

**ENVIRONMENTAL RESEARCH PROGRAM
ON
NATURALIZED KNOWLEDGE SYSTEMS**

Transitional Period Proposal

Submitted by

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SUMMARY

Since 1993 five First Nations communities across Canada have been involved in a pilot project with the main goals being:

- 1) to organize community-based environmental research
- 2) to document transfer of environmental knowledge and link this knowledge with "western" science;
- 3) to determine community-defined research priorities;
- 4) to define research framework dependent upon the needs, requirements and perceptions of communities but at the same time supplying university-based specialists required for individual scientific disciplines; and
- 5) to assist in organizing community-based environmental services.

The Naturalized Knowledge Systems (NKS) pilot project has accomplished all its goals. Three participating communities want to continue working on environmental projects using the methodology which has been developed in the course of the pilot project. Three other communities have joined the group and actively participate. Many First Nations communities want to join the process.

A workshop to evaluate and to conclude the pilot project took place in May 1997. In effect, the representatives of all communities, representatives of the University of Ottawa along with representatives of the Department of Indian Affairs and Northern Development (DIAND) decided that *the pilot project was successful*. It addressed several key issues affecting environmental and socio-economic development of First Nations communities. The success moved all representatives *to recommend that the NKS pilot project should evolve and expand into an Environmental Research Program*. The features of this Environmental Research Program will be as follows:

- 1) it will remain a First Nations' community-driven initiative, supported by universities, research agencies and government departments.
- 2) it will retain the methodology and characteristics of the pilot project;
- 3) it will continue to develop the methodology in the area of applied research while expanding and dealing with problems of scale of such a program, so that other First Nations communities across Canada will be able to join the process and benefit from its results.

A research initiative of this magnitude and importance has to be thoroughly prepared, therefore, we recommend and envision *a transitional period* (approximately six months) to take place before the research program itself can be started. This transitional period will be thus used:

- 1) to properly prepare the research program
- 2) to clearly define goals within individual communities and support agencies; and
- 3) to obtain a clear idea about the scale and speed of the expansion of the process.

Thus, this proposal describes briefly the *initiative* which was the base of the pilot project and which continues to represent methodological foundations of the new proposal. The focus is on the *transitional period* as an essential connection between the completed *pilot project* and the proposed *Environmental Research Program*.

We envision a significantly large-scale initiative with all the potential for positive and decisive impact on the present problems and difficulties confronting First Nations communities.

1 NATURALIZED KNOWLEDGE SYSTEMS

1.1 Introduction

Our inter-generational relationship on this continent has given us insight and in-depth knowledge of our lands and of sustainability of each region. While attempts have been made by ourselves, government agencies and non-government organizations and research institutions, the methodology for gathering information and capturing ideas about this knowledge remains insufficient. Moreover, an overview of what is available is incomplete as First Nations environmental knowledge is often ignored by “western” science and is not utilized in assessment of social and economic problems of our societies. Most assessments are usually done by an “outside” approach and outlook.

To understand the importance of our environmental knowledge is to understand the complexities of our traditional approaches to our environmental systems. This includes observation and appreciation of the physical world (our support systems of sustenance) and the philosophies and attitudes created and supported by close contact with these physical and living worlds (the world view).

To the “western” mind, the study and understanding of large environmental systems is inherently difficult - as these systems are unique, change slowly and written knowledge remains scarce. However, as First Nations people we often know about the behaviour of these systems and changes therein, because of our lifestyle, livelihood, culture and often the very existence is directly impacted by any adverse changes. This embedded knowledge in itself or prudently combined with or supported by selected methods and approaches of western science can be a very powerful tool for analysis and eventually for mitigation of existing environmental and related socio-economic problems.

Since 1993 five First Nations communities from across the country have been involved in the pilot project which dealt with the incorporation of First Nations community-based environmental knowledge into a structured research, where possible, in combination with university-based applied research. The approach has been spearheaded by the Department of Environment of the Mohawk Council of Akwesasne and termed Naturalized Knowledge Systems Approach.

All five communities which started the process had approved the pilot project. Three of the original communities (Maliseet Nation in Tobique, Mohawk Council of Akwesasne and North Peace Tribal Council) were joined by three “new” communities and groups of communities (Cumberland House Cree Nation, Treaty 8 Tribal Association, Tsawataineuk of Kingcome Inlet) during the second and third year of the pilot project. Two communities (Algonquins of Kitigan-Zibi and Opaskwayak Cree Nation) have voluntarily withdrawn from the project.

Five main goals of this pilot project were to:

- 1) organize community-based environmental research
- 2) document transfer of environmental knowledge and link this knowledge with “western” science;
- 3) determine community-defined environmental priorities;
- 4) define research framework based on needs, requirements and perception of communities, but at the same time supplying university-based specialists required for individual scientific disciplines; and
- 5) assist in organizing community-based environmental services.

An important factor of this type of approach was the principle of “community”. We participated directly in the design of projects, selecting critical environmental problems, identifying assessment criteria, and defining critical problems within the framework of every project.

This form of participatory research was directly useful to our communities, since the analysis and formalization of the environmental changes, of “state-of-the-environment reporting”, and of changes in availability of natural resources is critical for the understanding of these processes and for eventual modification and improvement of economic and social development.

The pilot project, which was supported by Environment Canada’s Environmental Innovation Program, Intern Development Research Centre and Indian and Northern Affairs Canada, was successful and has completed all its goals. We want to continue working on environmental projects using the methodology which has been developed in the course of the pilot project and many First Nations communities want to join the process.

Council Resolutions Supporting the Proposal are Presented in Appendix I.

1.2 Naturalized Knowledge Systems Initiative Naturalized Knowledge Systems: An Operational Definition

The object of the research initiative is to describe and investigate Naturalized Knowledge Systems (NKS) at work in our communities and to promote them as necessary and beneficial components of today’s partnerships of First Nations and Canadian societies.

Naturalized Knowledge Systems are bodies of ideas, values and concepts a social group utilize to function within its environment. “This process is dynamic and cumulative, which is to say that it adapts itself to new technological and socio-economic conditions as they come along” (Lickers, operational definition).

Supporting NKS are respect, equity and empowerment, three dynamic and reciprocal concepts, founded upon proper communication networks. They are defined as follows:

Respect emerges between partners (government, business, First Nations) only through communication and comprehension. This process is the first and necessary stage in healing the hurts and eliminating negative stereotypes that have been associated with research projects in the past.

Equity is often related to financial resources. Equity encompasses more than money terms, however, as assets can include people, technical resources and diversity in knowledge systems.

Empowerment is required to ensure successful action, once respect and equity have been attained. Empowerment is “the act of enabling”. This act implies that we, as First Nations communities, gain greater control in view of self-reliance. Empowerment includes decision-making, financing, acknowledgment of First Nations’ Naturalized Knowledge Systems, and the belief in cultural and economic self-determination. Accordingly, empowerment has been recognized by Agenda 21 as the facilitating key in encouraging local participation in sustainable development. The empowerment phase will be the hardest of three principles to achieve as it requires trust between all parties involved.

The three concepts of respect, equity and empowerment can contribute to a “healing process” which encourages us as First Nations people and non-First Nations participants to form evenhanded partnerships, and to stimulate a “zeal to deal”. In order to foster a “zeal to deal”, an appropriate combination of all three concepts is necessary. Only then can long-term goals, such as our involvement as First Nations in decision-making and in environmental research, be achieved.

The pilot project has followed these principles and the proposed new initiative will follow these principles as well.

Expanding upon the notion of NKS requires social component to be present even in natural or technical sciences-oriented projects. More specifically, the NKS approach to research requires researchers to move in the following manner:

- 1) to respect community protocols;
- 2) to discover and grasp the Naturalized Knowledge Systems specific to the community with and /or for whom the research is undertaken; and
- 3) to share all results with the community.

The ultimate goal of NKS is to ***empower First Nations communities through practical projects in the environmental area.*** To achieve this goal, however, requires information exchange,

validation of NKS, establishment of appraisal systems and most importantly, *securing intellectual property rights of each First Nations community*. This has to be incorporated into the "code of ethics" which is to be developed as a part of the proposed Environmental Research Program.

The pilot project was designed and carried out so as to include these three fundamental components of communication within our structures as they are discussed above - it reflected respect for the communities, it is helping us to increase our equity and it is assisting us in the process of empowerment. The proposed research program will again contain all these three fundamental principles.

1.3 Importance of NKS

1.3.1 Impact on socio-economic situation

The problems of First Nations communities represent some of the more serious challenges Canada faces at the present time. A short description of the situation is as follows:

- as First Nations people we are not an equal part of the larger Canadian society;
- the pseudo-welfare society trap exists for too many of our communities;
- there are too few structures for true economic and political viability;
- the loss of the traditional way of life goes beyond what is necessary for adaptation;
- as a consequence, social and economic disintegration occurs without any new vision for positive outcomes;
- after disintegration some communities never recover or continue to do crisis management with no time or resources for getting out of the daily struggle;
- the structures controlling our communities have neither clear existing concepts of grasping our ideals nor any idea how to prevent further loss of cultural identity;
- these structures themselves reflect the crisis management mode that is choking off whatever creativity our communities express to better their situation;
- consequently, there seems to be very little being done to move beyond the present situations.

While the proposed research program does not aspire to solve all of these problems, we seek to make a contribution by connecting pragmatic and practical approaches with conceptual steps linked to a larger picture. The project focuses on the environmental knowledge in our communities and particularly on Naturalized Knowledge Systems, their structures, indicators, and evaluation methods.

First Nations people have struggled to live as part of the environment. Our lifestyle was such that lifestyles and environment were one and the same. In this state, social, cultural and political stability was likely. The relationship between lifestyle and environment was modified with the introduction of market economies which destroyed the resource base and the environment on which communities depended. As the environment declined, the "lifestyle" of the people became more and more separated from the "environment". As this occurred, communities became more and more unstable. This separation leads to serious societal disintegration (Figure 1).

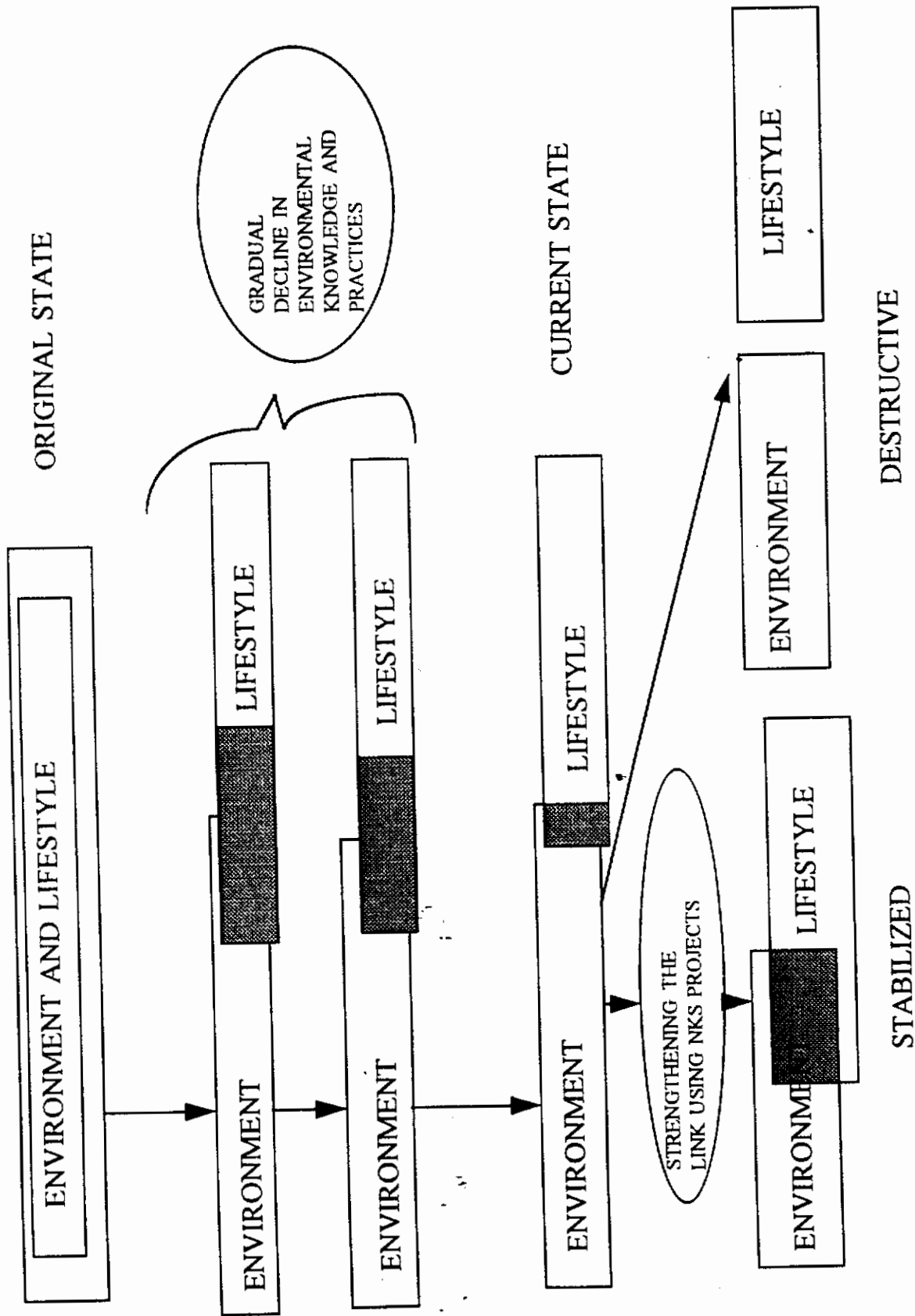


Fig. 1: FIRST NATIONS - CHANGE IN LIFESTYLE

As we articulate these problems, we look to solutions which would help to re-establish a *close environment-lifestyle relationship*. The environment should be the priority area of recovery and the following steps should be taken:

- culturally, the evaluation and *preservation* of First Nations environmental knowledge is a priority;
- economically, the assessment of environmental indicators and traditional and alternative use of natural resources can be implemented;
- politically, from management of natural resources and “environment” in general the economic self-government will emerge;
- ***societal recovery starts with and is linked to recovery of the environment;***
- as the reciprocity factor, environment-related work can be useful in promoting mutual *respect* among ourselves and non-First Nations societies, assist in *equity* building and supporting the *empowerment* of our communities.

We are stressing that promoting closer links between “environment” and “lifestyle” does not mean a “trip back in time”. The goal is ***our development on our own terms, at our own speed and the choice of our own targets***. These are the aspirations of all free people to preserve their identity and to lead meaningful lives full of purpose and satisfaction. Thus stated, the primary goal of this proposed program is the study and practical management of environmental problems.

This approach is supported by these generally accepted facts:

- First Nations in Canada are recognized as distinctive minority groups, representing roughly 3.4% of the population;
- First Nations have certain cultural and social norms which distinguish them from mainstream Canada;
- First Nations have a large youthful population suffering from all the ills of a depressed economy and damaged social fabric of their communities - environment-related work could give these young people some hope and chance;
- First Nations are struggling like all people in the world to give direction and provide example to youth;
- For First Nations, any further development and changes of the mainstream society carry high risk of further deterioration of the link between our environment and our lifestyle, thus, an analysis and stabilization of this link is important for development of both First Nations societies and the Canadian society as a whole.

1.3.2 Role of women and Elders

First Nations women have an important role in the context of participation, approval and idea sharing. While some communities are strongly matriarchal even those so will require a significant participation of the women. Any long term, steady vision of community development based on environmental services and environmental knowledge requires their commitment, as

women are the first teachers of fundamental truths, philosophies, and culture-bound belief systems. Also we have found that even in the most disturbed communities there are core members (Elders) carrying centuries old knowledge which is passed on inter-generationally as sacred truths. This project will involve Elders as teachers and knowledge-keepers as much as possible.

1.3.3 Sustainable use of renewable resources

The First Nations communities have traditionally depended on renewable resources. All means of sustenance, agriculture, hunting, fishing, trapping and gathering, depended on it. The sustainability of all these activities required sound management of resources which has been developed over thousands of years. However, external forces of huge population shifts with no knowledge of the "new" continent, thus with no appreciation of what was available, produced unsustainable activities too often inappropriate and taxing on an over-burdened land and water. The collapse of coastal fisheries, denuding of herb plants, decimation of uncounted animals, fish, bird species, the unabated ability to pollute waters and devastating forestry practices will be questioned for generations from all people.

While we can name the changes that have occurred, what we are lacking is structured, formalized analysis of these changes, which would enable us to assess damage already done and to analyse causes of these detrimental changes in order to slow down their impact or, if possible, to reverse these trends.

Thus, the analysis and evaluation of changes in environmental indicators, as seen by communities, will significantly assist in preservation of the existing knowledge of sustainable use of renewable resources. This knowledge can also be of importance for non-First Nations communities nearby and the society as a whole - there are certain lessons about the use of resources and existence as part of our physical and living environment where we are well ahead of non-First Nations communities.

1.3.4 Sustainable Development

Knowledge and use of environmental indicators (which already exist within First Nations communities) can, if formalized and used properly, be of assistance for communities to develop in an economically sustainable way with less significant socio-economic side-effects. Better knowledge of environmental indicators enables more sustainable utilization of renewable resources which is usually less demanding from the viewpoint of socio-economic adjustments and regulations.

1.3.5 Environmentally responsible decision-making at all levels of society

The project will strengthen environmentally responsible decision making at the community level. Furthermore, it will support the concepts of respect, equity building and empowerment of First Nations - and this will help not only our communities but also our neighbours and other levels of society, provincial, territorial and federal governments, as well as industrial and interest groups.

1.4 Linkage of NKS and western science

Linking these two knowledge systems will strengthen both of them. The main advantages for First Nations communities are as follows:

- 1) formalization of existing knowledge in a form that make it more accessible (this makes the question of intellectual property rights extremely important!);
- 2) western science is a valuable source of information for validation of NKS;
- 3) development of in-house scientific expertise through combining western science and NKS is another way of empowering communities: as that expertise increases, *communities are no longer at the whim of external "experts"*;

Advantages for universities/research institution are as follows:

- 1) NKS is a valuable *source of hypotheses* about how nature works, most of which are implicit rather than explicit. Western science can formalize these hypotheses and bring its methods to bear in testing them;
- 2) NKS is a valuable source of information related to experimental design; personal experiences of people living on the land can be of invaluable assistance in deciding where, when and how to sample;
- 3) NKS is a valuable *source of research personnel*; in many instances, the best people in the field will be those with long experience working in the field, albeit not within the standard scientific framework;
- 4) NKS is an available *source of information for scientific validation*; the key to scientific progress is the uncovering of inconsistencies between what are observations and predictions; NKS provides an additional source of data for the testing of scientific hypotheses. For example, if a scientific hypotheses makes a prediction which is inconsistent with existing traditional knowledge, then something is wrong somewhere, and finding out the source of the inconsistency may well lead to better understanding of the phenomenon in question.

2 PILOT PROJECT

2.1 Involvement of First Nations Communities

General Methodology

The First Nations community which coordinated the pilot project already had experience in the area of environmental science and management. The Mohawk community of Akwesasne has highly developed environmental services with an established Department of the Environment and a solid track record of research work. The environmental services established in the community create the basis for the work with other communities in Canada. In this project, Akwesasne acted as the coordinating community and the Institute for Research on Environment and Economy (IREE) of the University of Ottawa fulfilled the role of technical and scientific support.

The methodology of the work with communities can be described as a process which entailed several stages. First, the selection of the participating communities took place, communities were approached and the possible project structure, funding, goals, and management was explained to community and Chief and Council. Second, the community representative started working in their communities with the support from the staff of MCA and IREE.

There were several criteria for the choice of participating communities. First, and the most important, was the community willingness to participate in the project. Other criteria that were considered in the choice of the community were as follows:

- in order to achieve a representative set of communities, it was desirable that participating communities be from different parts of Canada, representing different geographic and ecological conditions;
- for the same reasons, it was decided that participating First Nations communities be from different groups of nations; and
- it was suggested that the communities have different socio-economic profiles (agricultural communities, hunter-gatherer communities, etc.), and have exposure to different levels and types of outside pressures.

In the pilot project phase, potential participating communities were approached by the Mohawk Council of Akwesasne. The significance of this form of start-up phase was that First Nations communities were approached by other First Nations people. If the approached community showed interest, a trip to the community was made by a Chief of the Mohawk community, the Environmental Director of the Mohawk Council of Akwesasne, and the principal investigator from IREE.

Community Representatives

The selection of community representatives was dependent upon the decision of the communities. There were two conflicting criteria that the selection process of the community representative should accommodate. First, a community representative should be a person with a certain degree of "formal" education and able to do the required work. Second, a community representative should be able to capture the First Nations environmental knowledge, be able to work with the Elders in the community and have the respect of the community.

As mentioned above, the project was organized by the coordinating First Nations community (Akwasasne), supported by the Advisory Group (University of Ottawa), which provided direct support (biologists, sociologists, geographers, etc.) and by the Evaluation and Steering Group (advisory and funding agencies). First Nations communities involved in the project were directly approved only by the Coordinating First Nations community which consulted other communities.

2.2 Participating communities (see the map p.14)

First Nations communities listed below have directly participated in the pilot project or follow this process for several years. All communities involved have approved the pilot project and benefited from it. Six communities (groups of communities) listed below want to continue and be the part of the Environmental Research Program (see Section 3 below):

Maliseet Nation at Tobique

The official name of Tobique, used by the Tobique Nation council, is Wolastokwik Negoot-Gook, or the Maliseet Nation at Tobique. The community is located near the Saint John River in New Brunswick, downstream from the town of Perth-Andover. The land area of Tobique in 1993 was 2,200 hectares, none of which is crown land. The total population is approximately 1700 people.

Akwesasne

The Mohawk Council of Akwasasne has played a leading role in environmental concerns with other First Nations communities since 1976. Akwasasne has a developed Department of the Environment with well defined goals and objectives that reflect the environmentally conscience of the lifestyles of the Haudensaunee. We have concerns for seven generations and recognize our responsibilities to the unborn.

Cumberland House Cree Nation

The community is located on the Saskatchewan River right in the delta of northeastern Saskatchewan forty miles from the Manitoba border. The community has important fishing, trapping, hunting, gathering and tourism industries. There is an already established and well functioning Environmental Division in the community.

Little Red River/North Peace Tribal Council

The Cree community of Little Red River is situated in northwestern Alberta. It consists of two reserve areas, John D'Or Prairie (114,034 hectares) and Fox Lake (10,438 hectares) and one non-reserve area, Garden Creek. All three parts of the community are located along the Peace River, east of Fort Vermilion. The total population in 1993 was 2,322. The community is part of Treaty 8. Environmental issues are of the primary concern of the community.

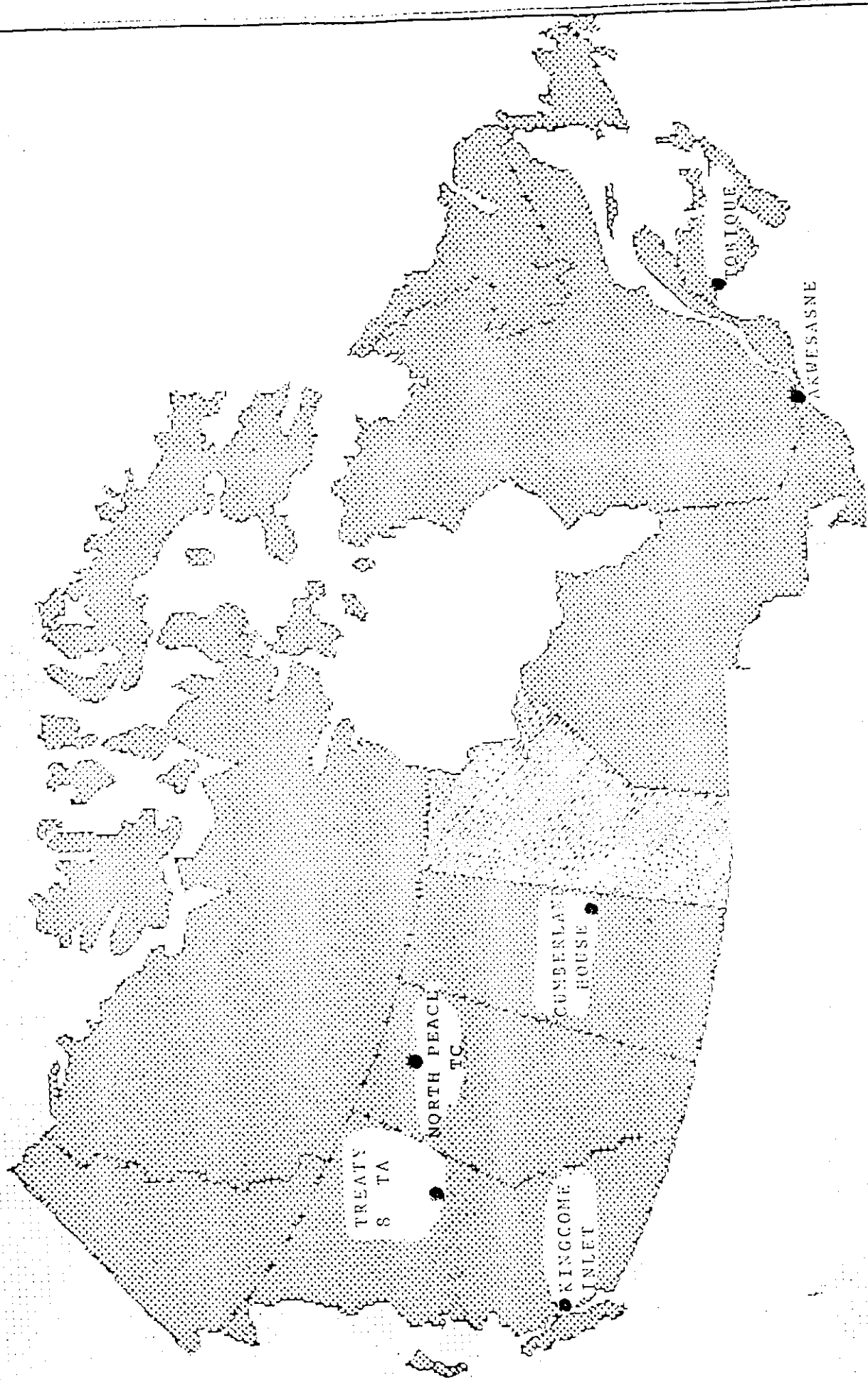
Treaty 8 Tribal Association

Treaty 8 Tribal Association represents several First Nations communities in the northeastern British Columbia. The Tribal Association has a well established and functioning Environmental Division. Communities are heavily affected by the oil and gas industry, logging, development of roads and by very rapid changes (communities were relatively isolated only 50 years ago).

Tsawataineuk of Kingcome Inlet

Tsawataineuk of Kingcome Inlet is located on the mainland of the coastal area of British Columbia. The area is representative of the many fjords that can be found up and down the coast. It is an area that relies on fishing and logging as the prime source of income. The environmental habitat of the area is sensitive to the many changes that have taken place in the recent years. Much research into the actual impacts on fish/birds/mammals as a food source has to be done in order for the quality of life may not be jeopardized in any way. Forest management plays a major role in this and also must be looked at.

FIGURE 2
PARTICIPATING COMMUNITIES



2.3 IREE/University of Ottawa

First Nations environmental knowledge, which forms the Naturalized Knowledge Systems, are to be formalized to a certain degree: it has to be described and analysed publications are to be prepared, results of the analysis evaluated and these results be made accessible to First Nations and Non-First Nations societies. This can useful as an added value even within individual communities where environment-related knowledge still exists and is part of everyday life. This formalization of the process requires *involvement of specialists* - geographers, biologists, anthropologists, sociologists, economists, systems specialists and others. This support function has been done by the University of Ottawa specialists coordinated by IREE. The University based specialists, however, work in close collaboration with communities and always asked *what communities wanted*. Therefore, they did not define the agenda, they rather provided specialized knowledge.

2.4 Results

The pilot project attempted to accomplish two things: to respect the complexity of the problem and at the same time, to make progress in the following specific areas:

- to organize First Nations community-based research;
- to document the transfer of knowledge within and between First Nations communities;
- to determine community-defined environmental indicators;
- to utilize environmental indicators as tools for the analysis of community needs;
- to assist in organizing community-based environmental services.

The pilot project has been completed and it has been recognized that it has accomplished all its goals. Several specific research projects were carried out during the pilot project. Two of the most successful ones were the Sturgeon project (Opaskwayak) and Bill C-31 project (Tobique). These projects demonstrated that *such projects can and in fact have been completed as part of the pilot project*.

3 ENVIRONMENTAL RESEARCH PROGRAM

3.1 Vision

The original vision of the Naturalized Knowledge Systems was realized in the pilot project. The approach has been tested, it has brought useful results and it did not do any damage. Many First Nations communities want to participate in the process.

First of all, we have to define what the communities are looking for over the long term. As the base of the expansion, we can use results and methodology of the pilot project. To consider the research program a success, it can be envisioned that in approximately twenty or so years, about a hundred or more of First Nations communities *will be operating their environmental divisions*.

These divisions will be able to manage several research projects and use their *natural resources in a sustainable manner*; these operations should be based on the results of the projects conducted in the past. Research projects will be conducted in such a way that they will be linking Naturalized Knowledge Systems and the university (research institution)-based science.

These research projects and natural resources-based operations should generate a considerable number of stable, rewarding jobs, which will strengthen the link of lifestyle and environment and significantly *contribute to the stabilization of the social, health and economic situation of the community*.

3.2 First five years

Even though the environmental research program is planned as the part of the long-term solution, its results and effectiveness should be assessed within the relatively short, “realistic”, time period. Within five years it will be clear whether the research program is delivering the expected results or not. Preparation of the plan of work for the first five years will be the main task of the Transitional Period.

The research program is initiated by six First Nations communities or groups of communities, tested by results and long-term commitment. We will continue to work to complete one or more long-term research project in every community. We will use the results of these projects for practical and economically feasible operations in the area of Natural Resources Management. Further, communities already involved in the project will consult, choose and sponsor new communities in their respective areas. It is proposed that each of the six communities will help select one or two new communities. These communities will have fully operational divisions (or offices) in these communities, working on the environmental projects and coordinated by environmental divisions.

This process of expansion can continue in the years to follow, the plan is to have at the end of the five year period, 20 to 30 environmental divisions in place, supporting commercial operations, which are based on results of already completed projects.

3.3 Speed of development

Speed of development will have several limitations. The process can easily become diluted if we adopt “the more the better” approach. This has to be prevented. Value and usefulness is not defined by speed and by the number of environmental offices in the communities. It is defined by the impact of this process on the socio-economic situation of our communities and by ability to do the work.

The speed of development (rate of expansion) has to be assessed carefully and systematically during the Transitional Period. Also, the Code of Ethics of expansion of the project as proposed by Tobique certainly merits serious consideration.

3.4 Purpose of the Environmental Research Program

3.4.1 Communities

- creation or strengthening of Environmental Divisions;
- recognition of Naturalized Knowledge Systems;
- involvement of the university-based research capacity on terms defined by communities; development of scientific, technical and administrative skills required for natural resources management;
- contribution to stabilization of the socio-economic situation; and
- job creation.

3.4.2 Universities/research institutes

- involvement in applied research, which is important from both scientific and societal point of view;
- involvement of graduate students in actual projects on site with all contingencies of community dynamics;
- training the next generation of decision makers to become more familiar with the scale and importance of problems and solutions First Nations societies have to work with.

3.4.3 Government agencies

- being part of the creation and enhancement of environmental services in our communities;
- creating permanent and acceptable employment opportunities;
- supporting the understanding and improvement of sound environmental practices;
- sharing ideas between our communities and the larger society, while promoting improvement of decision-making practices in environmental and socio-economic areas;
- promotion of cooperation between our communities and non-First Nations people, “healing the hurt” and building trust by doing so; seeking the best possible partnership between ourselves and the government agencies.

3.5 Criteria to be met before the Environmental Research Program is started (All points must be clearly described in the Work Plan; period of 5 years is recommended).

1. Our communities must be committed to the process;
2. Environmental divisions must be organized;
3. Research priorities must be defined by our communities;
4. Several projects must be structured and Research Teams organized; and
5. Reasonable funding has to be in place.

4 TRANSITIONAL PERIOD

The Transitional Period will evaluate the role of individual partners and will assess needs and conditions, which have to be secured in order to start and operate the Environmental Research Program successfully. The critical part of the Transitional Period will be:

Preparation of the five year plan/proposal for the first phase of the Environmental Research Program (see Section 3 above).

4.1 Transitional program in communities

As First Nations communities, we will accomplish the following tasks:

- 1) communities will review their commitment to the process of building Environmental Divisions, working on practical environmental problems, selecting new partners and cooperating with universities and government agencies;
- 2) communities will develop the methodology ("Code of Ethics") which will define the process of inclusion of new communities (a *code of ethics* designed by the Tobique Maliseet Nation is already available and can serve as an example), also, protocols have to be developed, defining and protecting communities' intellectual property rights;
- 3) communities will approach their neighbouring communities, will assess their willingness and ability to join the process and will recommend one or two communities in their respective areas to participate in the Environmental Research Program (see Figure 4.1: Expansion of the Project - Transitional Period);
- 4) at the end of the Transitional Period, approximately 14/18 communities will be involved in the process and significant number of projects will be started, proposed or planned and structured (see Figure 4.2: Expansion of the Project - Transitional Period);
- 5) communities either will strengthen existing Environmental Divisions or will start building the new ones;
- 6) Environmental Divisions (*will reflect traditions and size of communities*); will be typically staffed by a Division Manager, support personnel (assistant or secretary, etc.) and, importantly, by one or more people working on the project; Environmental Divisions will regularly consult Elders of the community and its operation will be coordinated by the Chief and Council of a community (see Figure 4.3: Community-based Environmental Division - Model Structures);
- 7) communities will select areas and topics suitable for practical environmental project, preferably projects where results can be utilized in the area of the natural resources management; and
- 8) communities will cooperate with workers from the university/universities on designing the structure of the selected environmental project and the research team working on the project; typically, each project will be staffed by the team managed and coordinated by the Manager of the Environmental Division, comprised of workers from the community and graduate students from the cooperating university and supported by advisors (Elders, university researchers - see Figure 4.4: Project - Typical Structure).

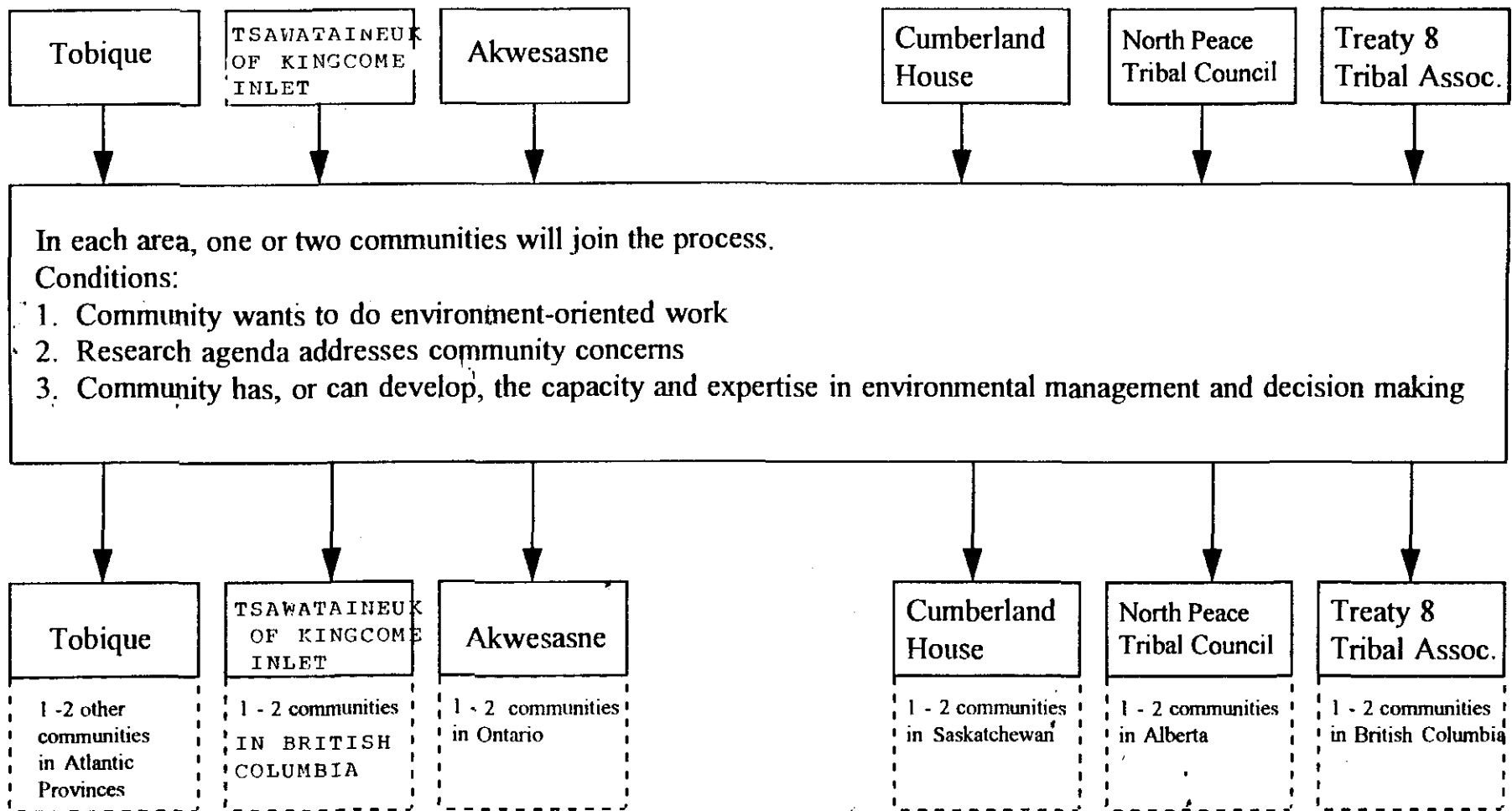


Fig. 4.1: EXPANSION OF THE PROJECT - TRANSITIONAL PERIOD

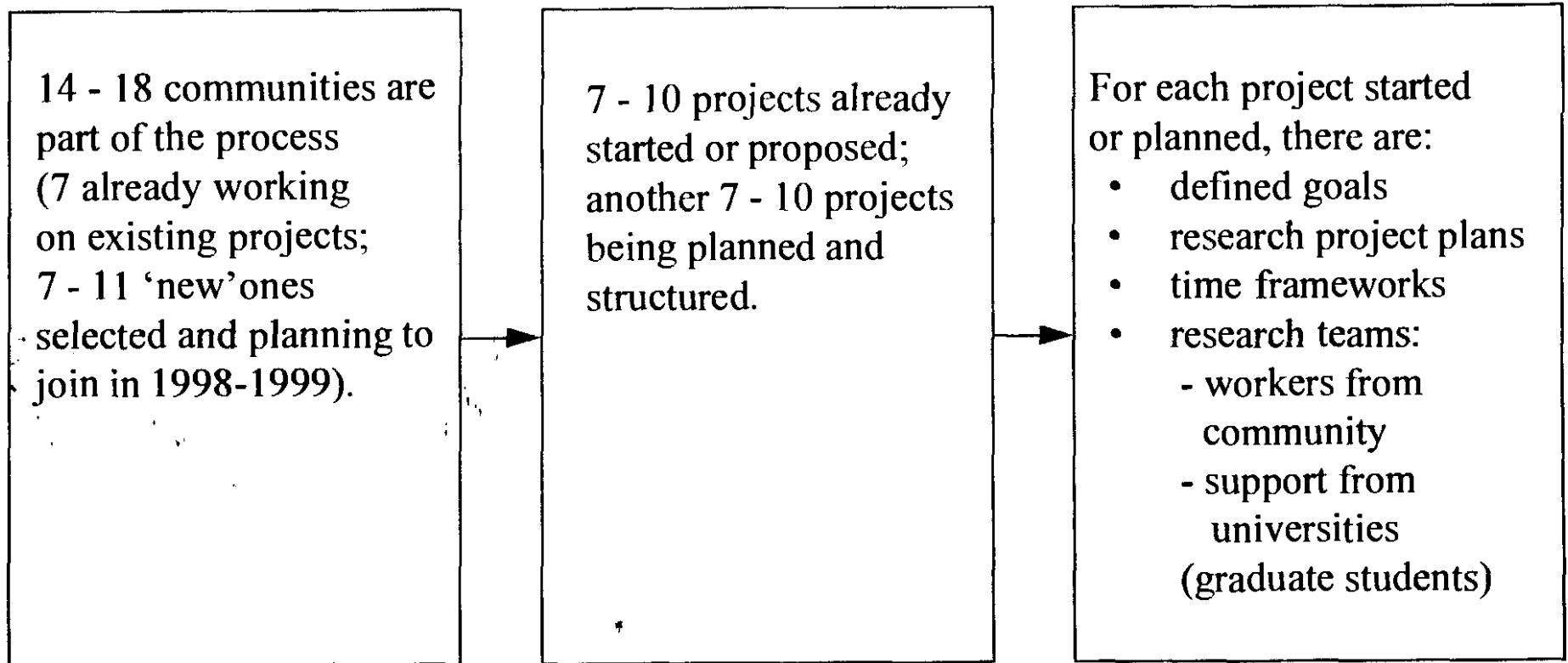
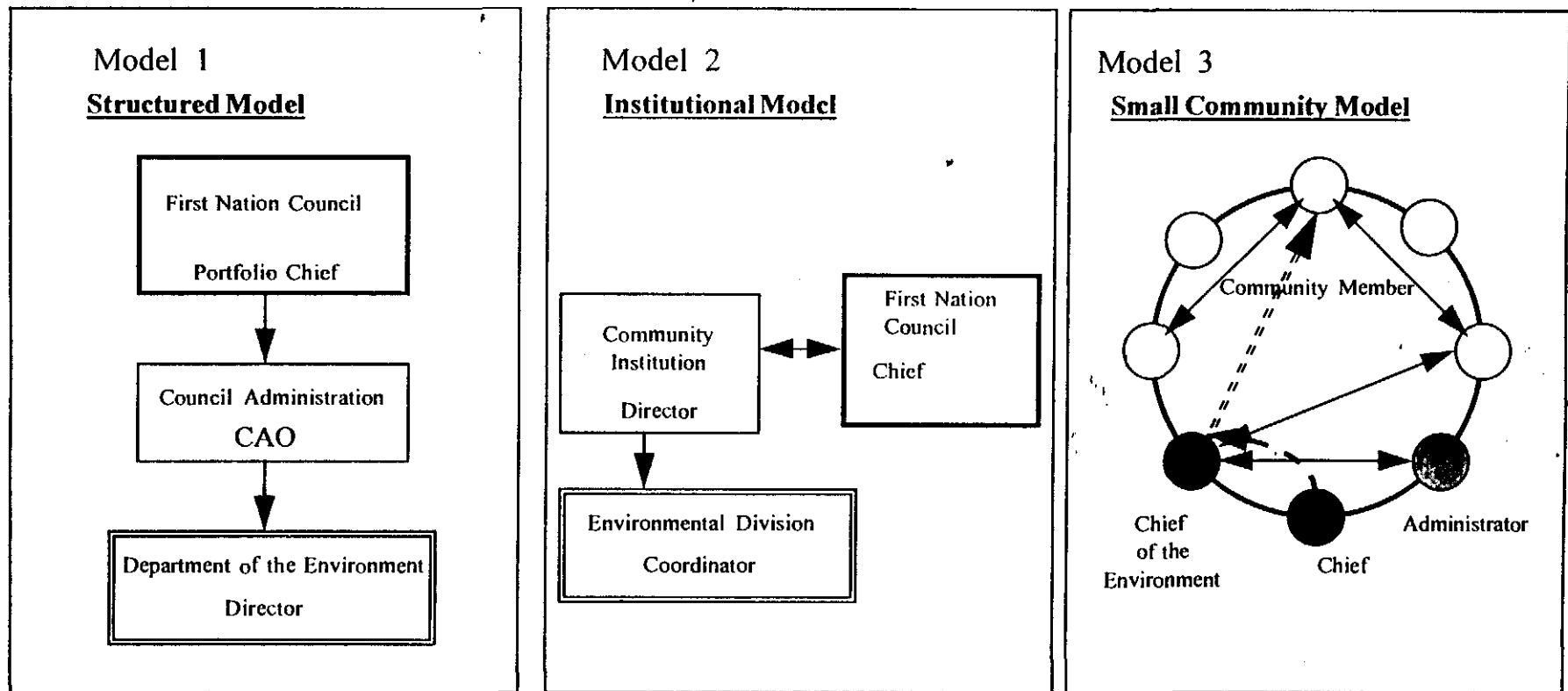


Fig. 4.2: EXPANSION OF THE PROJECT - TRANSITIONAL PERIOD

Fig. 4.3 Community - Based Environmental Division Model Structures



Lines of Authority Represented

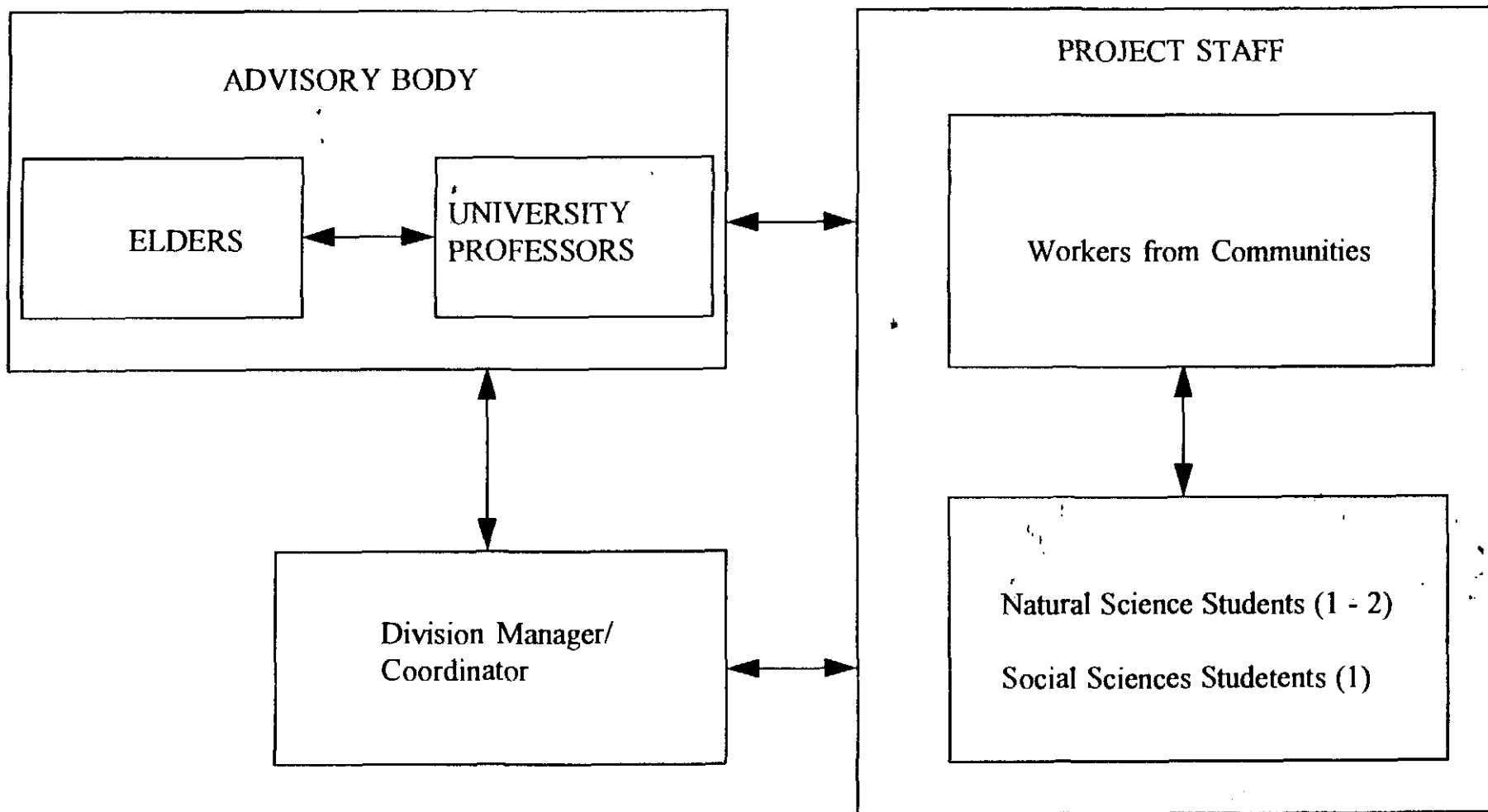


Fig. 4.4: PROJECT - TYPICAL STRUCTURE

4.2 Plans and goals of communities

4.2.1 Maliseet Nation in Tobique

Research priorities

- Impact of Bill C-31
- Forestry management plan
- Drinking water evaluation project
- Salmon fishing assessment and recovery plan
- Traditional logging project

Projects started

- Impact of Bill C-31
- Forestry management plan and logging practices respecting First Nations valued forestry attributes

4.2.2 Mohawk Council of Akwesasne

Research priorities

- Stress-response analysis of environmental systems
- Aquaculture of traditional fish species
- Shoreline recovery and reforestation

Projects started

- Comparison of traditional, historical and environmental time line for selected areas of Akwesasne territory

4.2.3 Cumberland House Cree Nation

Research priorities

- Fisheries management project
- Fish species inventory
- Sturgeon fishery maintenance
- Water quality assessment
- The Saskatchewan River Delta ecosystem analysis, including the inventory of fur-bearing animals and large mammals

Projects started

- Moose management

4.2.4 North Peace Tribal Council

Research priorities

- Management and recovery of large environmental systems

Projects started

- Environmental health projects
- Bison containment and rehabilitation project

4.2.5 Treaty 8 Tribal Association

Research priorities

- Cumulative environmental impacts
- Measurement and assessment of contaminants
- Environmental health
- Environment fragmentation

Projects started - to be determined

4.2.6 Tsawataineuk of Kingcome Inlet

Research priorities

- Fish habitat project
- Cedar project
- Salmon ladder project

4.3 Transitional Period - University of Ottawa/IREE

During the Transitional Period, the University of Ottawa/IREE will complete the following tasks:

- 1) will continue developing the methodology of linking NKS and university-based science;
- 2) will assist communities in evaluation of proposed projects;
- 3) after the suitable research projects are *selected*, *the structure* of these projects will be designed in close cooperation between University of Ottawa/IREE and communities - i.e. in consultation with communities, a set of environmental research projects based on community concerns and which integrate with NKS will be designed; in practice this will mean *takin an environmental problem or question and turning it into a research project proposal*, complete with rational, scientific hypothesis to be tested experimental design, sampling and statistical methodology, the research team and the budget;
- 4) IREE will be responsible for the design and establishment of the Geographic Information Systems (GIS)-oriented database to support all selected project;

- 5) as the scope of the proposed Environmental Research Program will far exceed IREE's own capacity and possibilities, the Institute will coordinate *involvement of other universities*, maintaining the methodology and approaches developed and established by the pilot project and will assist communities and DIAND in the design of the institutional structure required for the effective management and delivery of the Environmental Research Program (see Figure 4.5 - University/Research Agency based support).

4.4 Transitional Periods - Government agencies

The leading government agency to support the Environmental Research program in the area of NKS will be DIAND, the role of the department during the Transitional Period will be as follows:

- 1) to consider the possibility of structural changes within the department to accommodate the NKS-based Environmental Research Program;
- 2) to cooperate both with us; as First Nations communities and universities, in the process of project design;
- 3) to support coordination of the Transitional Period work both within and between individual regions of Canada;
- 4) in the case that the required funding cannot be secured by DIAND alone, to coordinate securing of the financial package required to support the planned NKS-oriented Environmental Research Program.

4.5 Management and organization

4.5.1 Environmental management program structure

Work during the Transitional Period will be coordinated by the *Chiefs Environmental Steering Committee (SC)*. Each participating community will name a representative, the Chief or his/her representative who will become a member of SC. Further, SC will consist of representatives of IREE, other universities who will work on the research project and of representatives of INAC.

SC will supervise the Environmental Management Team (EMT) which will be responsible for deadlines, deliverables, strict adherence to the code of ethics and sound fiscal management. It will be an advisory body supervising, but not deciding, an involvement of new communities in the Environmental Research Program.

SC will cooperate with individual Environmental Communities Department in the area of the intellectual property right protection and in the area of cooperation of NKS and university-based research. (See Figure 4.6)

The Environmental Management Program Structure is described in detail in Appendix II.

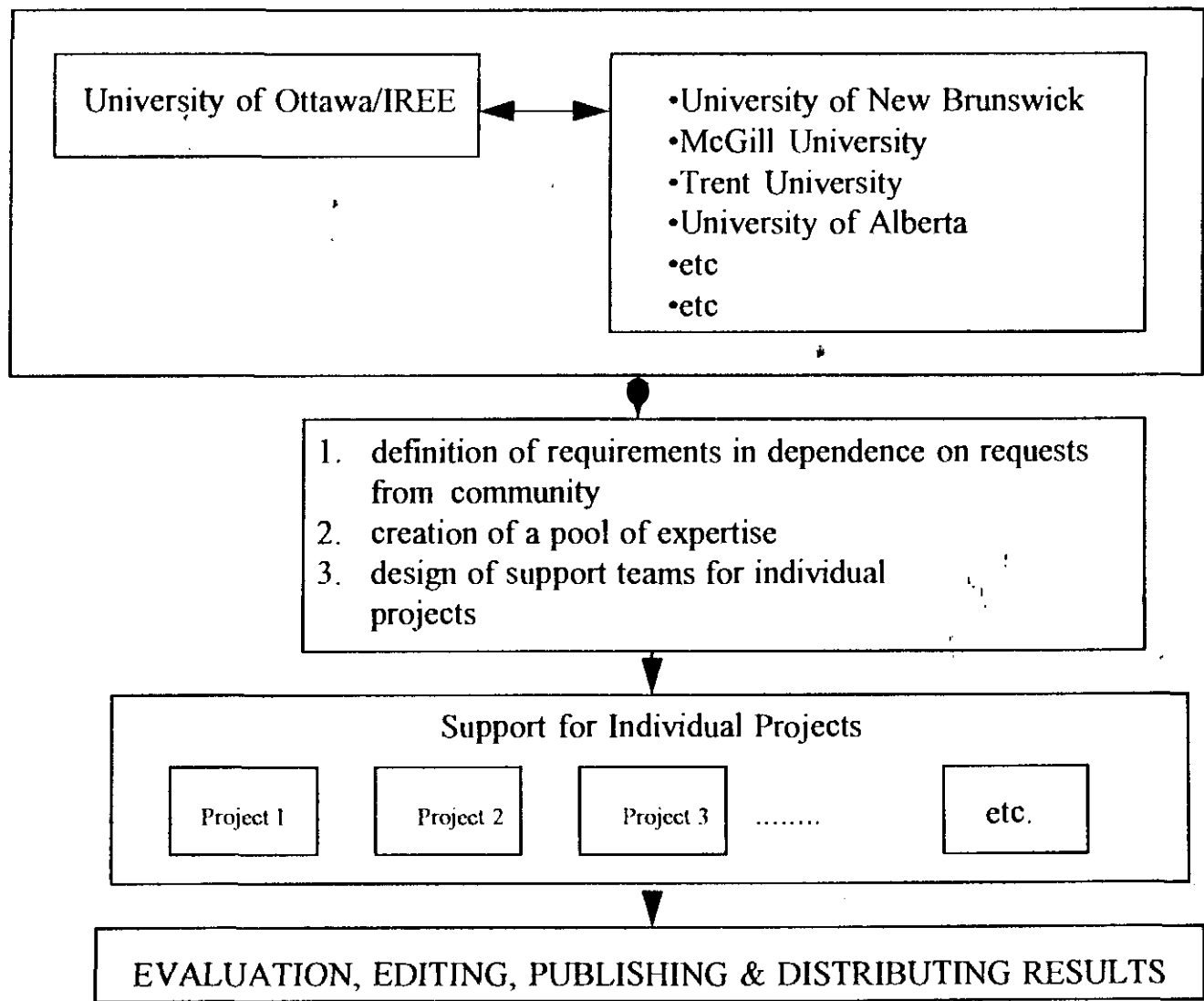
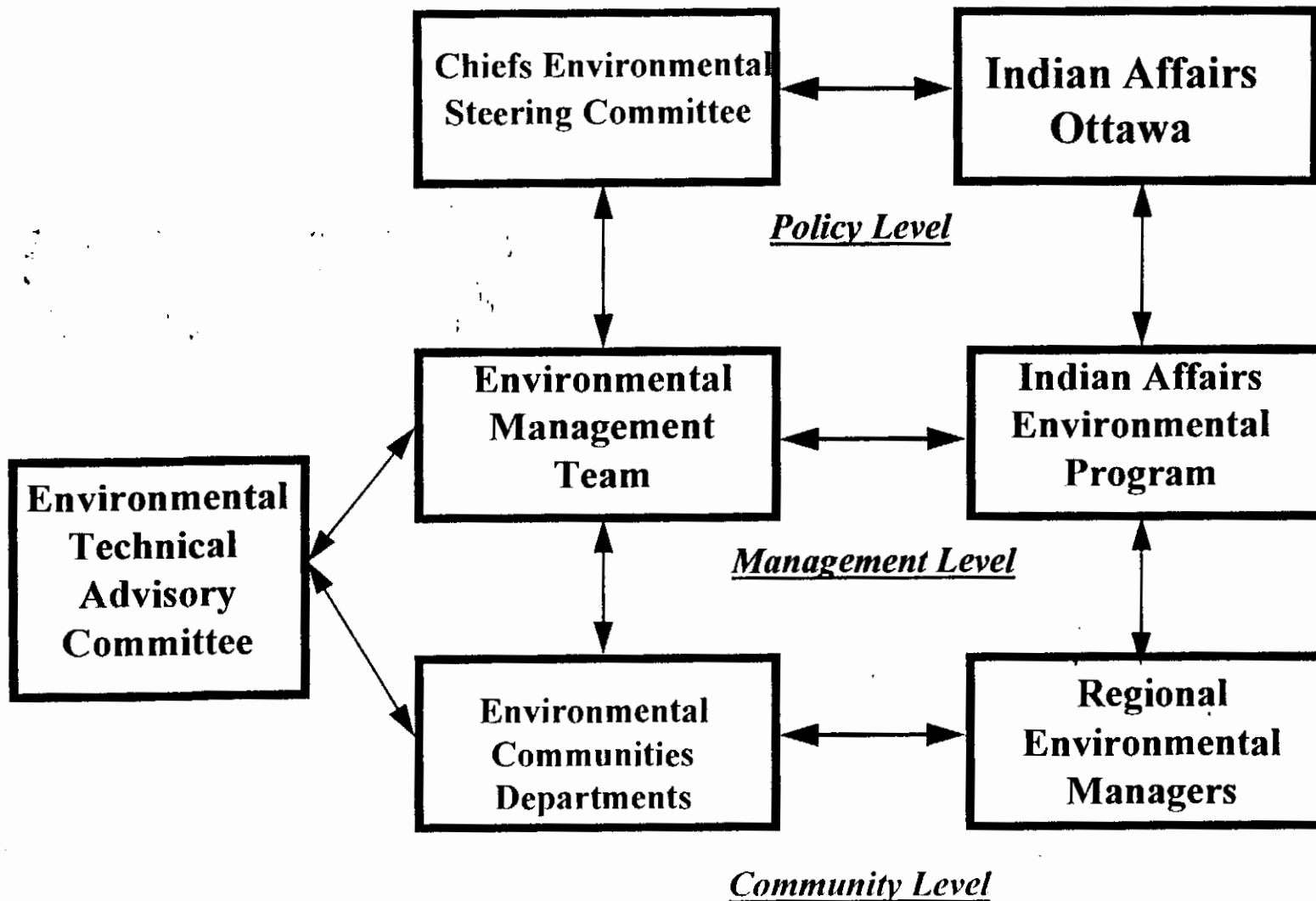


Fig. 4.5: UNIVERSITY/RESEARCH AGENCY-BASED SUPPORT

FIGURE 4.6

First Nations Environmental Management Program Structure



4.5.2 Timeframes and deliverables

COMMUNITIES

Time period of 6 months

SUBJECT	DELIVERABLE
Methodology of inclusion of communities	"Code of ethics"
Recommendation & inclusion of the recommended communities	list of new communities by region
Establishment or restructuring of Environmental Divisions	short report on the structure and functions of ED's
Recommendation of research projects - regions (groups of communities)	list of recommended projects by communities by region
Recommendation of research-recommended communities	list of recommended projects by communities by region
Design of main components of projects	report on the projects and the main components
(Note: it is important to realize that this critical component of the project design is controlled by communities)	
Collaboration on the design of individual projects	report on the project design

UNIVERSITY OF OTTAWA / IREE

Time period of 6 months

SUBJECT	DELIVERABLE
Preparation of the project support unit (research assistant)	unit available to support the Research Team
Availability of the GIS/mapping/database support unit*	(same as above)
Assessment of the recommended proj.- 7 communities	short report assessing the recommended projects
Assessment of the recommended - recommended communities	(same as above)
Design of individual projects	Report on the project design
Organization of cooperation of other universities	short report on the structure of cooperation
Methodology of linking NKS and university-based science	methodological report

IREE will be supporting the design and development of several projects, either directly or through other universities. It will provide GIS/mapping/database support, as well as in project preparation with extensive travel involved. It will provide project preparation support, already in the Transitional Period it will require some time of several professors as advisors and several graduate students as workers. The continuation of work on the methodology of side-by-side utilization of NKS and university-based research will require time, (i.e., money) as well.

For the division of responsibility, organization and management, see Appendix III.

4.6 Budget

Communities

Representatives of several communities have recommended that all of the communities involved will receive the same financial resources, both for the Transitional Period as well as in the course of the Environmental Research Program itself. It is hard to differentiate between communities "with money or without money". In consideration for this proposal, travel distances vary, the type of project influences the cost. Thus, some average estimates have been made, *based on the recommendations of participating communities.*

Each of the communities will continue operating an Environmental Division; this will require a minimum of 2 people (Manager and at least one worker); new communities will have to be visited, which will require travel, accommodation, several meetings. Some administrative support and office expenses will be required as well.

Advisory groups of Elders will need their own benefit package, (travel, payment as advisor) This has to be part of the code of ethics to prevent ["elder abuse"].

Budget (6 month time period) - communities

Cost per community

Community Workers	\$32,000
Advisors 60 days @\$200	\$12,000
Travel	\$10,000
Admin.support	\$4,000
Office Expenses	<u>\$6,500</u>
Cost per community total	\$64,500
6 communities total	<u><u>\$387,000</u></u>

University of Ottawa/IREE and Transitional Management Team

Budgets for University of Ottawa and the Transitional Management Team are listed below and are self-explanatory. Both budgets have been discussed with and approved by the representatives of the communities.

Budget (6 month period) - University of Ottawa (IREE)

Project manager (4 person-months)	\$ 22,000
project assistant (6 person-months)	\$ 20,000
development of methodology of NKS and* university-based research	\$ 20,000
administrative support (3 person months)	\$ 7,500
travel (project manager, 1 scientist, res. assistants)	\$ 15,000
upgrade of report preparation, editing, publishing communication	\$ 10,000
	\$ 3,500
University of Ottawa/IREE - Total	<u><u>\$108,000</u></u>

Budget (6 month) Transitional Management Team

Management (travel, communication)	\$ 25,000
GIS Specialist	\$ 10,000
Digital data acquisition	\$ 5,000
Transitional Management Team - Total	<u><u>\$ 40,000</u></u>

Budget Summary

Communities	\$ 387,000
IREE	\$ 108,000
NKS Transitional Management	\$ 40,000
TOTAL	<u><u>\$ 535,000</u></u>

**APPENDIX I - ENVIRONMENTAL RESEARCH PROGRAM ON NATURALIZED
KNOWLEDGE SYSTEMS - SUPPORT OF COMMUNITIES**

Council Resolutions included:

Maliseet Nation in Tobique
Mohawk Council of Akwesasne
Cumberland House Cree Nation
Tsawataineuk of Kingcome Inlet

Council Resolutions to follow:

North Peace Tribal Council
Treaty 8 Tribal Association

MOHAWK COUNCIL OF AKWESASNE

Chiefs Environmental Steering Committee
c/o The Mohawk Council of Akwesasne

Honourable Jane Stewart,
Minister of Indian Affairs,
Ottawa, Ontario

Dear Honourable Jane Stewart:

We are proud to present you with:

THE ENVIRONMENTAL RESEARCH PROGRAM ON NATURALIZED KNOWLEDGE,

Transitional Period Proposal prepared by these First Nation Communities:

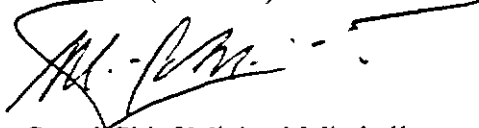
Maliseet Nation in Tobique
Mohawk Council of Akwesasne
Cumberland House Cree Nation
North Peace Tribal Council
Treaty 8 Tribal Association
Tsawataineuk Band Council

This proposal is the outcome of the very successful Naturalized Knowledge Systems Pilot Project, funded by Environment Canada, Innovation Program, International Development and Research Canada and some funding from Indian Affairs Canada.

The First Nation's Communities were encouraged and assisted by the staff of your Department to prepare and submit this proposal to you.

We are submitting this proposal for your approval and funding as requested.

Skennen (In Peace)



Grand Chief Michael Mitchell
Mohawk Council of Akwesasne



Chief Lynn Roundpoint
Environmental Port-folio Holder



WOLASTOKWIK NEGOOT-GOOK

(Maliseet Nation at Tobique)

R.R. 3, Perth-Andover, N.B., E0J 1V0

Tel.: (506) 273-5400 / Fax: (506) 273-3035

Chiefs Environmental Steering Committee

THE ENVIRONMENTAL RESEARCH PROGRAM ON NATURALIZED KNOWLEDGE SYSTEMS

Transitional Period Proposal prepared by these First Nation communities:

Maliseet Nation at Tobique

Mohawk Council of Akwesasne

Cumberland House Cree Nation

North Peace Tribal Council

Treaty 8 Tribal Association

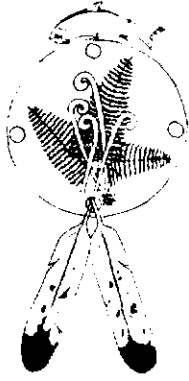
Tsawataineuk Band Council, Kingcome Inlet

This proposal is the outcome of the very successful Naturalized Knowledge Systems Pilot Project, funded by Environment Canada (Innovation Program), International Development and Research Centre and some funding from Indian Affairs Canada.

The First Nation's Communities were encouraged and assisted by the staff of your department to prepare and submit these proposal to you.

We are submitting this proposal for your approval and funding as requested.

In Brotherhood



Wolastokwik Negoot-g'ook (Maliseet Nation at Tobique)

GOVERNMENT RESOLUTION FORM

RESOLUTION NO.

DATE SUBMITTED

DAY MONTH YEAR

DEPT. FILE No.

DATE APPROVED

PURPOSE OF RESOLUTION _____

Whereas,

The Communities of:

Maliseet Nation at Tobique

Mohawk Council of Akwesasne

Cumberland House Cree Nation

North Peace Tribal Council

Treaty 8 Tribal Association

Tsawataineuk Band Council, Kingcome Inlet

wish to work together on environmental problems within our communities.

Whereas,

These communities have successfully completed and achieved recognition of the Naturalized Knowledge Systems Pilot Project.

Whereas,




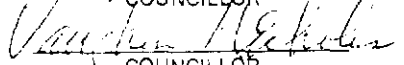


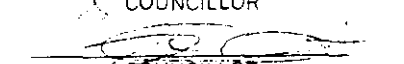

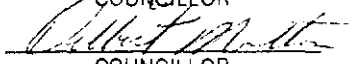

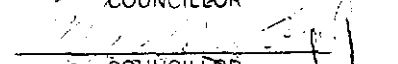
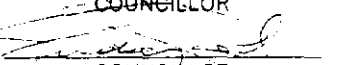
the Department of Indian Affairs Canada has encouraged and assisted the communities with the preparation of: The Environmental Research Program on Naturalized Knowledge Systems, Transitional Period Proposal

Whereas,

the Communities wish to fulfill their responsibilities to the Mother Earth.

Therefore Be it Resolved that:

The combined Councils of the participating communities hereby support and endorse The Environmental Research Program on Naturalized Knowledge Systems, Transitional Period Proposal, prepared by these First Nation communities for funding from the Canadian Government.

		
COUNCILLOR	CHIEF	COUNCILLOR
		
COUNCILLOR	COUNCILLOR	COUNCILLOR
		
COUNCILLOR	COUNCILLOR	COUNCILLOR
		
COUNCILLOR	COUNCILLOR	COUNCILLOR

AKWESASNE MOHAWK COUNCIL RESOLUTION

1997/98 - 140



THE	MOHAWK COUNCIL OF AKWESASNE	CURRENT CAPITAL BALANCE	\$ _____
AGENCY	SOUTHERN ONTARIO DISTRICT	COMMITTED	\$ _____
PROVINCE	ONTARIO / QUEBEC	CURRENT REVENUE BALANCE	\$ _____
PLACE	Admin II Boardroom	COMMITTED	\$ _____
DATE	<u>28</u> July <u>1997</u>		
	DAY MONTH YEAR		

DO HEREBY RESOLVE:

MOVED: Vaughn Phillips
 SECONDED: Larry King

Page 1 of 2

Whereas, the communities of:

- Maliseet Nation in Tobique
- Mohawk Council of Akwesasne
- Cumberland House Cree Nation
- North Peace Tribal Council
- Treaty 8 Tribal Association
- Tsawataineuk Band Council, Kingcome Inlet

wish to work together on environmental problems within our communities; and

Whereas, these communities have successfully completed and achieved recognition of the Naturalized Knowledge Systems Pilot Project; and

Whereas, the Department of Indian Affairs Canada has encouraged and assisted the communities with the preparation of:

THE ENVIRONMENTAL RESEARCH PROGRAM ON NATURALIZED KNOWLEDGE SYSTEMS,

Transitional Period Proposal

Whereas, the Department of Indian Affairs wished to work with First Nations Communities towards environmental responsibility; and

Whereas, the communities wish to fulfill their responsibilities to the Mother Earth.

.../2

FOR DEPARTMENTAL USE ONLY

1. BAND FUND CODE	2. COMPUTER BALANCE		3. EXPENDITURE	4. AUTHORITY — INDIAN ACT	5. SOURCE OF FUNDS <input type="checkbox"/> CAPITAL <input type="checkbox"/> REVENUE
	\$ CAPITAL _____	\$ REVENUE _____			
6. RECOMMENDED			APPROVED		
DATE _____	RECOMMENDING OFFICER _____		DATE _____	APPROVING OFFICER _____	

AKWESASNE MOHAWK COUNCIL RESOLUTION

1997/98 - 140



THE	MOHAWK COUNCIL OF AKWESASNE	CURRENT CAPITAL BALANCE	\$ _____
AGENCY	SOUTHERN ONTARIO DISTRICT	COMMITTED	\$ _____
PROVINCE	ONTARIO / QUEBEC	CURRENT REVENUE BALANCE	\$ _____
PLACE	Admin. II Boardroom	COMMITTED	\$ _____
DATE	28 July 1997 DAY MONTH YEAR		

DO HEREBY RESOLVE:

MOVED: Vaughn Phillips
 SECONDED: Larry King

Page 2 of 2

Therefore be it resolved, that the combined Councils of the participating communities hereby support and endorse the ENVIRONMENTAL RESEARCH PROGRAM ON NATURALIZED KNOWLEDGE SYSTEMS, Transitional Period Proposal, prepared by these First Nation communities for funding from the Canadian Government.

CARRIED

<u>Phillips LARRY</u> CHIEF	<u>Anderson Delamain</u> GRAND CHIEF	<u>Marie-Louise</u> CHIEF
<u>Vaughn Phillips</u> CHIEF	<u>Larry King</u> CHIEF	<u>Timothy Thompson</u> CHIEF
<u>Raymond [unclear]</u> CHIEF	<u>George Blaine</u> CHIEF	<u>Lynne Roundpoint</u> CHIEF
	CHIEF	
	CHIEF	

THIS MEETING TOOK PLACE IN THE TERRITORY OF AKWESASNE, WITH THE FOLLOWING MEMBERS OF THE AKWESASNE MOHAWK COUNCIL PRESIDING.

RECORDED VOTE:
 FOR: _____
 AGAINST: _____
 ABSTENTION: _____

FOR DEPARTMENTAL USE ONLY					
1. BAND FUND CODE	2. COMPUTER BALANCE		3. EXPENDITURE	4. AUTHORITY — INDIAN ACT	5. SOURCE OF FUNDS <input type="checkbox"/> CAPITAL <input type="checkbox"/> REVENUE
	CAPITAL \$ _____	REVENUE \$ _____			
6. RECOMMENDED			APPROVED		
DATE	RECOMMENDING OFFICER		DATE	APPROVING OFFICER	



Classification of this Resolution
Fait référence à l'Ét. de référence de l'États

**BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE**

NOTE: The words "From our Band Funds", "Capital" or "Revenue", whichever is the case, must appear in all resolutions requesting expenditures from Band Funds.
NOTA: Les mots "des fonds de notre bande", "capital" ou "Revenu", selon le cas, doivent paraître dans toutes les résolutions portant sur des dépenses à faire sur les fonds des bandes.

The Council of the Le conseil de la bande indienne	Cumberland House Cree Nation	Current Capital Balance Solde de capital	\$ _____
Agency District	Prince Albert	Committed Engagé	\$ _____
Province	Saskatchewan	Current Revenue Balance Solde de revenu	\$ _____
Place Nom de l'endroit	Cumberland House	Committed Engagé	\$ _____
Date	21 07 AU 19 97 Day, Year Month, Year		

DO HEREBY RESOLVE
DECIDE, PAR LES PRÉSENTES

WHEREAS, Maliseet Nation in Tobique, Mohawk Council
of Akwesasne, Cumberland House Cree Nation, North Peace
Tribal Council, Treaty 8 Tribal Association, Tswataineuk Band Council, Kingcome Inlet,

wish to work together on the Environmental problems within our communities

WHEREAS, These communities have successfully completed and achieved recognition of
the Naturalized Knowledge Systems Pilot Project

WHEREAS, The Department of Indian Affairs wished to work with Nations
Communities towards Environmental responsibility.

WHEREAS, The Communities wish to fulfill their responsibilities to the Mother Earth.

THEREFORE BE IT RESOLVED THAT, The combined Council of the participating
Communities hereby support and endorse THE ENVIRONMENTAL RESEARCH
PROGRAM ON NATURALIZED KNOWLEDGE, Transitional Period Proposal
prepared by these First Nation Communities for funding the Canadian Government.

A quorum for this Band
Pour cette bande le quorum est
consists of / fixé à 3
Council Members.
Membres du Conseil

_____ (Councillor - Conseiller)	<u>Prince Settee</u> (Chief - Chef)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	<u>Walter Sagan</u> (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	<u>St. Paul</u> (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	<u>Eric Tabbert</u> (Councillor - Conseiller)	_____ (Councillor - Conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVÉ AU MINISTÈRE				
1. Band Fund Code Code des fonds de bande	2. Current Balances Grands d'équilibre A. Capital B. Revenue / Revenu	3. Expenditure / Dépenses	4. Authority (Indian Act Section) Autorité (Article de la Loi sur les Indiens)	5. Source of Funds Sources des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue / Revenu
6. Recommended / Recommandé		Approved / Approuvé		
Date _____ Recommending Officer / Recommandé par _____		Date _____ Approving Officer / Approuvé par _____		

Administrative No. - Numéro administratif

Fils de fermetures - N° de file de dossier

BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE

NOTE: The words "From our Band Funds", "Capital" or "Revenue", whichever is the case, must appear in all resolutions involving expenditures from Band Funds.
 NOTA: Les mots "des fonds de notre bande", "Capital" ou "revenu" selon le cas doivent paraître dans toutes les résolutions portant sur des dépenses de nos fonds de bande.

THE COUNCIL OF THE LE CONSEIL DE LA BANDE INDIENNE	TSAWATAINEUK INDIAN BAND	Current Capital Balance Solde de capital	\$ _____
AGENCY DISTRICT	VANCOUVER ISLAND	Committed - Engagé	\$ _____
PROVINCE	BRITISH COLUMBIA	Current Revenue balance Solde de revenu	\$ _____
PLACE NON DE L'ENDROIT	GWA YEE, KINGCONE INLET	Committed - Engagé	\$ _____
DATE	28 08 AD 19 97 DAY - JOUR MONTH - MOIS YEAR - ANNÉE		

DO HEREBY RESOLVE:
 DÉCIDE, PAR LES PRÉSENTES:

That the Tsawataineuk First Nation Band become a full supporting and participating Community member of The Environmental Research Program on Naturalized Knowledge Systems.

A quorum for this Band
 Pour cette bande le quorum est

consists of
 (il est de) 4

Council Members
 Membres du Conseil

F.E. Dawson
 (Councillor - conseiller)
(F.E. DAWSON)
 (Councillor - conseiller)

C. Frank Wilkie
 (Councillor - conseiller)
C. FRANK WILKIE
 (Councillor - conseiller)

 (Chief - Chef)

 (Councillor - conseiller)

 (Councillor - conseiller)

 (Councillor - conseiller)

 (Councillor - conseiller)

Thomas Dawson
 (Councillor - conseiller)
(Tom DAWSON)
 (Councillor - conseiller)

Eric Joseph
 (Councillor - conseiller)
(ERIC JOSEPH)
 (Councillor - conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVÉ AU MINISTÈRE					
1. Band Fund Code Code du compte de bande	2. COMPUTER BALANCES - SOLDES D'ORDONNATEUR		3. Expenditures Dépenses	4. Authority - Autorité Indian Act / Loi Am. de la Loi sur les Indiens	5. Source of Funds Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue
	A. Capital	B. Revenue - Revenu			
	\$	\$	\$		
6. Recommended - Recommandé			Approved - Approuvé		
Date			Date		
Recommending Officer - Recommandé par			Approving Officer - Approuvé par		

APPENDIX II

First Nations Environmental Research Program - Management Structure

Introduction

“The common goal of the First Nations Communities and Indian Affairs Canada is based on the necessity to protect and enhance the environment.”

The purpose of First Nations Environmental Research Programs' management structure is to promote the concepts of Respect, Equity and Empowerment at all levels of the program. Working within these concepts, a balanced approach will be created which will achieve responsible management of the environment by communities and governments.

Chiefs' Environmental Steering Committee:

This committee shall be composed of Chiefs from the communities (or their representatives) which are taking part in the Environmental Research Program. They shall have voting status. Their community technicians shall be present but only as advisors. This committee will have responsibilities to coordinate work with AFN-Environmental Committee or with any national or regional body which they deem to be appropriate.

Indian Affairs Ottawa

This committee shall be composed of senior Indian Affairs officials including the Minister and appropriate Deputy Ministers of the Department. This committee will have responsibilities to facilitate the introduction of other Canadian government departments (e.g. Environment Canada and Health Canada) into this program.

Environmental Management Team

This team is composed of an eastern First Nation's Chief and a western First Nation's Chief as chairs; of two coordinators, one from the University of Ottawa and one from a First Nation community.

Indian Affairs Environmental Branch

This team is composed of Indian Affairs official who are working with the EMT on the program implementation. The EMT and the IAEB shall work in close cooperation using the principles of mutual Respect, Equity and Empowerment to carry out their work.

Community Environmental Department

In each of the communities who are working with ERP there shall be a department of the Environment or some organization to which the First Nation's Council will delegate its responsibility to the environment. Each community best knows the structure which is most appropriate to its community. This department will work on various problems as identified by the community with some references from the INAC. The Departments will be responsible to their First Nation Councils.

Regional Environmental Managers

A committee of Regional Environmental Managers will help to establish a network of people within INAC who are dealing with communities on their environmental problems. Each REM will work in close communication with the communities in his/her region. A REM's electronic network will help to keep the REM in communication with the program.

Environmental Technical Advisory Committee

This committee shall be composed of technicians from the First Nations communities and universities. It will advise and be responsible to the Environmental Management Teams on broad issues and to the Communities Environmental Departments, on a site specific basis.

Management Levels

Chiefs Environmental Steering Committee and Indian Affairs Ottawa will jointly represent the ultimate decision-making body. This body will mainly design the overall policy of ERP and resolve problems which can not be dealt with at lower levels. Environmental Management Team and Indian Affairs Environmental Branch will jointly design and operate ERP. Community Environmental Department will cooperate with Regional Environmental Managers on individual project.

APPENDIX III

Responsibility, Organization and Management

NKS Transitional Program - 6 months

Preparation of a five year work plan for the implementation/operation of a First Nation's Environmental Research Program is the main task of the NKS Transitional Program.

ORGANIZATION AND MANAGEMENT

MANAGEMENT TEAM is responsible to the Steering Committee for:

- Program deadlines
- Program deliverables
- Program coordination;

and will work with First Nations Environmental Divisions and Community on:

- Adherence to code of ethics
- Structure of research teams
- Identification of research projects;

and will provide liaison with:

- INAC
- Environment Canada
- IREE, University of Ottawa
- Other universities

RATIONALE

This organization structure allows for full participation of the First Nations Organizations and the two institutional stake holders, (IREE and INAC) in the five-year plan/proposal for Phase One of the Environmental Research Program.

Structure of the Management Team ensures First Nation's control of the Transitional Program, *while allowing* each of the participating First Nation Organizations the autonomy to organize their respective environmental divisions, and identify research priorities.

The Management Team acts as a resource group to each First Nation Organization.

The Management Team provides an effective focus for communicating with non-First Nations government organizations and other institutions.

COMMUNITY-BASED TRANSITIONAL PROGRAM

During the six month transitional period, each of the First Nation organizations will be responsible for:

- working within their communities to secure a commitment to the process of establishing First Nations Environmental Divisions, *and development of a community-based vision for the operation of the program;*
- working within their communities to develop input for establishing of a “Code of Ethics”, as a tool for the protection of intellectual rights;
- working through their communities to approach other First Nation communities, assess their ability and willingness to join this process, and develop recommendations for participation of these new First Nations communities in the Environmental Research Program;
- working within their communities to select research areas and topics which are of interest to these communities within the area of natural resource management;
- working within the Steering Committee to communicate community-based approaches and recommendations, and to establish program policies and guidelines based on consensus decisions which reflect and integrate these community-based approaches;
- communicating policy guidelines to their communities to secure community support for these policies and guidelines;
- working within their communities to either
 - establish new environmental divisions, or
 - create a stronger environmental division;
- working through these First Nation Environmental Divisions to
 - identify practical research projects which can be undertaken within the NKS approach
 - identify university-based scientific researchers who are acceptable to the First Nation organization and community members
 - establish “research teams” comprised of university-based scientific researchers and community elders/workers
 - develop research project proposals for submission to the Steering Committee

NOTE: The Management Team is responsible to the Steering Committee for the coordination of these community-based processes, and to each community as a resource to support community-based processes (see Appendix I)

STEERING COMMITTEE TRANSITIONAL PROGRAM RESPONSIBILITY

During the six month transitional program, the Steering Committee will have the following responsibility:

- To establish policy guidelines and main documents for the operation of a First Nation Environmental Research Program, including
 - principles of code of ethics
 - list of new communities to be added to the program
 - creation of a model for integration of NKS and science-based approaches to environmental research
 - list of research projects which could be undertaken;
- To provide guidance and direction to the Management Committee;
- To establish an organizational structure capable of providing effective management for the First Nation Environmental Research Program;
- To cause this organization structure and policy guidelines to be presented to INAC and the First Nations organizations/communities for their review and comment.

IREE - TRANSITIONAL PROGRAM RESPONSIBILITY

During the transitional program, the IREE will have the following support role in relation to the establishment of a First Nation Environmental Research Program, under the direction and guidance of the Management Team:

- develop a "draft" methodology for the integration (i.e. linking) of NKS and science-based approaches to environmental understanding
- develop principles of a Geographic Information System (GIS) which is responsive to First Nation information processing needs
- assist First Nations organizations/environmental divisions to convert environmental concerns into research projects which reflect an integration of NKS and Science based approaches

- coordinate involvement of other universities in a manner which retains the integrity of a community-based research and integration of NKS and science-based approaches
- assist the Steering Committee in the development of an organizational structure for effective management of the Environment Research Program

THIS IS THE WORK PLAN.