Project Title: Building Capacity Through Education: Development and Delivery of Community Level and Northern College Module Courses on Contaminants, Wildlife and Health: Year 1

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Abstract: In 2008, the Northern Contaminants Program (NCP) of Indian and Northern Affairs Canada (INAC) initiated and funded a collaborative educational venture with Yukon College and Trent University (Indigenous Environmental Studies Program). In an effort to expand and strengthen the education, communications and outreach capacity of the NCP, two Yukon College paraprofessional courses were developed and delivered through distributed learning (distance education). A total of 19 students from 7 Yukon communities participated in the two courses through videoconference. One course was on Northern Contaminants and Wildlife and one on Northern Contaminants and Community Health. In addition, a university transfer level module on contaminants was developed as part of an existing environmental science course at Yukon College. The module and paraprofessional courses were designed to be transferrable to the other 2 northern colleges (with appropriate regional modifications) - Aurora College (N.W.T.) and Arctic College (Nunavut). This project will continue in 2009/10.
Key Messages:

- Yukon College and Trent University have partnered to establish modules of course material for the existing Renewable Resources diploma program at Yukon College as well as two courses at the paraprofessional level for front line people working in areas that require a basic knowledge of northern contaminants (e.g. existing wildlife managers, lands and environment representatives, Community Health Workers, etc).

- This initial partnership has expanded to include the other two northern colleges (Aurora and Nunavut Arctic College). With this pan-northern scope and distance delivery through videoconference and internet (interactive course websites), the team hope to develop sustainable mechanisms through which to transfer and teach important aspects of environmental and environmental health sciences incorporating the latest Northern Contaminants program generated research and information.

Objectives:

- Develop and pilot the delivery of a module that incorporates recent NCP research for both Yukon College’s Renewable Resources Program and for Trent University’s Indigenous Environmental Studies Program;

- Develop and pilot the delivery of two paraprofessional courses that provide information on northern contaminants for individuals residing in rural Yukon who are in the health or environment fields;

- Through engaging a Steering Committee comprised of representatives from the three Northern Colleges, ensure development of courses in Year 1 of the project that will allow for adoption and implementation in other regions in Year 2 at Aurora College and Nunavut Arctic College.

Introduction
Since its inception, the Education and Communications sub-program of the Northern Contaminants Program has endeavored to find ways to effectively communicate the findings of northern contaminants research and build capacity for the understanding of this information in northern communities (Furgal et al., 2003). Currently, the three northern colleges (Yukon, Aurora, and Nunavut Arctic College) have some form of Environmental Technology or Renewable Resources program through which students are educated and very often go on to fill environment related positions in the region afterwards. The Northern Contaminants Program has yet to formally connect to and support the training of these individuals who are already motivated and interested in the environmental and environmental health fields at this critical time in their higher education prior to seeking employment. Further, with the rapid progress being made in the implementation of northern information technology infrastructure, the feasibility of communicating, exchanging knowledge and learning ‘at distance’ in the “comfort of one’s own community” rather than having to travel to a workshop or college, or University in the south is quickly increasing. As one example, Yukon College has now delivered a “Math for Water Operators” training program in many of the Territory’s First Nations Communities through an online distributed learning format that is now present in these communities. They are now looking for other opportunities to explore and develop
While changes occur in the northern workplace (e.g. growth in environmental and research oriented positions with resurgence in northern science and development) the NCP continues to generate significant amounts of world-class science to advance our understanding of contaminants, pathways, trends and their effects in northern ecosystems and on northern populations. Some of this leading edge science has made its way, albeit passively (i.e. without a focused specific effort of the program in many cases) into the classrooms of Universities and some high schools, often in the south. However, little sustained and concerted effort has been made to translate this material into learning modules for those that are perhaps some of the most motivated and interested to learn about this information in the north: northern college students and community workers.

It is for these reasons that Yukon College and Trent University have partnered to establish module course material for the existing Renewable Resources program at Yukon College as well as two courses at the paraprofessional level for front line people working in areas that require a basic knowledge of northern contaminants (e.g. existing wildlife managers, lands and environment representatives, CHRs, etc). In partnership with the other northern colleges for the adaptation and expanded use of this material in the two other Territories, this effort introduces a more sustainable mechanism through which to transfer and teach important aspects of environmental and environmental health sciences using the latest northern contaminants research and information.

The partnership between the Northern Colleges and Trent University is critical to provide the foundation not only for course development and delivery but also to offer the opportunity of University level transfer accreditation to students taking northern college courses as well as those then wanting to pursue University level education.

Activities in 2008/2009
This past year two paraprofessional courses were prepared and pilot tested in the Yukon. The first course, on wildlife and contaminants ran in the fall of 2008 and included 15 students from 7 different communities. The course lasted 7 weeks and received excellent feedback from students. As the sample testimonials show students very much appreciated the course and are requesting more research and learning opportunities of this kind.

“Wow! There is so much to love about this course!........I would love it if we got to so some testing on our water, soils, plants, animals and even in our home and ourselves....I now want to learn more and teach others and help my community members....I would love my classmates to help the community to help the animals and all living things.....I would love a summer job as a student to start making changes or assisting with contaminants testing and monitoring.”

Christine Blanchard, Dawson City

“In our class, I liked the opportunity for active participation.....I enjoyed doing the assignments....there was lots of good information.... Enjoyed the classes but also
reviewing the PowerPoint presentations on the website afterwards... the video technology was new to me but now I think it is amazing and so convenient that I didn’t have to go to Whitehorse....The material we covered was useful and brought an awareness of the seriousness of the global problem of dealing with contaminants.....The most valuable aspect of the course to me was becoming more aware of the contaminants issue and the stakeholders involved. I didn’t realize the amount of contaminants in the north; now, I can do my part as an individual by continuing to go “green” and be more proactive in my community.....I believe there was a good balance of information....it was good to have guest speakers come in**”

Shirley Lord, Tagish

**Elder Randal Tetlichi from Old Crow, Mary Gamberg and Lewis Rifkind (Yukon Conservation Society) accepted to be guest speakers in this course in fall 2008

“What I liked most about the class was local stories and things that hit close to home....I plan to continue with the next course offered on contaminants and community health”

Dawn Baker, Carmacks

The course inspired many of the students to want to learn more about the topic and the research taking place on their land. Below is a poem written by one student, Shirley Rose, about her perspectives on the issue, as inspired by her participation in the course:

**Cry in the Land**

Listen closely to what we say, For generations past and even today.
People of the north, Indigenous to this land,
We’ve lived close to nature sharing all that we can.
Affected from industry and politicians from afar,
Forever touched, forever changed Who we really are...
Did we ask for this destruction that so freely came?
No, we gave only our land in exchange for disease
and pain, Now, please hear, our Cry in the Land!

Our Ancestors have told us time and again,
To look after the plants, the wildlife and the land.
Are we to continue in silence, allow companies to gain
Their glory and riches, their shallow right to fame.
We have rallied here for the future looks so bleak,
To call on our Ancestors to help us because we really feel weak.
We have no powers to control the pollution coming our way
Are we to remain defenseless and defeated,
no, let’s stand united today
Please hear our Cry in the land!

Let’s work together to protect, preserve and enhance
Our global village that truly is not here by chance.
Let’s take the P.O.P.’s, the metals, the radionuclides,
Increase the awareness, stop the damage and destruction worldwide.
Let’s think of future generations of all in the Circle of life, living in harmony with the four leggeds, the winged ones, all that swim in the sea,
Creepy crawlies, the plants and two-legged and all that we see.
We must never take for granted the air that we breathe
The lakes & streams we fish in, the plant medicines we receive.
Please hear our Cry in the land!

We call on Healers of long ago to circle round and show us the way,
To live without polluting each and every day,
To walk on Mother Earth in a Sacred way, To revere and respect Her for all Her gifts She’s given us today.
Renew our strength and help us understand.

We cannot continue to abuse the sacredness of this land,
Tools we must gather, knowledge and wisdom to stop unhealthy attitudes of today,
Help us say no to the riches that consume us in a negative way.
Please hear our Cry in the land!

The pollutants are issues at hand that continue to grow,
They destroy the environment and Circle of life as we know.
Abolish the contaminants that want to destroy the family of man.
Together today, for our children, our future, Let’s take a stand.

- Written by: Shirley Lord – Gwichin Nation, Tagish, Yukon (Student, Contaminants and Wildlife Paraprofessional Course, Fall 2008)

The Community Health and Contaminants paraprofessional course was offered in March 2009 and, although enrollment was lower (4 students in 3 communities), the feedback from the course was similarly very positive.

As well, in Year 1 of this project, the structure and outline for the college level course module (to be proposed as the first component of the transfer credit arrangements being established between Yukon College and Trent University through the creation of an articulation agreement) was completed.

Additionally, one steering committee meeting was held in Yellowknife in conjunction with the NCP Annual results Workshop and representatives from each of the northern colleges and contaminants committees were in attendance.

Discussion and Conclusions
The first year of this new project was very successful. The project has now been renewed for Year 2 during which the following is planned:

- Expand the existing half courses (7 weeks) at the paraprofessional level into full courses (14 weeks) and deliver them in 09-10 in the Yukon;

- Complete the adaptation of existing paraprofessional material and development of other needed material for courses to be offered (if possible) in the other two other territorial regions in 2010-11;

- Develop a proposal in association with the Yukon paraprofessional courses to submit to the NCP in 2010-11 for the expansion of these courses to include contaminants
project experiential learning opportunities for students in cooperation with researchers working in the Yukon under the NCP;

• Finalize the Yukon College – Trent University articulation agreement;

• Complete the University Transfer credit module on contaminants and wildlife and pilot this module within the Yukon College Renewable Resources Program;

• Explore the possibility of adding a college level health and contaminants module within the existing health education program at Yukon College (we are not currently requesting funding to develop and pilot this module at this time as arrangements are being negotiated with the current health instructor etc; if negotiations are finalized this summer a mid-year funding request will be submitted to the NCP, o funding will be requested for this in a future funding year of the program);

• Explore, via Steering Committee meetings, adaptation and adoption of the modules and delivery by the other northern colleges in 2010-11.

The current courses are fully accredited by Yukon College and developed and delivered as distance education courses using distance technology such as video conferencing and interactive web technology.

Currently they include:

• One course, Contaminants and Human Health, is specifically designed to introduce the fundamentals of northern contaminants while exploring the nature of exposure and effects of northern contaminants on human health. An exploration of fundamentals in Arctic human health provides some context to the effects of contaminants on human health. This course is targeted for Community Health Representatives and others who are working as rural front line community health workers;

• One course, Contaminants and Wildlife, is specifically designed to explore the levels, trends and possible effects of northern contaminants on local wildlife populations. An exploration of the basics of wildlife health and ecology and possible impacts of other forms of environmental change (e.g. climate change) provides some context for understanding the effects of contaminants on wildlife heath. This course is specifically targeted for individuals working as front line workers in rural land management departments. This course includes a full-day on-site lab component.

College modules are being developed with the intention that they become transfer credit courses for those individuals wanting to apply these credits to further education at Trent University in one of the applicable programs (Environmental Resource Studies / Science; Indigenous Environmental Studies/Science). By involving representatives from Aurora College and Nunavut Arctic College on the Steering Committee, we are establishing a northern college partnership that has not existed among these individuals previously on
this topic and will provide the opportunity for future collaborations on curriculum
development and knowledge exchange across the colleges of the north as well as between
colleges and supporting institutions to the south.

Yukon College will deliver the wildlife module as a core component of the Renewable
Resources program and will deliver an expanded (full course version) of the two
paraprofessional courses via distributed learning in 2010-11 to those planning to work or
already working in either the health area or the lands and environment area or to other
interested community members.

To ensure that this initiative remains relevant to individuals across the north, the steering
committee will continue work into the second year of the project and involve three NCP
Regional Contaminant Committee (RCC) co-chairs, representatives from Yukon College,
Aurora College, Nunavut Arctic College, and Trent University. This committee will
continue to advise and oversee the program and will explore opportunities where transfer
agreements can be made among the three northern colleges to strengthen opportunities
for communicating results stemming from northern contaminant research.

This is an ongoing project that will be complete, in its current form, in 2010.

References:
Contaminants Program Structures, Processes and Products. Canadian Arctic
Contaminants Assessment Report II. Indian and Northern Affairs Canada,