

# The Co-Management Review

From the Project:

Criteria and Indicators of Joint Forest Management

March 2004

Issue #3

Welcome to the third edition of the *Co-management Review*, a series of newsletters about the *Criteria and Indicators of Joint Forest Management* project. This research attempts to design and evaluate methods for local-level criteria and indicators (C&I) development and to produce a set of flexible C&I to direct, monitor, and evaluate co-management arrangements, particularly those involving First Nations. The John Prince Research Forest (JPRF), a partnership between Tl'azt'en Nation and UNBC, is used as a case to explore the essential elements of co-management. We focus on learning about co-management processes and outcomes. We aim to apply our findings to improve co-management of the JPRF. In addition, we hope our results will enhance forest co-management in other areas and assist other types of joint management partnerships. In this issue, you'll learn about our research progress and winter activities on the John Prince Research Forest. Articles for this edition were written by Erin Sherry and Regine Halseth, and the newsletter was designed by Sarah Parsons. We hope you enjoy this issue!

## Project Update

As the end of March quickly approaches, we are wrapping up the second phase of our project. We have conducted 57 interviews so far, some as long as three hours! Many of these have been transcribed and returned to participants, but there are still more to do. In the weeks ahead, we hope to complete the transcription and verification process. The

research team received qualitative data analysis training from Erin in February. Then, as a group, we began coding the content of transcripts. This means recording the essence of what was said in short statements. This allows us to find commonalities and differences, and to condense the interviews. Results of some initial analysis are shown on page 6. Once coding is complete, each participant will receive a summary of their transcript for verification. On March 24<sup>th</sup>, we presented our work to date in Tache; more details about the workshop and poster session can be found on page 7. We were very pleased with the turnout and people's interest. Thanks again to everyone who attended!

team. Gail is now the CURA Director, while Erin and Sue are Stream Leaders. Bev will continue working on the project, although in a reduced capacity, and is the Tl'azt'en CURA Co-ordinator. Sarah will remain with the project throughout the summer and then begin her Master's degree in September, focusing on co-management criteria and indicators. Erin and Sarah are also sharing the UNBC CURA Co-ordinator job. Thanks to Regine Halseth and Ron Winsler who made many important contributions to ensure project success. Good luck in your new endeavours!

You will continue to receive our newsletter, including information from the larger CURA project. Take a look at our CURA website - <http://cura.unbc.ca> - and follow the links to the *Improved Partnerships* project. Please let us know what you think of the research. Your feedback on the newsletter, website, workshop, and publications is welcomed. We'd love to hear from you. Thanks again to all our participants; your efforts are greatly appreciated!

- The Research Team

### Contact Us

If you have any questions about the project, please get in touch with us.

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Currently we are undergoing a transition described in the update on page 5. Our funding source has changed from Forestry Innovation Investment to CURA (Community University Research Alliance). We are one of four streams in a research partnership between Tl'azt'en Nation and UNBC. Although the work on co-management will continue as planned, our project has a new name - *Improved Partnerships*. This has also meant some changes in the research



# Update from Beverly Leon

## TI'azt'en Nation Research Associate

It's been an exciting time for the *Criteria and Indicators of Joint Forest Management* project and the outcomes are encouraging. I've spent a lot of time interviewing people from TI'azt'en Nation and Nak'azdli First Nation who agreed to participate in the project. It's been a wonderful experience and I especially enjoyed listening to everyone's stories. Many participants discussed successful elements of the partnership between UNBC and TI'azt'en Nation and made recommendations to improve operation of the John Prince Research Forest.

Research is an amazing tool! The vast knowledge and experience First Nations have about the land and our connection

to it is phenomenal. The need to care for the forest, the water, and the animals was often expressed. I've listened to many stories of how the John Prince Research Forest and the Pinche Lake area were used by First Nations throughout the generations and some very neat stories about life in the area during the mining era. Those stories have helped me to understand the rich lives and vibrant traditions shared among the Nations and in cross-cultural situations.

Most of my interviews were conducted in January. There are still a few interviewees who are missing in action, but hopefully I will be able to hear their perspectives soon. At the beginning of February, Dr. Erin Sherry provided data analysis training to project staff. That process prepared us for content analy-

sis, which was conducted for 3 weeks in March in order to generate general outcomes to present at our community workshop. Of course this process will continue until all transcripts are complete. The workshop, held on March 24<sup>th</sup> in Tache, was a great success!

The *Criteria and Indicators of Joint Forest Management* project will be carried into the new fiscal year under the Community-University Research Alliance (CURA) project as one of four research streams. CURA is going to be a very exciting and busy project in the communities of TI'azt'en Nation and UNBC, and I look forward to working with everyone.

Nanyoosten'la

~*Beverly Leon*

## Research Relevance

In practical terms, this research will contribute to improved co-management of the JPRF. Findings should also have broader theoretical and applied relevance. We are developing methods to identify local-level C&I that recognize the importance of community involvement in forest management, sustainability monitoring, and partnership building.

### Local Scale

It is important to consider sustainability at multiple scales. C&I for sustainable forest management have been developed and applied at regional, national, and international levels of forest management. C&I specific to a particular place and methodologies for their identification are needed.

### Local Participation

Although the role of local people is given special attention in some C&I initiatives (e.g., Model Forests), most depend overwhelmingly on input from researchers and experts. Yet, experience shows that local people's participation in defining C&I is desirable, and viable management systems depend on how well their views are incorporated. Still, how to involve local people in the development and application of C&I is largely unexplored. Methodologies are required that are transparent and accessible to all community members, reflect the widest possible range of interests, incorporate traditional knowledge, link ecological and socio-cultural components, and allow for ongoing participation, evaluation, and system improvements. Our project is developing and refining such methodologies.

### Social Sustainability

The forestry community is struggling to define what social sustainability means and how to monitor and achieve it. Recognition of the value of social indicators as measures of community sustainability is growing, although studies are relatively uncommon. Our work focuses on the development of social and cultural C&I.

### Process Orientation

Considerable work on C&I of sustainability makes clear that processes of decision-making and management are as important to society as the outcomes. Despite this, a continued emphasis on the results of forest management prevails in BC. The current project addresses the development of process and outcome C&I. Both provide important information for the direction and assessment of co-management.

# Research Process

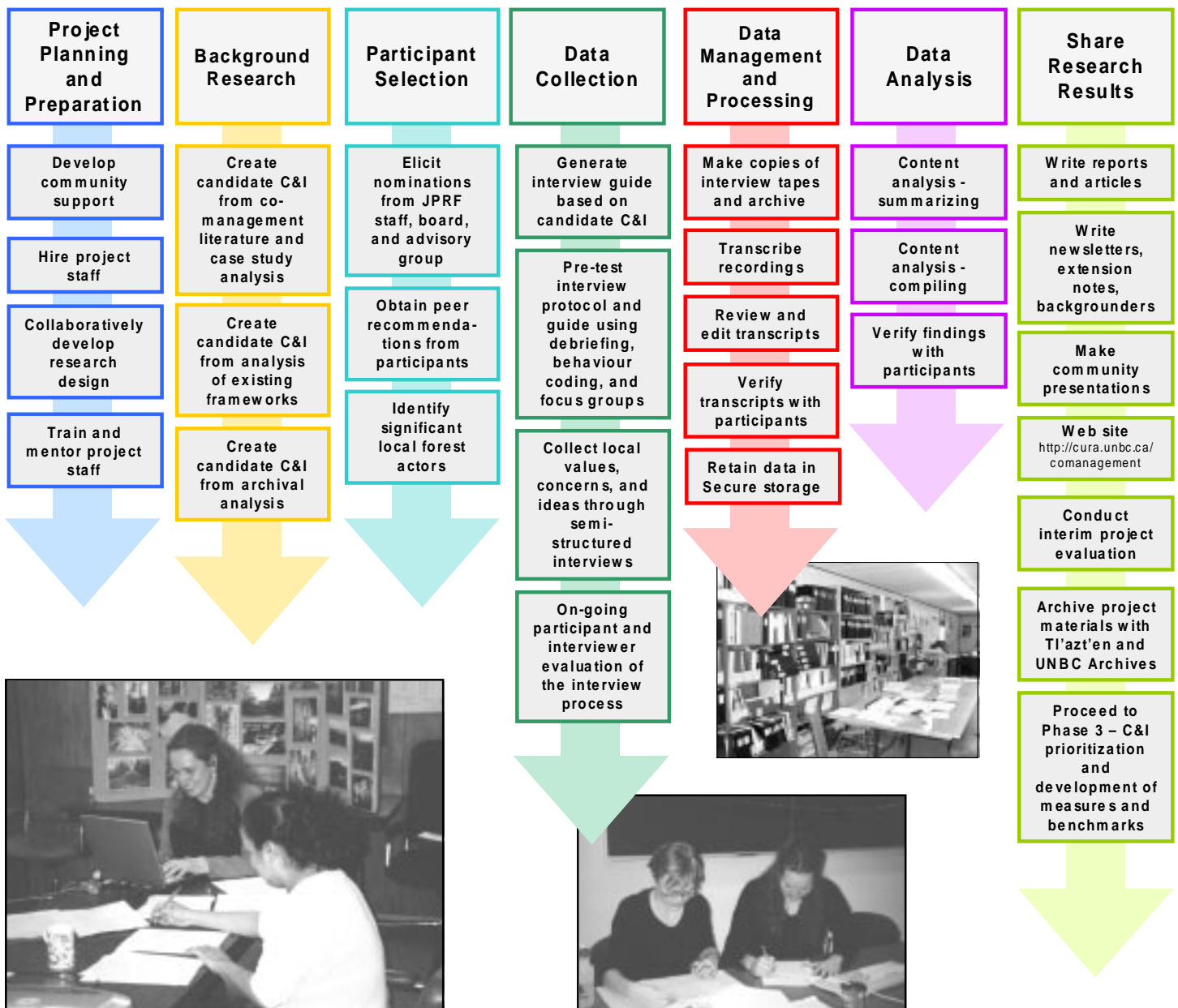
## How do we develop Criteria and Indicators?

Co-management is a social and institutional experiment. The content and structure of co-management arrangements vary widely in Canada. The growing popularity of such arrangements necessitates further investigation into the requisites of successful partnership. We set out to develop 1) a fuller understanding of the essential elements of effective co-management; 2) concrete guidelines, tools, and methods to facilitate effective co-management; and 3) a monitoring and evaluation framework

that considers co-management in a comprehensive, multi-dimensional manner.

In contrast to previous *ad hoc* or expert-driven processes, which largely ignored community input, needs and sustainability concerns, the methods developed in this research attempt to democratize the process of criteria and indicators development. We have designed and applied methods to identify local-level C&I of successful co-management. The diagram below illustrates the

C&I development process undertaken during research phases 1 and 2. While these steps have a distinct order, the process is reflective and can be revised based on new knowledge. Work during the next 3 years will focus on verifying, prioritizing, and elaborating this framework. The goal is to create a management and monitoring process that is responsive to the values, expectations, and changing needs of co-management partners and stakeholders.







# News from the JPRF

Many activities occurred during the winter field season on the John Prince Research Forest. Staff members were busy with winter logging operations, field research, and a new project addressing local labor market issues. Several University of Northern BC faculty conducted research, field camps, and class day trips.

## Wildlife Inventory and Monitoring Program

In January, the JPRF began implementing a long-term wildlife inventory and monitoring program. These activities will provide managers and researchers with valuable baseline data. The JPRF secured funding through the Natural Resources Canada, Science and Technology Program to hire a recent UNBC Wildlife Biology graduate, Jennifer Black, for a one-year term to assist Johnny Tom and Dexter Hodder in this process. Several species will be surveyed, including forest birds, waterfowl, raptors, small mammals, furbearers, aquatic mammals, ungulates,



Jennifer Black, UNBC Wildlife Biology graduate was hired in January to work for the JPRF as an intern.

large carnivores, amphibians, and fish. Significant habitat related features will also be monitored, including wildlife trees, wildlife trails, dens, breeding sites, weather, sedimentation, special plant communities, medicinal plants, berry patches, access roads, recreation



Johnny Tom works for the JPRF as a Research/Forestry Assistant.

pressure, and coarse woody debris. During the initial project phase, JPRF staff are conducting a detailed literature review of species inventory methods and information gaps. In the coming weeks and months, staff will talk to community members to gather input into the monitoring program, which will become a formal part of the next JPRF management plan.

## River Otters

An extensive snow tracking exercise was conducted on Tezzeron Lake, Pinchi Lake, and all other small lakes in the JPRF and surrounding area. These activities provide a preliminary picture of otter populations and winter home ranges. Staff are also examining winter feeding sites to assess key winter habitats for otters in the JPRF.

## Lynx

Winter track transects were estab-

lished as per inventory guidelines to determine local lynx populations and habitat use. The JPRF contains six transects, each 3km in length.

## Mule Deer

This is the second year of research on winter habitat utilization by deer, both white tail and mule deer, in the JPRF. This long-term project is evaluating a winter range habitat model developed by the Ministry of Water, Land and Air Protection. Most importantly, this will enable the JPRF to manage for habitat values and maintain ecosystem function for these animal populations.



## Snowshoe Hares

Key winter areas for snowshoe hare populations are being noted in the JPRF and spring pellet counts will be conducted to measure relative hare population numbers, an indicator for monitoring the boreal ecosystem cycle. Investigation into snowshoe hare excavation of an iron-rich site is continuing through collection of track, pellet, and hair data, as well as the installation of a wildlife monitoring camera.

## Mineral Licks

A UNBC study of mineral licks in the JPRF has been ongoing for 3 years. Through track, pellet, and camera data, researchers are finding that moose and mule deer use mineral licks at all times of the year and that peaks in activity vary by animal age and sex. Mineral licks appear to be extremely important, ensuring animals can meet mineral requirements and interact with others of the same species. This underscores the need for forest managers to adopt a planning approach that incorporates consideration of areas such as mineral licks.

## Wildlife Sighting Database

At the beginning of January, staff started formally collecting information on wildlife sightings in the JPRF. All sightings are entered into a database and will serve as an anecdotal list of all species. Each record contains location and habitat information as well as time and weather data.

## Bear Den Site Selection

In February, findings to date regarding bear dens and forest management on the JPRF were presented at the International Bear Association conference in San Diego, California. This research is attempting to determine the relationship between bear den locations and timber extraction, and the subsequent economic implications of leaving buffer sites around bear dens.

## Aerial Moose Survey

In early January, researchers from UNBC and the Ministry of Water, Land, and Air Protection conducted an aerial moose survey of the JPRF. In 4 hours of flying, 94 moose were counted. Researchers estimate that about 130 moose inhabit the entire research forest. These findings will be used to help build a database of yearly variations in the moose population between Tezzeron and Pinchi Lakes.

## Labour Market Partnership Project

JPRF has commenced a new community research project with funding from Human Resources Development Canada, Labour Market Partnership program to investigate labour market and capacity building initiatives within Tl'azt'en Nation and their relationships to surrounding communities. This project will result in a strategic human resource plan for Tl'azt'en Nation and companies/organizations that employ Tl'azt'enne. Ron Winser and Jean May Monk will coordinate this project.

# CURA Update

While our funding from FII for work on improving JPRF co-management ends at the end of March, our work will continue! Tl'azt'en Nation and UNBC have received a major research grant from the Social Sciences and Humanities Research Council of Canada to work together for the next 5 years (see last issue of this Newsletter). The CURA (Community-University Research Alliance) work has begun, and this newsletter will continue to keep you in touch with research developments. Please also visit our website, <http://cura.unbc.ca/>, where all kinds of materials from our project will be posted.

The CURA research focuses on four areas: improved co-management, Tl'azt'en Traditional Ecological Knowledge (TEK), culturally appropriate Science education for Tl'azt'en youth, and eco-tourism. So far we have hired a fulltime Tl'azt'en Research Coordinator (Bev Leon) and two half-time UNBC Research Coordinators (Erin Sherry and Sarah Parsons). We have begun work on the TEK research (led by Beverly

Bird and Jane Young), looking at Tl'azt'en place names for what they tell us about the environment. Work on Tl'azt'en knowledge regarding medicinal plants will also begin shortly. Erin Sherry and Sue Grainger continue to lead research on enhancing JPRF co-management. Deborah Page and Chris Jackson will shortly begin to examine how science education curriculum might be improved. Our ecotourism research will start a bit later.

All the research involves both Tl'azt'en and UNBC researchers. We will hold regular community workshops to report on our findings. The CURA project is dynamic; so if you have ideas regarding other research projects, please contact us. And of course, if you have questions or concerns, don't hesitate to contact anyone of the research leaders or coordinators mentioned above, or Gail Fondahl.

-Gail Fondahl, UNBC  
Principle Investigator, CURA

## Resource Recreation and Tourism Field Trip

by Sanjay Nepal,  
Assistant Professor,  
UNBC



From March 5th to 7th, my Resource and Recreation Tourism class came to the JPRF to learn about visitor management. The class of 13 students was divided into groups to plan recreational activities including snowshoeing, cross-country skiing and ice-fishing. They explored how these activities could occur simultaneously in an area without causing much ecological damage or conflicts.

The class also simulated conflict between recreational user groups, and developed strategies to minimize or resolve these conflicts. Three user groups were established: the rowdy bunch, the purists, and the novices. Encounters between groups were created to examine how such encounters influence participant expectations and interactions. This allowed the class to discuss issues of recreation conflict management. The goals were to explore ways of minimizing the ecological footprints of winter recreation in a semi-wilderness setting through developing a set of indicators and a monitoring system, conceptualizing multiple-use recreation management principles and practices, and finding ways to provide a quality experience for visitors while maintaining the integrity of the area.

# Participant Perspectives on JPRF Co-management Outcomes

Interview analysis revealed a wide range of outcomes participants would like to see from the JPRF. These outcomes, results, and benefits can be organized into three main principles or explicit co-management imperatives, including social sustainability, economic sustainability, and increased management effectiveness. Each of the 13 criteria identified below are described by a set of related local-level indicators. As data analysis continues, this framework will grow and be further refined.

<p><b>Preserving Tl'azt'en Culture</b></p> <ul style="list-style-type: none"> <li>• Opportunities for cultural rediscovery for First Nations children and youth</li> <li>• Strengthening intergenerational connections</li> <li>• Cultural revitalization through:             <ul style="list-style-type: none"> <li>▪ Restoration of traditional trails</li> <li>▪ Identification and protection of CMTs</li> <li>▪ Preservation of traditional knowledge and practices; involvement of Elders</li> <li>▪ Building sites to celebrate traditions and culture; for example, the pit houses</li> <li>▪ Development of eco-cultural tourism</li> </ul> </li> </ul>	<p><b>Employment</b></p> <ul style="list-style-type: none"> <li>• Jobs for people from UNBC and Tl'azt'en Nation</li> <li>• Meaningful work opportunities for Tl'azt'en youth</li> <li>• Increasing Tl'azt'enne success in professional employment</li> <li>• Tl'azt'enne employed as researchers, tour guides, resource management professionals, contractors</li> </ul>	<p><b>Education and Training</b></p> <ul style="list-style-type: none"> <li>• Tl'azt'en children and youth experience increased success in school and are prepared for higher education</li> <li>• Development of Tl'azt'enne resource management professionals</li> <li>• Growth of the science and culture camp program</li> <li>• Traditional knowledge is taught on the JPRF and involves the Dakelh language and Elders as teachers</li> <li>• Job-shadowing, mentoring and apprenticeship programs are created</li> <li>• Summer student, internship, and volunteer programs are created</li> <li>• Education programs use hands-on and outdoor learning approaches</li> <li>• Programs facilitate cross-cultural learning and build relationships</li> <li>• Professional development and training opportunities</li> <li>• Opportunities for general public to learn about forestry and First Nations cultures</li> <li>• Skill development in research for Tl'azt'en and UNBC</li> </ul>
<p><b>Strengthening Tl'azt'en Nation</b></p> <ul style="list-style-type: none"> <li>• Tl'azt'enne employability and skills increase</li> <li>• Optimism about the future increases</li> <li>• Community autonomy and self-sufficiency</li> <li>• Meaningful opportunities to participate in and receive tangible benefits from resource management</li> <li>• Contributions to community health, healing, and well-being</li> <li>• Community pride and positive outlook increase</li> </ul>	<p><b>Empowerment</b></p> <ul style="list-style-type: none"> <li>• Recognition and prestige brought to partners</li> <li>• Increased access to information, funding, and services</li> <li>• Increased community control over resource use</li> <li>• Recognition of Aboriginal rights and title</li> <li>• Enhanced communication and cooperative decision-making</li> <li>• Increased self-esteem, identify, and sense of pride</li> </ul>	<p><b>Economic Sustainability</b></p> <ul style="list-style-type: none"> <li>• JPRF remains non-profit; income is re-invested in programs, facilities, and staffing</li> <li>• Financially self-sufficient and sustainable in the long-term</li> <li>• Contributes directly and indirectly to the economic well being and stability of local communities</li> <li>• Contributes to economic diversification - cultural tourism, eco-tourism, recreation, guiding, gift shop, non-timber forest product development</li> <li>• Economic development is appropriate, small scale, and considers social/cultural implications</li> </ul>
<p><b>Facilities and Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Development of the Cinnabar Resort; facilities should be attractive and functional</li> <li>• Cinnabar Resort should be used as the JPRF office, a tourist destination, campsite, and a center for JPRF programs, events, courses, and retreats</li> <li>• Cinnabar Resort should be promoted as a facility available to rent</li> <li>• Infrastructure projects: electricity, sewage system, running water to cabins, telephone, and internet</li> <li>• Facilities projects: improved</li> </ul>	<p><b>Building Relationships</b></p> <ul style="list-style-type: none"> <li>• The JPRF is a place for gathering, "a hub of activity"</li> <li>• Opportunities for diverse cultures to work together and learn from each other</li> <li>• Programs designed to bring individuals together and provide personal enrichment</li> <li>• Strong families; interpersonal and intergenerational connections</li> <li>• Tl'azt'enne exposed to UNBC students, staff, structures, and programs</li> <li>• Relationships with other First Nations are enhanced</li> <li>• Communities outside partnership are engaged</li> <li>• Feasibility of joint management partnerships in other areas improves</li> </ul>	<p><b>Desired Research Projects</b></p> <ul style="list-style-type: none"> <li>• Forest Ecology: natural disturbance, landscape ecology, effects of logging history, Douglas-fir, soil conservation</li> <li>• Archaeology</li> <li>• Improved partnership</li> <li>• Economic development: tourism, value-added, cottage industries</li> <li>• Education and training</li> <li>• Regional socio-economic impacts of the JPRF</li> <li>• Cultural revitalization</li> <li>• Social well-being</li> <li>• Traditional knowledge of medicine plants, forest health, stewardship</li> <li>• Traditional practices: subsistence use, burning</li> <li>• Water quality, hydrology</li> <li>• Impacts of sport fisheries</li> <li>• Sturgeon populations</li> <li>• Bark beetles</li> <li>• Climate change</li> <li>• Forestry: alternative practices, cost-effectiveness, growth and yield, wood products, herbicides and pesticides, social impacts</li> <li>• Integrated resource management</li> <li>• Pinchi mine</li> <li>• Ecological restoration</li> <li>• Wildlife</li> <li>• Improved research methods</li> <li>• Special sites</li> </ul>
<p><b>Forest Stewardship</b></p> <ul style="list-style-type: none"> <li>• Highest standards of forest stewardship are practiced: sustainability, integrating all values, ecosystem-based, maintaining natural systems, exceeding current standards of environmental protection, responsible harvesting</li> <li>• Incorporation of traditional knowledge, practices, and perspectives into management</li> <li>• Strong working relationships with Keyoh holders</li> <li>• Support for personal, cultural, family and ancestral attachments to the land</li> <li>• Protection of subsistence opportunities; traditional plants and animals are protected</li> <li>• Protection or enhancement of sites of ecological, cultural, and social importance</li> <li>• Protection of wildlife/fish populations and habitats, especially hunting and trapping animals, endangered species, and unique ecosystems</li> <li>• Protection of water, wetlands, riparian areas and soils</li> <li>• Inventory of wildlife, fish, and streams</li> <li>• Long-term monitoring and evaluation program</li> <li>• Ecological restoration of damaged or degraded sites</li> <li>• Efforts to assist Pinchi Mine remediation</li> <li>• Roads and access are responsibly managed</li> <li>• Recreation opportunities exist</li> </ul>	<p><b>Partnership</b></p> <ul style="list-style-type: none"> <li>• Trust between co-management partners</li> <li>• Understanding and respect for each others' culture and values</li> <li>• Tl'azt'en values and beliefs are central to the partnership</li> <li>• Community support for partnership exists</li> <li>• Working environment is positive and welcomes innovation</li> <li>• JPRF is held in high regard as a model of co-management</li> </ul>	<p><b>Research Expectations</b></p> <ul style="list-style-type: none"> <li>• Applied, practical research is conducted</li> <li>• Research results are implemented and promote change on the JPRF and in other areas</li> <li>• Research benefits both partners</li> <li>• Research addresses issues of local/regional concern</li> <li>• Research priorities address Tl'azt'en Nation needs</li> <li>• Children and youth are involved in research</li> <li>• Through research, JPRF provides information for improved decision-making</li> <li>• Better understanding of natural systems</li> <li>• Improved forest management and practices</li> <li>• Better understanding of the environmental impacts of forestry and mining</li> <li>• New partnerships are formed through research</li> <li>• Research is monitored and assessed</li> <li>• Opportunities continue to develop for both partners</li> </ul>
	<p><b>Sharing Knowledge</b></p> <ul style="list-style-type: none"> <li>• JPRF demonstrates that co-management can be effective and viable</li> <li>• JPRF management experiences are shared</li> <li>• Knowledge gained through research is shared</li> <li>• Knowledge is transferred and used by partner organizations</li> <li>• Collective learning; local/regional First Nations, schools, industry, government agencies, academia utilize knowledge</li> <li>• Education for the general public is provided; for instance, on First Nations' culture, forest ecology, and forest practices</li> <li>• Development of cultural and ecological interpretive sites</li> <li>• Through demonstration of alternatives, JPRF plays an indirect political role</li> </ul>	

# Criteria and Indicators Workshop

A *Criteria and Indicators of Joint Forest Management* workshop and poster session was held on March 24, 2004 in the Eugene Joseph Elementary School gym, Tache, BC. It was attended by 45 people from Tl'azt'en Nation, Fort St. James, UNBC, Nak'azdli First Nation, and Prince George. Preliminary project results were presented followed by a joint poster session with the John Prince Research Forest.

After a meet-and-greet over muffins and coffee, the workshop opened at 11:00 am with a welcome to Tl'azt'en Nation Traditional Territory by Amelia Stark, a prayer by Morris Joseph, and then further opening remarks and introductions by Amelia. This was followed by an overview of the recently funded



Community University Research Alliance (CURA) project by Dr. Gail Fondahl and presentation of a UNBC video media release on this Tl'azt'en Nation/UNBC research partnership. Dr. Erin Sherry then provided an overview of the *Criteria and Indicators of Joint Forest Management* project, followed by words from research team members Beverly Leon, Sarah Parsons, Gail Fondahl, and Sue Grainger. Next, Erin walked people through the project posters displayed throughout the gym, highlighting preliminary research

findings. This was followed by a group discussion period. A short break was taken for lunch during which five door prizes were awarded.

Everyone reconvened in the afternoon for the joint poster session where 13



posters were presented. Eight of the posters were from the *Criteria and Indicators of Joint Forest Management* project. They highlighted various stages of the research, from its initiation through to preliminary results, and included:

- *John Prince Research Forest: A photo tour*
- *Criteria and Indicators of Joint Forest Management: An overview*
- *Faces and voices of project participants*
- *The process of local-level criteria and indicators development*
- *Processes required for successful co-management: Information from literature and case study analysis*
- *Desired outcomes of JPRF co-management: Preliminary results from participants*
- *Preliminary participant recommendations: Actions and strategies for JPRF success*
- *Success stories: Shared perspectives on JPRF accomplishments*

In addition, five posters were presented on JPRF programs and research, including:

- *John Prince Research Forest: Science, tradition, respect for the land, respect for the people*
- *Mule deer winter range in the John Prince Research Forest*
- *River otter winter feeding site selection*
- *Does the establishment of den site buffer zones impact forestry economics?*
- *Testing the effects of road reactivation and traffic on moose movement and habitat use patterns in the JPRF*

We would like to extend special thanks to a number of people who contributed to making this workshop and poster session a great success. We would like to thank the principal, teachers, and students at Eugene Joseph for donating the use of their gym and equipment. Sophie Monk provided a delicious lunch that was enjoyed by all. We would like to thank Amelia Stark for her opening remarks and project participants who attended the workshop. We appreciate the contribution of your valuable time and your willingness to share ideas.





# Cross-cultural Outdoor Education on the JPRF

In the Fall of 2003, the first in a proposed series of five cross-cultural educational modules was successfully delivered in the John Prince Research Forest in a pilot project offered to Grade 4-6 students from three local First Nation



schools - Tl'azt'en Nation, Nak'azdli First Nation, and Yekooche First Nation. The program, *Yunk'ut Whe Ts'o Dul'eh* (We Learn from Our Land), was conceived of and designed by the Chuntoh Education

cilities for Chuntoh program delivery.

The program integrates Dakelh (Carrier) cultural materials with elementary school science learning objectives in an outdoor atmosphere. When fully developed, the program will consist of five modules corresponding to traditional seasonal activities. The Fall module, "Travelling by Canoe", focuses on the traditional knowledge topics of spiritual interconnections, traveling, and making dugout canoes, as well as the scientific knowledge topics of ecosystems, water conservation, and forest ecology. Other module themes will include:

- Winter - Storytelling
- Early Spring - Survival
- Coming of Summer - Time of Renewal
- Summer - Time of Plenty

*Chuntoh Education Society Mission: Providing children and youth with environmental and cultural education opportunities in a focused and positive outdoor atmosphere.*

Society, a non-profit society affiliated with the John Prince Research Forest. The society was formed in 2002 in response to a need for outdoor education programs targeting children and youth that combine science and traditional knowledge, promote cross-cultural learning, stimulate interest in environmental studies, and prepare young people to pursue science in high school and at the post-secondary level. The JPRF provides the setting and fa-

Renel Mitchell planned and organized program activities for the 3-day Fall module and Ron Winsler, Geraldine Joseph, and Farrah Alexis taught the different components of the module. The children camped at Cinnabar Resort with their teachers and

other adults acting as chaperones. The program was well received by the approximately 50 children who took part in it. There were



organized day and evening activities. Some of the popular activities from the program included the blindfold walk, lake study, food pyramid game, forest ecology hike, and empowerment pebbles. In their free time, students were able to explore their natural environment, go canoeing, or just relax in their cabins. The Chuntoh Education Society looks forward to developing and delivering additional *Yunk'ut Whe Ts'o Dul'eh* modules during the upcoming year with the help of JPRF staff, community members, teachers, and kids.

