

Martin S. Weinstein  
M.S. Weinstein Consulting Services, 108 Croteau Road,  
Comox, British Columbia, Canada V9M 2P8  
FAX: (250) 339-4337  
EMAIL: wstein@mars.ark.com

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Stream: Aboriginal Territory and Management Rights  
Discipline: Human Ecology

**Title: Sharing Information or Captured Heritage: Access to Community Geographic Knowledge and the State's Responsibility to Protect Aboriginal Rights in British Columbia**

**1. Introduction:**

Community knowledge plays a critical role in common property resource management regimes. Knowledge and information are obvious requirements for any type of resource management. Less obvious is the role that access to information plays in the ability to restrict access in otherwise open or shared-access common property resource (CPR) regimes. Indeed, in some informal (as opposed to *de jure*) CPR regimes, control of the flow of knowledge is the primary mechanism through which access to resources is restricted to outsiders.

Within British Columbia many aboriginal households engage in the non-commercial harvesting of fish, wildlife and wild plants. Since the Supreme Court of Canada's *Sparrow* decision (S.C.C. 1990), the rights of the communities to engage in these activities are recognized under Canadian law as having priority over other uses of the resources. In most of the province recreational, commercial, and aboriginal food harvesting uses take place in the same locations or on the same resource populations. With the exception of the salmon fisheries, the allocation between these sectors remains informal or is ignored by government management agencies.

The problems associated with open-access are moderated by the aboriginal users' control of their knowledge of the lands, waters, and resources. To date, the transmission of geographic knowledge has followed aboriginal traditions, passing within kin and task groups according to cultural rules.

The findings of the lower courts in the seminal *Delgamuukw* case (Supreme Court of B. C. 1991; Court of Appeal for B. C. 1993) placed a fiduciary duty on the provincial government to ensure that aboriginal rights are not "unjustifiably infringed upon by the resource development activities of the Crown, or its licensees" (B.C. Ministry Forests 1995). To honour this responsibility, the BC government began a major collaboration with aboriginal communities throughout the province. Provincial agencies, most notably, the Ministry of Forests, have been funding community-mapping programs, so-called Traditional Use Studies (TUS). Under the TUS program, aboriginal communities are mapping their own knowledge of cultural and resource geography.

Conflicts, however, have emerged over the sharing or use of the TUS data. The nature of these conflicts indicates that there are fundamentally different understandings about information

and its role. The province proposes that TUS map data, without descriptions of their meaning or significance, be housed in a government database, directly accessible for agency planning and for a first stage review of development plans. Aboriginal parties, on the other hand, find the risk of allowing this information to leave their hands unacceptable. Instead of honouring a fiduciary duty, the sharing structure has given the TUS program an appearance of information capture, with a possible consequence of placing the rights it is intended to protect under greater risk.

## **2. The conflicts:**

Many aboriginal communities in British Columbia harvest common property resources — wildlife, fish and plants — from their traditional territories. These harvests have an economic consequence for aboriginal households. They provide quality foods and materials that would otherwise have to be purchased.<sup>i</sup> Beyond their economic role, hunting, fishing and plant gathering have important social and cultural significance, being tied, among other things, to cultural reproduction — educating the next generation in skills, traditions and values — and to the enjoyment of a meaningful life according to cultural rules.

These harvests of wild resources generally take place on Crown Lands and Waters. Most of the lands and inland waters, and the upland resources fall under provincial jurisdiction. Coastal areas and resources are more complicated. Some resources and habitats are the responsibility of the federal government (anadromous and marine fishes, in particular) and others (e.g., clams and seaweed) are under provincial authority.

There has been a long conflict between these aboriginal activities and government decisions. Resource agencies historically have had a mandate for promoting economic development and the settlement of newcomers to BC. Aboriginal household harvesting has not been viewed as an important part of their tasks. Rather, it was frequently viewed as conflicting with both the job at hand and the vision of the appropriate direction of the province's future.

Many types of conflict emerge from government management decisions, but they might be categorized into three broad areas: allocation; habitat and landscape change; and creating access for competitors (which is really a sub-set of allocation). Very briefly:

- Some types of resource management decisions and management structures created *de facto* allocation priorities among different resource harvesting sectors. For example, as the last harvesters before the salmon spawning grounds, the interception-style of salmon fishing on the coast placed the conservation burden on aboriginal in-river food fishers. This effectively placed aboriginal food fishers below commercial fishers on the allocation ladder (S.C.C. 1990).
- Planning for industrial forestry has ignored the consequences of habitat and landscape alteration on the ability of aboriginal hunters to use their traditional knowledge to harvest accustomed levels of wildlife from their historical territories (Elias and Weinstein 1992). Two issues are involved here. First, landscape change can destroy long established travel routes and produce changes in animal behaviour, rendering traditional hunting strategies useless. Secondly, habitat changes can affect the wildlife productivity of the local environment, altering the supply of food resources.
- Furthermore, the roads constructed for logging (and other industrial resource development) provide access corridors into the hunting areas of aboriginal communities for competing hunters.

Solutions that should have been available from government resource management agencies have been absent. In fact, these have been non-issues for the agencies. This may be due, in part, to a lack of information about aboriginal harvesting practice. But, for most of this century the agencies' mandate focused on recreational and commercial harvesting of wildlife and fish, rather than caring for aboriginal interests.

### **1. The role of access to knowledge within common-property regimes:**

Aboriginal communities have not been passive to these threats. However, very few solutions from the standard common-property management lexicon were available for most of this century. Rather, government decisions went the other way, transforming the territorial, limited access CPR systems practised by many groups as an integral part of their culture (e.g., Weinstein 1994) into broad open-access for native and non-natives alike. Although legal rights to harvest fish and wildlife for food were recognized, the issue of allocation priority within the open-access system remained unsettled until the early 1990s.

Limiting access to resources is the dominant common-property problem. Clearly defined social and geographic boundaries stand as the first design principle for long-enduring sustainable common-property resource regimes (e.g., Becker and Ostrum 1995). Indeed, it could well be argued that limiting access is the necessary condition for all other aspects of CPR management. If access is open, then all of the free-rider problems that provoked Garrett Hardin's (1969) pessimism about common property resource self-management seem to be inevitable.

Each of the three types of conflict discussed above can be seen as an open-access problem. They certainly feel like open-access to First Nations. The simplest example is deer or moose hunting, key resources for many interior aboriginal communities. Hunting takes place on a traditional territory. The people who customarily use a territory may be the group as a whole, or use may be limited to an extended family. During the sports hunting season, however, the territories are open for the use of resident sports hunters, who may reside anywhere in the province. Non-resident sports hunters can also hunt, but they pay a larger fee. This is clearly open access.

Logging and other types of habitat altering activities are more difficult to appreciate as a form of open access. Certainly, the road building associated with industrial development makes the territory more accessible to outsiders. The roads cut a common playing field for people who lack the detailed local knowledge required for travel by foot or horseback. Beyond competition for the same resource, logging has population consequences on wildlife. Another group's ability to change the resource productivity of a territory is a form of open-access. Rather than operating on the resource level, this type of open-access is more ecological, working through the habitat and food-web pathways.

Limiting the flow of knowledge may be the earliest method for common-property resource management regimes. It is certainly the simplest. And it represents a system with very low dedicated institutional costs for resource management. Generally, the institutions perform other tasks as well. The institutional arrangements work through socialization. Children and people who marry into the group are brought into the system by training and experience and, perhaps, cultural initiation. Outsiders may be brought into the system as they gain trust and friendship.

As people are brought into the system, they are provided with geographic knowledge. They are taught about the location of travel routes, and how to use them strategically for

harvesting. They are taught about the details of locating resources, including how the more predictable behaviours of mobile resources work out on the local land and seascape. Along with the geographic details, they are taught the CPR rules and environmental values. Among these are rules of appropriate behaviour toward the resources and toward other humans. The rules include a definition of people within the shared knowledge pool and those outside of it. McDonnell's (1975) description of how knowledge of seasonal grouse locations on side hills in south-eastern Yukon acted as a limiting condition for the year-round occupancy of Dene hunting groups is instructive about how the flow of knowledge limits access. Outside of the family, the knowledge was only passed to children's marriage partners.

### ***A CPR solution***

The above section describes the principal CPR management strategy of many BC aboriginal communities since government assumed the role of legal manager of provincial resources. The native people of BC include a large diversity of cultural and linguistic groups. Their traditional solutions to CPR problems are equally diverse, ranging from the institutionally simple to complex, formal arrangements.

I think that it is fair to say that the confusion over issues of access to resources during the current century resulting from provincial authority pushed native communities into a common, simple solution. The punitive measures used by some coastal peoples for trespass were no longer appropriate. Government did not recognize the aboriginal boundaries or the native laws that controlled access to resources. As the use of the aboriginal regulatory systems assumed greater risk for practitioners because of conflicting provincial laws, even the people with more formal systems stepped back into the invisible. Limiting the distribution of knowledge was a method that remained untouched by government laws.

Staying hidden is a powerful technique that guided aboriginal response to resource management conflict through most of this century. Native communities felt that fish and wildlife managers operated for the benefit of settlers. It is difficult to argue otherwise. In some regions, the province's innovative Registered Trapline System displaced native communities in favour of settlers who were tied to the resource frontier agenda (e.g., Weinstein 1979, Brody 1982). Bag limit and seasonal hunting restrictions that followed recreational hunting traditions meant that at other times of year families hid meat when the game officer entered the reserve. Much aboriginal resource use within BC remains hidden (e.g., Brody 1982).<sup>ii</sup>

This is the historical stage on which the CPR drama plays itself out. The principle characters have a different experience and understanding of the drama, its goals and its meaning. A major difference centres on trust. The indicators that aboriginal communities use for evaluating if it is time to change strategies are whether aboriginal interests are being given the priority the courts recognized.

## **2. The legal changes:**

The aboriginal rights landscape in British Columbia has changed greatly over the last 10 or so years. Successive decisions at the highest level, the Supreme Court of Canada, enabled a gradual unfolding of legal understanding of aboriginal rights, much of it focused on resource management issues. Since the Supreme Court of Canada's *Sparrow* decision (S.C.C. 1990), harvesting for food has had a powerful legal recognition. The rights are entrenched within the Canadian constitution. *Sparrow* also recognized the aboriginal right to fish for food as having

priority over recreational and commercial fishing. Other courts interpreted these rights as being equally applicable to hunting.<sup>iii</sup>

The latest of these Supreme Court decisions, *Delgamuukw v. British Columbia*, was handed down in December 1997 (S.C.C. 1997). This ruling established a broad new stage for the aboriginal rights drama. It defined a variety of tests for the proof of aboriginal title to land (and presumably water). It accepted aboriginal oral tradition as having equivalent weight to western-style written argument and analysis. However, this paper is not about the Supreme Court's decision. The consequences of the decision are still being actively elaborated. Many critical questions remain and will likely continue so for years.

Rather, this paper deals with a common-property question and the TUS program that emerged from the provincial government's response to the lower courts' *Delgamuukw* rulings (Supreme Court of British Columbia 1991; Court of Appeal for British Columbia. 1993). In these decisions, although the courts rejected the aboriginal title of the Gitksan and Wet'suwet'en peoples, they recognized rights to harvest resources on traditional territories for household purposes. This finding combined with the earlier Supreme Court of Canada decisions, particularly *Sparrow*, implied that the provincial government had a fiduciary responsibility for aboriginal rights within its areas of jurisdiction.<sup>iv</sup>

Although the court established allocation priorities in the *Sparrow* decision, a major area of conflict remained unresolved, namely the effects of conflicting development on Crown Land. The lower courts' *Delgamuukw* decisions charged the provincial government with an obligation to ensure that its decisions are reviewed for potential conflicts with these rights. The rights may be legally over-ridden for other significant social objectives, but there is an obligation to understand and minimize the effects of conflicting activities and to consult with the potentially affected aboriginal group.

### **3. The state's response: The Traditional Use Studies Program:**

The provincial government established the Traditional Use Study Program in response to the Lower Courts' *Delgamuukw* mandate to protect aboriginal rights. To protect the rights requires an ability to evaluate the effects of government's resource management and development decisions (as well as those of its licensees). The early ethnographers who collected so much detailed information about Northwest Coast groups during the early part of the century largely ignored mapping. What maps they did produce, such as Boas' atlas of Kwakiutl place names (Boas 1934), lack the detail required to locate the places on the landscape. And most significantly, their maps largely ignored resource harvesting. In other words, the available maps, whether native or non-native, are almost blank about aboriginal land use, history and culture.

The TUS program funds research to map the cultural and resource geography of aboriginal communities. The climate of resource relations with First Nations was described above. The lack of a trust relationship meant that provincial employees or contractors could not do the required research. Instead, the TUS program funded First Nations to collect the information from its membership and to collate the results.

The program has gone through numerous changes, particularly as a result of interactions and disagreements with First Nations. The provincial TUS administrators acknowledged the difficulty balancing First Nations' and government's needs (Gelean 1997).

As of March 1997, the program was described as:

- “Provid[ing] funding to and [sic] develop partnerships with First Nations to collect, store, maintain, and map traditional use site information;
- Provid[ing] standards for the recording and storage of traditional use site data;
- Develop[ing] agreements with First Nations for the sharing of TUS data to assist provincial land use planning decisions at the strategic and operational levels;
- Produc[ing] TUS data for storage in the Provincial Heritage Registry Database (PHRD) which is held in the Archaeology Branch of the Ministry of Small Business, Tourism and Culture.” (Gelean 1997:4)

### *Sites or areas*

One of the areas of confusion is what is actually being mapped. Interview design is left to the communities. Mapping resource use has high priority for many First Nations because of the on-going problems with resource use conflicts. Table 1 (see appendix) is an outline of the basic cultural and resource categories used for several First Nation Traditional Use Studies. Resource use was a major topic of these mapping programs. In actual use, the resource section of the table was greatly expanded with scores of wildlife, fish and plant resource species. Clearly, mixtures of points, lines and areas or polygons are what would be expected from mapping the categories within the table.

On the other hand, the wording of some documents (e.g., Gelean 1997:4 -quoted above; Deloitte and Touche 1997), as well as discussions with program officers, indicates that government expects an identification of sites, as opposed to geographic areas. At other places within the same documents there are mentions of a mixture of points, lines and polygons.

The issue of points or areas is fundamental to the conflict over TUS. If the use of the mapped data is limited to identifying cultural heritage or historical sites that may be damaged by government resource development permits, then points would be expected. The emphasis on sites invites the feeling that when government established the program they viewed aboriginal land uses as past activities. Certainly, it is a critical part of government’s responsibility to ensure that cultural and historical sites are not unduly damaged by resource development plans. But, it is not sufficient. It was obvious from the court and from the government’s own reading of the mandate that a large part of identifying rights at risk involves resource harvesting. Some types of fishing can be mapped as sites, but all other resource harvesting involves significant geographic areas.

The origin of the wording that emphasizes sites is unclear. The Heritage Resources Branch was charged with the initial organization of the program.<sup>v</sup> The notion of sites certainly fits well with the traditions of heritage identification. The emphasis on sites raises doubts among aboriginal parties about the seriousness of government’s intention. Sites are easily circumscribed. They can be treated in the same way as eagle nests, left in the middle of clear cuts.

In this paper we are suggesting that significant clarity can be gained by looking at these conflicts as CPR problems. This perspective seems to be absent within government circles, although there are indications that the courts take a broad view of allocation (e.g., S.C.C. 1990). The TUS design has the feel of a struggle by government to honour a basic set of legal obligations while avoiding the core conflict. The ambiguity within the word site (in which the word can also represent an area) may represent an inner struggle and a compromise.

## **1. Information sharing:**

One of the most contentious issues of the TUS program is its information sharing requirements. Ultimately, so-called information sharing is tied to the question of how the mapped data will be used.

However, accountability comes before data use. The provincial government has spent a large amount of money on the TUS projects. Sums in excess of \$100,000 are not uncommon. As of July 1997, the total spent in grants to First Nations exceeded \$5 million (Deloitte & Touche 1997). Because the collaboration often is adversarial and lacking in trust, the relationship is kept at arms' length. Accountability is a problem for the funding agencies. Beyond standard fiscal accounting, are they getting a reasonable return for their money? Within the government there those who feel that money they spent should buy government something. They feel that a return for a monetary contribution is only reasonable. In this view, TUS contracts are similar to contracts with a research consultant.

A rather convoluted arrangement for sharing information was created and incorporated into the funding contracts. First, agreement is required on an interim information sharing process in which access is provided to TUS data prior to the completion of the project. Second, deliverables include final project maps at 1:50 000 or more detailed scale showing point, line and area data. And third, the deliverables also include adding the database created for the final maps to PHRD, the Provincial Heritage Resource Database (Gelean 1997:4).

To honour confidentiality government proposed that the data entered into the PHRD be limited to site locations and a contact name. By not requiring the identification of the type of activity, program administrators felt they were "meet[ing] the needs of First Nations and government while retaining confidentiality" (Gelean 1997:4).

Government's idea for the use of the data was to incorporate it into the planning process, regionally and locally. Having a set of detailed spatial records would allow resource development planning to account for aboriginal geography. Certainly, the transfer of mapped information into a government database implies a capability for review independent of consultation with First Nations.

The program has many critics. Inside government there are officials who feel that value for the money spent is wasted. Outside, many of the First Nations who accepted funding struggle with the administrative requirements. The contractual information sharing agreements are the most contentious. Several First Nations have by-passed the government program and funded TUS studies independently. The concerns of these groups extend beyond the contracts. They are concerned about the possibility that accepting public funding may mean that the Freedom of Information and Privacy Act requires the data be made available to the general public. Indeed, there are opinions from government officials that suggest these concerns are well founded. Even though there are provisions under the Act which cover confidentiality, using these provisions is at the discretion of government managers. Committing themselves to the TUS program as designed by the provincial government imposes a very high degree of trust on aboriginal parties, but it also places a great obligation on the government. It might even be argued that government has assumed a much more onerous care-taking role by implementing the TUS program than it had before.

### ***Sharing conflict***

From the point of view of First Nations, there are many difficulties with the information sharing process devised by the provincial government. The most obvious one is that it requires trusting the very agencies with which there has been a long record of conflict. In the lengthy history of powerlessness with government resource agencies, aboriginal communities frequently relied on the uniqueness of their knowledge for empowerment. For people with this history, the significance of transfer of knowledge outside of the oral tradition should not be taken lightly, let alone depositing it within the databanks of the other camp.

This paper, however, deals with CPR issues. From an exclusively CPR perspective, the question is more limited. What are the potential risks for First Nation resource management strategies in making the information available? If aboriginal communities did not have to deal with open access, if they did not have to worry about outside harvesters, the risks from competitors would likely be minimal. If First Nations had exclusive rights to their harvesting areas and could control the access of outsiders, making information available to potential competitors could be offset by other methods. As discussed above, control of the flow of information has acted as the primary method for limiting access in an otherwise open-access CRP situation. The provincial government's confidentiality strategy of unlinking categories and text from mapped information is unconvincing. Indeed, it feels as though there is a fundamental lack of understanding of these issues. Lines on maps following stream courses up slope can only represent hunting trails. Polygons drawn in deep water areas probably signify halibut fishing spots. And so on. The scale of mapping specified in the contract requires that original interview data be placed in the government databanks.

The aboriginal perspective on risk to aboriginal rights is very much ecological in its approach. Risks involve potential changes to the size of harvestable animal populations, changes to the usefulness of traditional ecological, changes to disturbance, and changes to access for competing harvesters. In potentially placing an existing system at risk, the possible benefits are evaluated. Government is dealing with a new-found responsibility. First Nations have been experiencing these problems for a long time. The First Nation perspective is that government's view of the problems is too limited to account for native concerns. At the point that the two views of the problem coincide there will likely be greater willingness to share information.

### ***Getting to solutions***

Shared information is not a solution to the problem. Sharing is an inappropriate characterization, in any event. The way this aspect of the program was conceived has the appearance of a one sided capture of information. There is no equivalent information exchange or equivalent risk from the government side. Rather, the structure of this part of the program has the appearance of an exchange of research money for information. Sharing is not the correct word to use in such a situation.

Rather than information, it is the resources or the resource habitat that are being shared. This notion follows from the recent Supreme Court of Canada *Delgamuukw* decision. If a First Nation can establish that it has aboriginal title to its traditional territory, a complex relationship obviously exists. Federal and provincial governments still have jurisdiction over the territory's resources. Within all First Nation territories, government has historically allocated land and resources to third parties, and continues to make common property resources available for commercial and recreational harvesting. The best characterization of such a complex situation is



sharing. Information about First Nation's use and cultural values is clearly vital to straightening out the inevitable conflicts.

However, the provincial government's shared information is not an appropriate method. It is not clear how it was arrived at. It has a unilateral feel. At best, consultation was inadequate, or perhaps inappropriate. The system of use for the data was devised at the earliest stage of the project. The conflicts began to emerge as aboriginal organizations conducting the studies assumed the role of counter-parts to the provincial government agencies.

First Nations have organized two provincial-scale aboriginal conferences on TUS. The first, organized by the Sto:lo, took place in December 1996 in Chiliwack. The second, hosted by the Williams Lake First Nation, took place in October 1997. In my experience, these were unique events in Canada. They were well attended by BC First Nations from the coast to the far-eastern interior, from the north to the urban south. Discussions at both conferences were wide-ranging, from funding to electronic data storage. Where the primary focus of the first workshop was aboriginal land use research methodology, the major issue at the second conference was the provincial government's information sharing requirements. All groups had similar concerns.

## **2. Conclusions:**

The provincial government took the lead in this important area. They began discussions on how to resolve conflicting land and resource use. They correctly recognised the first step, identifying the conflicts. And they provided a rare source of funding to map aboriginal traditional use. The program they devised produced many spin-off benefits for First Nations. It created employment. It trained people in relevant skills. It facilitated communication between elders and younger people. It got the communities and leadership thinking broadly about many of the issues discussed above. Even though government was acting under an interpretation of court instructions, they deserve appreciation. At the Williams Lake workshop, the provincial TUS program administrator announced that as of the new fiscal year (1998/9), funding for new TUS research was uncertain. The response from the conference floor was that by initiating the program government had opened a tap that was going to be hard to shut. For all of the TUS program's irregularities and conflict and methodological uncertainties, First Nations well appreciate the critical importance of the information.

Difficult questions remain. Among these are:

- Who owns the information — the researchers, the First Nation's political body, the knowledge holders as a body, or the interviewees?
- What is the sensitivity of the information?
- How should confidentiality be maintained?
- What research standards are appropriate for these data?
- How should quality control of the results be ensured?
- What kind of conflicts can be identified with the information and which cannot?
- How can the information be used to help resolve the conflicts?
- Who should be involved in the resolution efforts — government representatives from both sides, researchers and consultants, and/or the holders of the traditional knowledge?

- What is the appropriate role of the holders of TEK? (There is a useful rule from the academics who think about how to bridge traditional and western environmental knowledge. Within the western science tradition data is rarely used without the appropriate expertise to interpret it. It seems presumptuous to assume that traditional knowledge can be used without equivalent expertise.)
- There are also important questions about funding beyond data collection. If First Nations are expected to respond to government permit referrals, there are costs involved. There are also considerable costs involved in the maintenance and use of TUS databanks.<sup>vi</sup>

These are not questions that can be unilaterally answered by government agencies. Some of these fall within individual First Nation's realm. Even there, however, guidance from a broad examination of principles would be helpful.

Given the relevance of these issues and the ways that TUS links with critical First Nation issues and with government activities, it may be useful to create an organization to look at these issues and others such as basic methodology, broadly. Government took the lead on this, out of its own needs. But it is clear that the decisions were not adequately informed about aboriginal concerns and needs. TUS has been a strange kind of partnership. *Crossing boundaries* was attempted, but there was never a full discussion of the hard issues, from data collection methodology to data ownership to data use and conflict resolution.

## **BIBLIOGRAPHY**

Becker, C. Dustin and Elinor Ostrum. 1995. Human ecology and resource sustainability: The importance of institutional diversity. *Ann. Rev. Ecol. Syst.* 1995. 26:113-33.

Boas, Franz. 1934. *Geographical Names of the Kwakiutl Indians*. Columbia University Contributions to Anthropology 20. New York.

British Columbia Ministry Forests 1995. Ministry Policy, Resource Management, 15.1: Protection of Aboriginal Rights. Victoria: Min of Forests.

Brody, Hugh. 1982. *Maps and Dreams; Indians and the British Columbia Frontier*. New York: Pantheon Books. 297 pp

Court of Appeal for British Columbia. 1993. Reasons for judgement in *Delgamuukw v. R.* *Canadian Native Law Review* 1993 (5):1.

Deloitte & Touche. 1997. *Evaluation of the Traditional Use Study Program*. Vancouver: Deloitte Touche Tohmatsu International. 45 pp + appendices.

Elias, Peter Douglas and Martin S. Weinstein. 1992. Development and the Indian People of Fort Ware: Predicting and Managing Consequences: A study for the Kaska Dena Council and the community of Fort Ware. Lethbridge: University of Lethbridge, Faculty of Management. 36 pp. + Technical Volume.

Gelean, Shannon. 1997. Traditional Use Study Program of British Columbia, Canada. Paper prepared for Plenary Session on Traditional Use Studies: Applying Anthropology to Aboriginal Rights and Title Issues. Society for Applied Anthropology. Seattle, Washington. 7 pp.

Hardin, Garrett. 1969. The Tragedy of the Commons. *Science* 162:1243-1248

McDonnell, Roger F. 1975. Kasini Society: Some Aspects of the Social Organization of an Athapaskan Culture Between 1890 - 1950. Ph.D. Dissertation, UBC Department of Anthropology. 386 pp.

Supreme Court of British Columbia. 1991. Reasons for judgement in *Delgamuukw et al. v. The Queen*. *Canadian Native Law Review* 1991 (5):1.

Supreme Court of Canada. 1985. Reasons for judgement in *Guerin v. The Queen*. *Canadian Native Law Review* 1985 (1):120.

----- . 1990. Reasons for judgement in *R. v. Sparrow*. *Canadian Native Law Review* 1990 (3):160-188.

----- . 1997. Reasons for judgement in *Delgamuukw v. British Columbia*. *Canadian Native Law Review* 1998 (1):14-97.

Weinstein, Martin S. 1979. Indian Land Use and Occupancy in the Peace River Country of Northeastern British Columbia. Vancouver: Union of B. C. Indian Chiefs. 151 pp.

----- . 1994. The Role of Tenure and the Potlatch in Fisheries Management By Northwest Pacific Coast Aboriginal Societies. A paper prepared for American Fisheries Society Northwest International Chapter, First Nations Fisheries Workshop. Vancouver 17-18 January 1994. 15 pp.

## **APPENDIX**

### **Table 1. Basic Topics for Traditional Use Mapping.**

Note: The list of resource locations becomes greatly expanded with the addition of the scores of fish, bird, mammal and plant species that form the resource complex of an aboriginal economy.

## **CULTURAL SITES**

### **RESIDENTIAL**

- village locations (winter, summer, year-round)**
- camp locations (resource harvesting, travelling, etc.)**
- life-cycle residences (birthing, puberty, menstrual, etc.)**
- cache locations (food, equipment, ceremonial objects, etc.)**
- other**

### **TRAVEL ROUTES**

- place names**
- boat and canoe routes (marine, lakes and rivers, portages)**
- wagon routes**
- horse trails**
- walking trails**
- navigation or travel land-landmarks**
- weather landmarks**

### **CEREMONIAL/SPIRITUAL**

- ceremonial locations**
- burial grounds**
- therapeutic/healing locations**
- other**

### **HISTORICAL EVENTS**

- archaeological site**
- gathering places (tribal, inter-tribal, Euro-Canadian)**
- battle/conflict locations**
- event leading to transfer of rights or prerogatives**
- personal or family member life event locations**
- other**

### **MYTHOLOGICAL EVENTS AND PLACES**

- supernatural places**
- origin story locations**
- other legendary events locations**
- other**

## **RESOURCE LOCATIONS**

### **HARVESTING LOCATIONS**

- food**
  - fish**
  - wildlife**
  - plants**
- materials**
  - plant**
  - mineral**
- medicines**

### **PROCESSING LOCATIONS**

- food**
- materials**

### **RESOURCE TRADITIONAL ECOLOGICAL KNOWLEDGE**

- habitat during different parts of life history**
- reproduction**
- behaviour (includes migration routes)**

## **RESOURCE MANAGEMENT /RESOURCE ALLOCATION AGREEMENTS**

**MAIN FAMILY INTEREST OR RESPONSIBILITY AREAS**

**SPECIFIC RESOURCE RIGHTS OR RESPONSIBILITIES**

**RESOURCE ENHANCEMENT OR MANAGEMENT AREAS**

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## **ENDNOTES**

<sup>i</sup> Researchers in the Canadian North generally characterize these activities as the household harvesting or subsistence sector of an economy with mixed sources of income. Within British Columbia the pejorative tone of *subsistence* is more powerful than its descriptive value. Government officials and some courts use the more neutral term *sustenance*. Aboriginal communities simply refer to the activities: hunting, fishing, berry picking, etc.

<sup>ii</sup> Some uses, such as the fishing stations that, in places, line the Fraser River, are highly visible. But, even there, the critical management and organization methods are community processes, closed to the government regulators in order to limit intrusion. One of the most contentious resource management issues in the province took place on the salmon fishing grounds. For many years there was an annual battle over harvest numbers. The regulators required Indian food catch numbers to fit into their quantitative management formulas. Indians perennially refused to comply. Brody (1982) powerfully describes how the numbers game has historically acted as a catch-22 for native peoples. If harvest numbers are high, Indians were accused of having no concern about conservation and, consequently, require the intervention of state regulators. Low harvest levels were taken as a lack of need or interest, with the resources available for allocation to others. It has only been after the courts recognized how fish and wildlife management was often loaded against aboriginal interests that the numbers issue became more relaxed.

Nonetheless, barriers to cooperation and openness are still powerful. There is a very poor understanding of the aboriginal experience among government regulators. Very few government officials understand that the type of regulations they enforce were historically part of the chiefs' resource management role. Setting the timing for fishing, in particular, —telling people when and where to fish — and making decisions about closures for conservation were important chiefly prerogatives. When these come down from government officials there is a feeling that the officials, and the government, have put on the chief's blanket.

<sup>iii</sup> To my knowledge, legal decisions about aboriginal rights to harvests plants are presently absent, but there is no reason why the logic should not be transferable to plants as well as wildlife.

<sup>iv</sup> The Supreme Court of Canada had earlier found that the Government of Canada had a care-taking or fiduciary responsibility for areas within federal responsibility (e.g., S. C. C. 1985)

<sup>v</sup> Heritage Resources is a branch of the Ministry of Small Business, Tourism and Culture. The administration of the program has since been transferred to the Aboriginal Affairs Branch of the Ministry of Forests, which "delivers the program on behalf of all other provincial agencies" (Gelean 1997:3).

<sup>vi</sup> Much money has already been spent on TUS research. But compared to the need, and the economic interests involved, in reality, it is quite limited. The TUS program was intended to gather information for a new, major government administration program. Getting administration programs up and fully running takes time, considerable money, and considerable trial and error course corrections.