forest tenures are the contractual arrangements governments use to transfer property rights to the private sector. These rights permit the utilization of the public timber resource, and in theory should result in the highest possible benefit to society (Ross 1995). In 1994, the National Forest Round Table agreed that

> forest lands should be managed under that combination of tenure systems which balances rights with responsibilities, encourages stewardship, optimizes the sustained supply of various values from forest lands, and contributes to fair and sustainable markets, and healthy communities (Ross 1995:318).

There is a growing sense in B.C., however, that the current tenure system is not achieving these goals.

In order to understand the significance of forest tenure and how it affects forestry and communities in Canada, it is important to consider the political economy of the relationships involved. At the core of the current system is an extractive relationship whereby centralist institutions dominate local territories. According to M'Gonigle (1996), this relationship

> ...privileges bureaucratic (including corporate) forms of organization over communal ones. This pattern characterizes the history of the forest industry in Canada, from the first large-scale cutting of the forest of eastern Canada by a distant British Crown some two hundred years ago, to the extraction of logs from the traditional lands of the Nuu-chuh-nulth First Nations by multinational corporate traders today. Historically, the development of these linear, centralist patterns has been at the expense of a range of community-based values and skills of territorial self-maintenance and mutual social co-operation.(M'Gonigle 1996:2).

In our current system of forest tenure, the inherent goal is to maximize the values of private production and profit. Tenure arrangements are a reflection of the fact that public corporations are driven first and foremost to manage for profits and business growth. In fact, they are legally mandated to do so. The BC Company Act of 1979, (c.59, s.142) and the Canada Business Corporations Act of 1985, (c. C-44, s.122) require the board of directors to act in the best interest of the company. This translates to responsibly serving shareholders, an obligation that the courts have interpreted to mean managing for profits or business growth in order to increase share value (M'Gonigle 1996).

The tenure system has resulted in corporate concentration, and management which is overseen by a highly centralized government. According to Drushka (1993): "It is simply not possible to decide from an office in Victoria how to manage every hectare of forest land in B.C., yet that is essentially how the system works" (Drushka 1993:15). Discussion of the need for tenure reform goes back at least as far as 1942. There has, however, never been an open debate on the relative merits of public and private land ownership. The April 1991 report of the Forest Resources Commission recognized that increased private ownership may promote more responsible stewardship, but concluded that it is not a realistic alternative. Drushka (1993) speculates:

> There is, I suspect, an unstated reason behind the continued opposition to private forest ownership, not only in BC, but in most of Canada. That reason has to do with the distrust many bureaucrats, resource professionals and others feel toward the ordinary citizens of the province particularly those who work in the woods (Drushka 1993:3).

It is conceivable, however, that a push toward privatization may not be in the best interest of those who depend on the Province's forests. The majority of evidence which supports large-scale private ownership as a means of promoting better stewardship is theoretical (Zhang, 1997), and may represent unrealistic neoclassical economic ideals. As was mentioned in section 3, the land owner's right to sell his/her property can be a disincentive to manage for ecological sustainability in the long term. Secondly, private ownership does not directly address the issues of community-economic development and sustainability.

The tenure system is linked to sustained yield forest management, a management regime that frequently leads to clearcutting, slash burning and single species tree planting (Hammond, 1991).

Because of this, advocates of community forestry believe that the tenure system must be changed to make room for ecologically-based initiatives that maintain ecosystem health. Burda et. al (1997) indicate that since tenure holders must adhere to annual allowable cut (AAC) requirements, they cannot employ forest practices which sustain ecological composition, structure and function. They state that in most cases this would undercut the AAC and community forest licensees would risk losing their licenses. It is possible that ecologically-sensitive forest practices could be used while meeting the AAC in areas where forests have not been degraded by logging. Most forests in close proximity to rural towns have, however, seen some logging activity and would need to be restored. It is this line of thinking that leads to the notion that the tenure system must be changed to create the space for alternative forestry practices.

One of the strongest arguments for tenure reform is the fact that the present system does permit meaningful public participation in decision making. As stated earlier, the concept of a participatory democracy, where citizens and resource users are involved in making decisions and are thus responsible for them, is intrinsic to community forestry. Today in B.C., ordinary citizens have very little say in how forest ecosystems are managed (Hammond 1991).

The challenge for the provincial government is to design a new community forest tenure. The legislation to permit such a tenure was passed in the B.C. legislature on July 30th, 1998 (British Columbia 1998b). Bill 34, the *Forest Statutes Amendment Act, 1998* allows for the establishment of community forest pilot agreements. The pilot agreements stem from a commitment made under the Jobs and Timber Accord to design and pilot a new community forest tenure that would "...increase the direct participation of communities and First Nations in the management of local forests and to create sustainable jobs" (British Columbia, 1998a) According to Minister of Forests David Zirnhelt, "The legislation is the first step towards giving communities the flexibility to manage local forests for local benefits. Community forest tenure will contribute to the long-term economic stability of communities that rely on B.C.'s forests..." (British Columbia, 1998b). The new tenure is intended to:

- describe a specific area of land for a community forest;
- be long-term in duration;
- test local government and community-based legal entities that are appropriated to hold a community forest tenure;
- provide the opportunity to manage for resources beyond timber;
- base timber harvest rates on the community's management objectives rather than on provincial criteria for the allowable annual cut determination and cut control;
- initially use the current stumpage system, but test alternative fiscal arrangement which would recognize broader management rights and regimes;
- initially use a results-oriented approach to forest practices, similar to what is being developed for woodlot licenses, but also examine the need for provisions specific to the community forest tenure;

- minimize risk to communities and the province through requirements for a management plan, business plan, public involvement and reporting. (British Columbia, 1998b: 1).

Three or four communities will be selected as pilot communities out of the twenty seven that have applied (British Columbia, 1998b). This pilot project represents a significant step in the direction of community-based resource management, and will be watched with keen and critical eyes around the province.

Potential Problems with Community Forestry

As is evident from the preceding sections, there are many advantages to community forestry and CBNRM in general. But before highlighting some examples of community forestry in B.C., a few potential problems will be mentioned. To date the major obstacle to community forestry has been the lack of an appropriate tenure. However, a number of other difficulties exist, and due to Canada's relatively brief experience with the concept, they have yet to be adequately addressed (Betts 1998). They include the following:

4. Landscape-level issues: If large forest licenses are fragmented into smaller community-based licenses, then it will become more difficult to manage for landscape-level ecological process such as wildlife migration, fire, and water quality. Betts (1998) suggests two possible solutions to this problem. First, if provincial government representatives are appointed to community forest management institutions, they could assist in the planning of these transboundary issues. Second, that a committee with representatives from each community forest could be created to address landscape planning.
5. Representation of non-community interests: Perhaps the most commonly raised criticism of community forestry is that the interests of non-local people who depend upon or use the forest may not be sufficiently represented in locally-managed forests. Many of the visions developed for community forestry (see Burda et al 1997, Tester 1992 and Maki 1993) do include an umbrella role for the provincial government. This authority could be charged with representing these interests (Betts 1998).
6. Selection of community forest stakeholders: Many of the questions of community forest governance remain unanswered (Taylor and Wilson 1993 sited in Betts 1998). Perhaps the major difficulty lies in determining which interests should be represented on the community forest board. The 'consensus-based' approach proposed for most community forest management authorities has also been questioned. Forest management decisions will not always create a "win-win" solution. Betts (1998) states that the potential solutions to these problems may lie in the election of some community forest board members (while others are appointed), and a majority vote "back-up" decision making process.
7. Community Enthusiasm: Community enthusiasm for the concept of community forestry and its

benefits is critical. According to Anthony Usher Planning Consultant et al. (1994), community forestry may succeed in one community and fail in another simply because of the inspiration and commitment of a small group of people in the first community. This factor calls for a system whereby communities can 'opt in' to community forest management if they possess the requisite leadership, resources and desire (Betts 1998, Burda et al 1997).

8. Ecological sustainability: CBNRM is believed to lead the way to more sustainably managed resources. There are no guarantees of this, however. Fulton (1998) found that several individuals involved with community forest development in B.C. hold the opinion that many communities, if given the option, would maintain industrial logging practices (Mitchell-Banks, 1998; Profilis, 1998; Routley and Pollock, 1998; Weir 1998 as cited in Fulton 1998). There are a number of reasons why resource degradation could be perpetuated. Perhaps one of the most problematic is ignorance of local ecosystem composition, form and function that must be maintained to ensure a healthy system. Solutions to this problem do exist, however, such as a technique developed by Silva Forest Foundation called ecosystem-based landscape planning (Burda et al 1997).

Communities must be given the latitude to decide what works for them. It is likely that should community forestry become more widespread in the province, some communities would adopt an ecosystem-based approach, while others would maintain current industrial forestry standards.

> However as the years passed, and the different communities compare how their forests were contributing to the social and economic well being of the community, it would become readily apparent that the communities practicing environmentally sustainable forestry would have healthier ecosystems and economies, as well as greater community stability (Fulton 1998: 24).

In a talk presented at the International Workshop on Ecosystem-based Community Forestry held in Victoria in October 1998, Stephen Harvey, Senior Policy Advisor with the Ontario Ministry of Natural Resources said that community forestry will lead to ecologically-based forestry if:

1. There is general agreement within the community concerning its relationship with the forest and the expectations of that relationship.
2. The community can identify in a sufficiently intimate way with the forest such that it promotes good stewardship of the forest.
3. he community understands and accepts its role as stewards of the forest; stewards acting not only on behalf of local but also national and global interests.
4. The community has sufficient knowledge of the forest and sufficient access to decision tools to support its understanding of its activities in the forest. (Harvey, 1998:4)

9. Reconciliation of revenue for the State and communities: At present all community forests in the

province operating on Crown land pay stumpage to the provincial government. Many advocates of community forestry would like to see all of the revenue generated by community forest lands stay in the community. The provincial government, however, relies on revenue collected from Crown land.

> The government receives two kinds of revenue: 1. stumpage, the price paid for timber harvested on Crown land , which in 1995 amounted to more than $1.7 billion, and 2. annual rent of $20 million, paid for the right to occupy Crown land for the purpose of harvesting timber (British Columbia 1996).

With community forestry, it is possible that operations can be economically feasible for communities, while still generating money for the provincial government. Competitive log yards are one potential solution. The Vernon log sale project, a competitive log yard, has demonstrated that this kind of system can increase employment and revenues at a higher return to the Crown than the average stumpage paid (Burda et al 1997).

10. Access to forests and defining boundaries of community forests: At present there is little unallocated forest land in the province, and therefore the opportunities for communities to gain access to forest areas are limited. Also, the question of the setting of boundaries has not been adequately addressed to date (Fulton 1998). Communities that are in close proximity to each other but that want to manage individual forests will have to come to agreement on the boundaries of their management areas. A regional management board structure may be required in some cases.

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1. Economic self-sufficiency: Many communities in B.C. will have a difficult time financing their community forest operations, at least in the beginning stages. A high degree of self-reliance is very important, however. Because of this, communities may need to scale back their vision of what type of community forest they would like, and may need to ease into the process of developing a community forest slowly (Fulton 1998).

It is likely that many more obstacles to successful community forestry will be identified as we become more experienced with the concept. Many of the problems can, however, be overcome when communities have the capacity to innovate and find creative solutions. This essential "community capacity" will be the focus of section 5, but first two examples of community forestry in B.C. will be described.

Examples

As mentioned above, a number of community forests are already operating in B.C.. Most are

limited by the current tenure system They are, however, a good starting point for demonstrating how community-based natural resource management can work in a community, and what benefits can accrue. The next section describes the community forests that have been established in the towns of Kaslo and Mission. The Kaslo Forest License, a new arrangement, serves as a good example of how local management capacity was built through CBNRM planning. The Mission Municipal Forest has been in operation for many more years, and shows how a community forest can provide economic benefits to a community.

Kaslo Community Forest

Background

On January 2, 1996, the MOF announced the opportunity for a Community Forest License in the Kootenay Lake Timber Supply Area (TSA). This forest license authorized an AAC of 10 000 m3 for Kaslo, and was based on the goals of encouraging local involvement in the management of forest resources and creating local employment. In February of the same year, a Public Information Forum was held to inform the local public of this new opportunity. During this Forum, a Community Forest Planning Committee was formed and given the mandate of gathering background information, assessing models for management and governance, and providing recommendations back to the community (Kaslo and Area Community Forest Planning Committee, 1997).

According to facilitator Susan Mulkey, the goal of the committee was to produce a model that would contribute to the sustainability of the community and its resources. Their desire was to include the interests of the broader community and ensure greater community control. Given this objective, they created a non-profit community group, the Kaslo and District Community Forest Society (KCFS). The Society's Board includes nine volunteer members: one each from the Regional District of Central Kootenay and Kaslo Village Council; and seven members at large, selected by the Planning Committee with assistance from an external auditor. The members reflect a balance of geographical, gender, general and sectoral interests (Kaslo and Area Community Forest Planning Committee, 1997).

One of the most important components of the KCFS mandate is the protection of ecosystems, watersheds and other resources through low impact harvesting (Kaslo and District Community Forest 1998). Another key element is community stability through job creation and training. It is projected that the management and operation of the license will employ 6 people full time and up to 16 more seasonally. The license will support roughly 13 processing jobs, and is expected to gross revenue of approximately $750, 000.00 (Kaslo and Area Community Forest Planning Committee, 1997).

Weaknesses

Given the type of license and the rights conferred to the KCFS, three potential weaknesses of the Kaslo Community Forest can be seen. The first is that the MOF still holds the final decision-making authority on key issues such rate of harvest. It is possible that a lack of community control in areas such as this could negatively affect the groups' willingness to become responsible stewards in the long-term. Second, the fifteen year tenure duration may be too short to act as an incentive for the community to invest in stewardship and management capacity. Third, allotments that are volume and not area based are not believed to promote investment in ecologically sensitive forestry.

These potential weaknesses have been observed from a distance, however, by examining the tenure type of the community forest. According to Forest Supervisor Bill Plant the KCFS is overcoming these potential barriers, and developing a long term, sustainable management strategy that involves protecting local ecosystems while establishing viable community-based businesses. Furthermore, the Society is operating under the premise that once the fifteen year license has expired, a long term tenure arrangement will be established (Plant, 1998).

Benefits

To date there have already been many gains for the people of Kaslo resulting from the establishment of their community forest. Two substantial benefits were incurred early on during the planning stages. First, the license secured local jobs and economic activity. Second, the process of simply applying for a Forest License seems to have created social capital and management capacity within the community. Susan Mulkey, the facilitator, writes:

> The benefits of the tenure reach beyond the obvious positive economic impact on the community. The citizens are able to participate directly in the management of the local forests and watersheds. Responsibility for respecting diverse forest values, meeting statutory and legal obligations AND ensuring effective fiscal management falls to the people who are directly affected by forest practices in the area. This provides invaluable community learning processes and a venue for partnered economic development (Kaslo and Area Community Forest Planning Committee, 1997:I).

Social capital, a vital community asset, is created through changes in the relations between persons that facilitate action (Ostrom, 1990). The ability of Kaslo residents to organize and effectively make decisions representing a broad range of interests in their town has assisted in the building of management capacity. This learning process has placed them on a road to more extensive community-based natural resource management, and should serve as a model for other communities in B.C.

In addition to the building of social capital in Kaslo, their activities have strengthened the relationship between the members of the community and the forest ecosystems that surround them. Local knowledge and awareness of local forest ecosystems and the importance of forest

health has increased. This has lead to greater sense of stewardship among the people living in Kaslo. The KCFS has set up a work experience training program with the local high school. Local expertise has been used in forest management, and the KCFS hopes to extend that knowledge to the community at large. A high level of trust has been developed between community members and those who manage the forest. This is partly because the process is participatory and transparent so citizens feel at ease in voicing their concerns. Informal monitoring has also emerged as community members who spend time in the forest report important matters to the KCFS office (Plant 1998).

The Mission Municipal Forest

Background

The Municipality of Mission, is located approximately 70 kilometres east of Vancouver, B.C. The municipality, manages the Mission Municipal Forest (MMF) under Tree Farm License (TFL) #26. TFL # 26 covers an area of 10,414 hectares of mostly second growth forest just north of Mission City.

The first steps towards the formation of the MMF were taken in the 1930's when nearly 1,000 ha of land in northern Mission reverted to municipal ownership following property tax default. Local business people and municipal government officials became very interested in the land as they realized the economic potential of forest management (Allan and Frank, 1994).

In 1946, various agencies began to pressure the provincial government into allowing the municipality of Mission to manage Crown forest land. Several proposals were submitted to the B.C. government in the years that followed and with changes to the Municipal Act in B.C. in 1948, the movement to establish the MMF became stronger. The private sector was one of the more influential and organized agencies to pressure the provincial government. The local forest industry of Mission found an articulate voice in Naranjan Grewal who would lobby their demands.

In 1954 an agreement in principle was reached to permit Mission to manage Crown forest land. With help from the Sloan Commission's conclusion (1956) "that management of TFL's by a municipality was appropriate", Tree Farm License #26 was granted to the district of Mission in 1958 (Allan and Frank, 1994).

At present the MMF's Annual Allowable Cut (AAC) is 45,000 cubic metres. The forest land base of the MMF is quite varied in elevation (100 to 1,400 m ASL) and topography. The southern boundary of the MMF skirts along fertile farmland, and rises in elevation north into steep alpine areas and glaciers (Allan & Frank, 1994). Most of the forests of the MMF are second growth, with the first crop removed from past logging and forest fires (circa. 1880, and 1920). Of the timber that is harvested 90 to 95% of it is second growth, the rest is old growth. Two thirds of the AAC

in the MMF is cut by local contractors; Westcoast Forest Products/Herman Brothers Timber. Once the trees leave the forest they are sold on the open log market by the harvesting contractors.

Because the MMF has had to operate unsubsidized (since 1978 when they began to pay substantially higher stumpage fees due to changes in the Municipal Act) in an increasingly competitive market, their goals and objectives have changed considerably over time. Currently the goals and objectives of the MMF reflect general public concern over the debt, high taxation rates, and an aversion to subsidizing any government function. Consequently the MMF has had to become more efficient by taking advantages of fluctuating log markets.

In 1996 the revenue from the MMF had significantly declined from previous years, but still remained positive with a surplus of $442,973. The decline in profits was attributed to the decrease in log and pulp prices from 1995 to 1996, and the higher operating cost (through increased stumpage fees and more administrative duties) of the new B.C. Forest Practices Code. The AAC for 1996 was reduced to just over 31,000 cubic metres because of the low market value of wood and pulp, and also to compensate for exceeding AAC levels in 1995 (to take advantage of high log prices during that year). A reserve fund of $ 800,000 has been created to help smooth out the boom/bust cycle of the forest economy and to make the MMF a self-sufficient operation.

Weaknesses

One of the major weaknesses of the MMF is the fact that there is no community forest board. The forest is managed by the municipality's forest department, which is made up of two foresters (Masse 1995). As a result, the ability of the MMF to incorporate meaningful community involvement is questionable (Betts 1998).

Another problem facing the MMF is that fact that TFL forest management practices are generally based on volume extraction, and as such this system does not provide the incentives for adding value to the timber harvested.

The economic benefits incurred by Mission from the community forest are significant. However, to move from maintaining these benefits to expanding them, the community must look at encouraging the development of value-added timber manufacturing practices. This development would in turn stimulate local economic development through meaningful employment creation and do more with less wood.

As mentioned above, the major obstacles in developing a value-added forest industry are structural. The current TFL forest management practices are based on volume extraction and this does not provide the incentives necessary for increasing the value of the timber. Through local control of the MMF, the community of Mission has a unique opportunity to initiate the development of an innovative value-added forestry economy by providing more fibre to value-added processors. If Mission succeeds in developing a value-added forestry economy, this could

be used as a template for other forest-dependent communities in BC.

Benefits

The Municipality of Mission does not include any surplus created by the logging operations of the MMF in their budget calculations. When the MMF generates a surplus revenue (beyond the reserve fund) it is considered extra funds to the Municipality of Mission. These extra funds have been used to enhance the community and the lives of those that reside in Mission. In 1990 approximately $130 000 of revenue from the operation of the MMF was used to help buy a new fire-truck, and construct a firehall in Silverdale (a remote but growing part of the community). In 1993 $700 000 of MMF revenue went to construction of a new Community Library and Archives, and in 1995 $1 000 000 was given to the Municipal council to direct toward other worthwhile community capital projects (Allan & Frank, 1994).

Another benefit that the community of Mission has received from revenue generated by the forest management of the MMF, is the "Arts and Culture Grant". The MMF donates $2.00 per resident of the district of Mission to fund arts and cultural events. These funds have been used for a variety of events from The Mission Folk Music Festival to the Summer Series of the Vancouver Symphony Orchestra.

Aside from addressing civic and cultural values the MMF has encouraged more recreational use of the area. Since 1989 the MMF has constructed at least one hiking trail per year. Presently there are seven hiking trails in the MMF, with one of them being an interpretive trail that has been visited by over 600 students from the Mission School District annually. There has been a conscious decision to raise public awareness and to form lasting ties with the community through education (Allan 1997).

Besides recreational values, the forest management staff of the MMF are attempting to manage for environmental values. The average cut-block size is about 10 hectares which is significantly smaller than the coastal cut-block size of 35-40 hectares. The cutblocks are scattered throughout the TFL, and do not occur in a continuous pattern, thus enhancing wildlife and landscape values (Allan, 1997).

The proximity of the MMF to the Fraser Valley and the concern over air quality has prompted the forestry staff to end the practice of broadcast slashburning over 6 years ago. Herbicides have not been used for many years and brush clearing to prepare sites for reforestation is done by manual methods. Reforestation occurs very soon after harvesting, and the MMF has just recently planted its' 3 millionth seedling in 1996 (MMF 1996).

The MMF is attempting to address adverse impact of conventional harvesting methods and has

actively encouraged the development of more environmentally sensitive harvesting practices.

5. Conclusion: Elements of a Successful Community Forest Initiative

A great deal can be learned from examples such as those described above. Many of the concepts embodied by CBNRM, and community forestry in particular, are relatively new and untested in Canada. More real life examples are needed to evaluate these concepts. The Minister of Forests' Community Forest Pilot Project will hopefully serve as a laboratory for exploring the praxis of this exciting CED strategy.

Communities across British Columbia are in the process of evaluating their readiness, or *capacity* for community forest initiatives. Capacity is defined as

> ...a community's ability to identify, enhance an d mobilize the human potential, economic opportunity, social relationships, and ecological resources found within a community for the purpose of improved community stability (Markey and Vodden forthcoming).

Success in the development and implementation of a CED initiative is defined as the degree to which that initiative improves the quality and integration of the human, social, economic and ecological elements of community capacity (Markey and Vodden forthcoming). Although there is no set recipe for success in community forestry, experience shows that a number of elements are present in communities that have implemented successful community-based natural resource management projects, and CED in general. According to Vodden (forthcoming), authors such as: Young and Charland, 1992; Ameyaw, 1997; Bryant, forthcoming; Kinsley, 1996; Economic Council of Canada, 1990; Wismer and Pell, 1981; Pierce, 1995; Stacey and Needham, 1993, have identified conditions that are frequently present within communities that have launched successful CED initiatives. In 1996, Cortex Consultants Inc. compiled a list of factors of success that are specific to community forests. Their list draws from Anthony Usher Planning Consultant et al.'s 1994 publication: *Partnerships for community involvement in forestry overview: a comparative analysis of community involvement in natural resource management. Community Forestry Project, Ontario Ministry of Natural Resources*. pp. 30 & 31. Betts (1998) also lists a number of important factors.

The ideas from all of these sources have been combined here in an attempt to form a list of success factors for community forests that meet the integrated goals of CED. Whether or not these are *prerequisites* for successful community forestry remains to be seen. Every community is unique. It is very possible that some of these elements are more important than others, and the importance of each one will no doubt vary from place to place. This list should therefore simply be seen as a starting point from which communities interested in a community forest can begin to assess their community's capacity for such an initiative.

The list below was assembled based on the premise that community forestry should work to achieve community participation, CED and sustainable forestry. The list is meant to be as complete as possible, but it is a working list of success factors, which will most certainly change as experience in community forestry is gained.

The attributes required for a successful community forest initiative have been divided into five categories: human attributes, social attributes, economic attributes, ecological attributes and external factors. In many ways this is an artificial categorization, as all of the groups and factors are interrelated. Despite this, it has been done to facilitate the communication of these concepts.

Perhaps the most crucial ingredient of successful community forestry at this early stage in its development is the ability of communities to realistically determine the scope and scale of a community forest based on local circumstances. The following attributes of successful community forestry can help communities determine these local circumstances by using the attributes to evaluate their own capacity.

HUMAN ATTRIBUTES

1. A dynamic leader or "sparkplug" (often an elected public official, e.g. the mayor) and/or a core group of committed individuals who are motivated and, together, have the necessary skills, know-how and community acceptance to make a community forest happen.
2. The existence of local forest knowledge. Such knowledge might include a locally assembled data base characterizing significant landscape features, or might simply entail a well-established working knowledge of the local area held by naturalists, hunters, or indigenous people (Betts 1998:36)
3. Available local human resources such as a specialized yet flexible, labor force.
4. Existing education, training programs and learning opportunities (includes adult education, conventional educational institutions, informal learning options).
5. Available professional support and technical services for local organizations and entrepreneurs, marketing expertise.

SOCIAL ATTRIBUTES

6. A sense of community identity and culture (belonging, pride, awareness of history and shared past experiences).
7. A crisis or major concern motivating local leaders and citizens to act (a felt need).
8. Community enthusiasm for forestry in general and community forestry in particular. "While

enthusiasm is the least quantifiable of all community forestry criteria, it is probably the most important" (Betts 1998: 36).

9. Ability to adapt, innovate and be proactive in the face of changing circumstances.
10. Building on existing structures and community strengths to achieve community forest goals in partnership with community groups.

SOCIAL ATTRIBUTES RELATED TO PLANNING

11. A realization that if things are going to happen community members and leaders have to do it themselves.
12. Community agreement on expectations and objectives for a community forest and environmental and resource management values.
13. Clear mission to achieve explicit economic, employment, social and/or cultural benefits as desired by the community. This includes an explicit statement of forestry objectives. This statement can then later be translated into a specific management plan (Betts 1998:36).
14. The ability of local leaders and the community to work together and mobilize broad-based support. Pierce (1995) describes this necessary characteristic as homogeneity, adding that "people agree how to go about doing things." This also relates to the criteria of "positive public attitude" identified by Young and Charland (1992).
15. Meaningful inclusion of broad spectrum of community interests in decision-making structures and process.
16. Willingness and ability to collaborate. May involve a regional approach among neighboring communities.
17. 7. Willingness and ability to utilize a strategic planning and evaluation processes in CED efforts.
18. 8. The establishment of an independent community-based monitoring program. This could include the involvement of a broad range of interests which might serve as watch dogs over forest management. These interests include timber managers, fisheries managers, tourism outfitters, hunter, naturalists, and educators. Such interest diversity will ensure that the forest is managed for multiple values (Betts 1998:36)

ECONOMIC ATTRIBUTES

19. Available internal and external funding/financing mechanisms. Of critical importance is an initial investment of the community's *own* resources, including it's own money. This should lead to:
20. Meaningful revenue autonomy. The arrangement should have sufficient revenue sources and autonomy that it can effectively achieve its objectives (Usher et al 1994 as cited in Betts 1998:37).
21. Entrepreneurial capacity
22. High level of community control over the range of forest activities (i.e. planning, harvesting, monitoring, processing, manufacturing etc...). This can be seen as vertical integration within the community.

23. Commitment within the community to maximize the value of forest products harvested (i.e. a focus on value-added manufacturing).
24. Commitment to a long-term approach (willingness and ability to sustain development efforts over the long-term).
25. Commitment to reinvesting in community forest.
26. Ability to develop a sound and realistic business plan.

ECOLOGICAL ATTRIBUTES

27. Access to forest resource that is close to the managing community.
28. Forest should have inherently high potential for providing a diversity of benefits.
29. Land-base should be large enough to support a balanced forest-age class structure and ideally, should have good site quality and a substantial amount of good quality timber.
30. Size of land-base required will vary depending on the goals of the initiative.

EXTERNAL FACTORS

31. Meaningful tenure with sufficient length, security and delegation of authority to encourage community involvement and achieve community-defined objectives. This includes the meaningful delegation of authority and responsibility for resource planning and management from the provincial government to the community.
32. Markets for both timber and non-timber products (Matakala 1991 in Betts 1998:37).

These factors all point the fact that CBNRM is a demanding strategy for CED. A considerable amount of community capacity is required for it to be successful in the fullest sense. Here, success is measured by a community's ability to attain and integrate economic, social and ecological objectives. As was discussed in section 4, there are currently a number of barriers to this kind of success in B.C. However, one of the best ways to learn to overcome these barriers is through trial and error. This was demonstrated by the examples discussed here. With the creation of the new community forest tenure, the MOF's Community Forest Pilot Project should provide more models from which to learn The ability of this new tenure to respond to the needs of communities for CED, however, remains to be seen. In the meantime, it is important for communities to build local capacity and to plan strategically so that they will be able to assert more control over how their local natural resources are managed in the future. Only then will they become more self-reliant and sustainable.

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Return to the top of page

Return to Forest Communities Table of Contents

Return to Research Section main page

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