

# **FORESTS FOR THE FUTURE INTEGRATING LOCAL ECOLOGICAL KNOWLEDGE WITH NATURAL RESOURCE MANAGEMENT**

**POLICY STREAM REPORT**  
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Numerous factors figure into the current questions regarding ecosystem management/use compatibility in British Columbia, most importantly are the ongoing treaty negotiations between the First Nations peoples and the federal/provincial governments and the Local Resource Management Plans presently under discussion. These factors are addressed in the policy stream report as well as the ongoing debates regarding the consideration of local ecological knowledge in determining ecosystem management/use. A brief history of forest use in British Columbia is presented as is a discussion of timber allocation policy past and present. Data for this segment of the final report come from personal interviews, published/unpublished policy documents as well as archival and library research.

## **The Resource**

The merchantable timber species found in the timber sale area located in the north coast region include Western hemlock, Western red cedar, amabilis fir, Sitka spruce, yellow cedar and cottonwood. These forests are very old with a large majority of the stands being over 280 years (North Coast LRMP Current Conditions Report 2001). All harvesting to date has been of old growth forest, with there being no experience in the district of harvesting second growth stands (North Coast LRMP Current Conditions Report 2001). As noted in the LRMP report, most of the harvesting occurs in low elevation forests in the Coastal Western Hemlock zone. In the isolated valleys, harvesting operations are most often accessed from the water, with licensees preferring to harvest small drainages in a single pass, harvesting both sides of the valleys to reduce the high costs of operating in these remote areas (North Coast LRMP Current Conditions Report 2001). The rugged terrain of this region further complicates the use of conventional logging practices. Because of this rugged terrain, most harvesting is done by hand felling trees and extracting them with the use of conventional (non-aerial) systems such as cable systems (83%) and helicopters (17%). However, by far the greatest proportion of harvesting occurs using clearcutting regimes (North Coast LRMP Current Conditions Report 2001).

## **The History of Forest Use In British Columbia**

Archival research reveals that the forest industry of British Columbia extends back in time to the period of 1778-88. Lamb (1938) reports that Captain James Cook was the first European to make use of timber on Vancouver Island. The first reported commerce in timber from the province occurred in 1788 when Captain John Meares loaded a vessel with furs and a deck load of spars and sailed for China (Lamb 1938). The first machine operated (water power) sawmill in the Pacific Northwest was built in 1827 on the Columbia River near Fort Vancouver. Knight reports that some Indian handloggers delivered logs to local mills in the 1850s (1996:235). Archival records reflect the issuance of handlogging licences to aboriginal peoples from about 1884. Knight notes that by the 1890s logging was important as the cash source for a number of coastal communities with native handloggers and small logging outfits becoming firmly established in the industry (1996:236). Archival data revealed that handlogging was vital to the early timber industry. For the native peoples, handlogging was easily incorporated in the 'seasonal round' with families travelling to logging areas and subsistence spots. Ironically it was this very aspect of handlogging that was used to push native loggers out of the industry as the timber industry grew and the mechanics of extraction became more efficient (BC Archives). According to Knight logging became the life long occupation of many First Nations peoples in British Columbia (1996).

### **The Timber Allocation Process**

During the colonial period in the early years of the province, the Crown alienated rights to timber and to timber lands by the traditional procedure of Crown grants (BC Archives). The most extensive Crown grants were made under arrangements with the federal government in aid of railroad construction.

Four Royal Commission studies were conducted (1909, 1943, 1955, 1975) to examine existing allocation procedures. Changes were made in forest policy as a result of the commission studies culminating in the present system that includes the following license/tenure structure: Tree Farm Licence (34); Forest License (190); Timber Sale License (8); Small Business Forestry Enterprise Program (1773); Woodlot License (516); Pulp Agreement (24); Timber License (670).

### **Some Recent Changes in the Forest Plan**

In November of 1999 the Ministry of Forests (MOP) started developing the First Nations Forestry Strategy - a framework for addressing treaty and non-treaty related forestry issues. MOF looks upon this new plan as a way for First Nations to build a stake in the forest sector in a pre-treaty environment. According to the MOF report the strategy captures ongoing opportunities for First Nations and rolls them into a strategic approach without limiting existing programs. The MOF report notes that the ministry was able to meet or exceed all of its targets for the First Nations Forest Strategy. In addition, 21 agreements were reached with First Nations including the Tsimshian Tribal Council, the umbrella agency for the First Nations bands included in this project.

### **Logging and the Effects on the Ecosystem**

Many of the ecosystem problems have been noted revolving around: 1) the excess removal of trees thus reducing the forest canopy and causing increases in the water temperature of spawning streams; 2) gravel removal; 3) log driving; 4) log jams; 5) log storage; 6) bank and stream protection i.e. leave strips. The Forest Practices Code specifies planning and organizational guidelines for each phase of timber harvesting operations around streams, lakes and wetlands. These guidelines are outlined in detail in the Forest Practices Code, Fish-stream Identification Guidebook. As noted in the guide, forest development plans require that only *known* (emphasis theirs) information be presented in most cases (1998:34). Assessments of fish streams are to be made with the information for those assessments coming primarily from fish and fish habitat inventories carried out by fisheries agencies in watersheds where harvesting is proposed. The guide seems to make no allowance for the use of TEK/LEK in the fish-stream identification process

### **Emerging Alternatives**

New systems of forestry management are emerging in response to the increasing need for forest products while protecting the valuable resource. The most prominent of those systems is the community forest. The community forest structure allows for the consideration of all forest values in planning sustainable forest development as this system takes into account all of the uses and functions of the forest without prioritizing one over another (Baskin and Smith 1997:2). A number of British Columbia communities, among them many First Nations groups, have applied to participate in community forest pilot projects.

### **What is TEK/LEK**

Traditional ecological knowledge (TEK) can be defined as a cumulative body of knowledge and beliefs handed down through generations by cultural transmission about the relationship of living beings (including humans) with one another and with their environment and is usually considered an attribute of societies with historical (and I would add prehistorical) continuity in resource use practices; by and large, these societies being non-industrial or less technologically advanced, many of them indigenous or tribal (Berkes 1993:3). TEK is contrasted with scientific ecological knowledge in that TEK usually is: qualitative vs. quantitative; intuitive vs. purely rational; holistic vs. reductionist; mind and matter considered together vs. apart; moral vs. value free; based on empirical observations and accumulation of facts by trial and error vs. systematic, experimental; data generated by resource users themselves vs. researchers only and based on long-time series

information on one locality vs. short-time series over a large area. Berkes goes on to tell us that TEK is imbued with symbolic meaning and spiritual connections based on reciprocity and obligations to both community members and others - encapsulated in a conceptualization of the environment that is different from Western science (1993:3). Much like TEK, LEK is based on long-time series information on lone locality vs. short-time series information over a large area. For this reason, TEK/LEK can contribute substantially to resource management plans. Local knowledge about forest-related phenomena makes sense, both for local forest users and for those who appreciate cultural wisdom, its skillful socio-cultural performance from a perspective of scientific interest, environmental concern, and bearing responsibility for a renewable resource that matters to the future of humankind (Seeland 1997:101). As Seeland notes, indigenous knowledge of forests unites aspects of nature and culture which are both local and global concern. In short inclusion of TEK/LEK has much to offer in the way of science. Consequently the primary goal of this project is to link local ecological values and knowledge with community appropriate policies. This report stresses the need for a policy framework of forest management that embraces TEK/LEK.