

*A Strategic Approach to Cumulative Impact*

*Assessment and Cumulative*

*Impact Management in Northeast*

*British Columbia.*

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## EXECUTIVE SUMMARY

The extensive agriculture, oil and gas, forestry and coal mining development across northeastern British Columbia (BC) has raised questions among communities, First Nations, resource managers and scientists regarding the potential for cumulative impacts as they relate to sustainability within the Region. Although many residents have raised the question, First Nations have been most vocal regarding their concerns, especially as they relate to Treaty Rights. The Treaty 8 Negotiating Table recognized cumulative impact assessment (CIA) and cumulative impact management (CIM) as an issue.

Over the last two decades the concept of sustainability has advanced and been adopted by many jurisdictions, including BC. Sustainability involves environmental sustainability, social sustainability and economic sustainability. Integration of these elements within the concept to meeting the goals of the people who live in the region and those impacted by the activities within the region is the challenge before Government. The management of a range of resources, whether for renewable resource management, extraction, conservation or protection, in an integrated manner, requires clear guidance regarding the overall goals. These can be articulated through a sustainability vision statement.

BC has been and remains primarily a resource based economy. Through legislation and regulation, as delivered by multiple Ministries, the province is adept at the assessment and management of applications for and management of, the activities proposed in multiple resource industries including agriculture, forestry, mining and others. BC also has a mature strategic land and resource planning framework enabling public input to and distribution of activities on the land base. Despite this, the province does not have a system or process to consider the potential effects and the impacts of multiple industries, each operating legally and within their own legislation and regulation, upon a common land base.

The Oil and Gas Commission initiated a project to assemble relevant information regarding cumulative impacts related to agriculture, forestry and oil and gas development and the views and interests of key contacts within BC and Alberta for use in developing a strategic approach to Cumulative Impact Management within the Northeast BC Region. Interviews were conducted with over 50 people in BC and Alberta with perspectives from Government, industry, First Nations, communities, NGOs, and others. In general, the interviewees:

- ❖ preferred that building on existing instruments, processes and products would be the most desirable in addressing the issue as compared to creating a whole new system
- ❖ wanted to see the benefits of controlled, measured (“responsible”) development
- ❖ wanted assurance that industrial activity was not doing long term harm to the quality of the environment of the Region

The issues around CIA and CIM and the views of individuals in various sectors in the Northeast, can be summarized into the following:

- 1) The most commonly voiced concern was that the CIA/CIM issues not be viewed as a reason to stop, halt or unreasonably limit resources development but to move ahead within the objective of sustainability. The benefits of development were recognized and desired but within this objective.
- 2) A strategic approach to resource management and extraction and monitoring is needed
- 3) Integrated decision making between Ministries and between Victoria and the Region needs development
- 4) Consultation between companies, regulatory bodies and First Nations relative to operational activities needs improvement to address First Nations issues
- 5) A practical and effective system of assessing the impacts of multiple activities on a specific land base is required
- 6) Standards and operational controls on oil and gas development activity need improving
- 7) Additional resources, people and funds, are required to develop and implement effective solutions to the above points

CIA and CIM is a complex issue. If a system is to be effective in addressing the concerns, it has to be simple, practical and strategic. It also has to build on existing instruments, processes and systems, where appropriate. A strategic approach to CIA and CIM for northeastern BC requires that the following **five (5) strategic plan components** be implemented in an integrated manner:

- 0) Sustainability vision
- 0) Government policy/regulatory structure
- 0) Consultation processes
- 0) Strategic level planning
- 0) Operational level planning

In addition, there are **four (4) support systems** that will determine the extent of continued success in each component. It is not critical that these be included in the initial strategic plan implementation, if costs and human resources are limited. However, they are important and included in this report for consideration and completeness.

- 0) Monitoring system
- 0) Planning support system
- 0) Adaptive management support system
- 0) Public reporting system

The recommendations associated with delivery of the Strategic Plan should be implemented as a package. The preferred option is to implement the full Strategic Plan. However, it is recognized that the capacity may not exist to implement all of the recommendations immediately. If Government is in this position, other options are available to utilize existing and proposed pilot studies, with or without the injection of a new area (eg First Nations Traditional Territory) for piloting all the components of the Strategic Plan. Regardless of the option chosen, the success of implementation will be dependent upon assigning a senior person as a “**Champion**” with the necessary resources and skills to coordinate the initiative. In all options the Strategic Plan should be used as a guide with resources first going towards high priority recommendations as outlined in Table 1.

Table 1

## SUMMARY OF RECOMMENDATIONS

No.	Recommendation	Priority	Responsibility			Supporting Organizations
			Gov't	Industry	First Nations	
1	Appoint a "Champion" for Strategic Plan implementation					
2	Develop sustainability vision	High	X			LRMP Monitoring Committees
3	Review of existing policies & operational procedures	High	X			
4	Identification of legislation, regulation, policy revisions	High	X	X	X	LRMP Monitoring Committees, Peace Managers Committee
5	Rationalization of consultation policies	High	X			
6	Re-invigorate LRMP Monitoring Committees	High	X			
7	Complete SRMZs	Medium	X			LRMP Monitoring Committees
8	Require resource management industries strategic level plans	Medium	X	X		
9	Increase First Nations capacity for input into strategic level plans	High	X		X	
10	Establish or enforce policies regarding operational plans and documentation of First Nation and stakeholder comments	High	X	X		
11	Evaluation of operational plans relative to strategic plan	High	X	X		
12	Continue OGC pilot standard operating practices	Medium	X		X	
13	Develop monitoring system	Medium	X	X	X	LRMP Monitoring Committees & Cumulative Impacts Technical Advisory Group
14	Develop regional data management system	Medium	X	X	X	
15	Establishment of Resource Data Technical Group	Medium	X	X	X	LRMP Monitoring Committees
16	Develop "first approximation" cumulative impact thresholds	High	X			LRMP Monitoring Committees & Cumulative Impacts Technical Advisory Group
17	Establish R&D fund	Medium	X	X		BC & Alberta Universities
18	Establish R&D Users Advisory Group	Medium	X	X		
19	Annual report	High	X			LRMP Monitoring Committees

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# *A Strategic Approach to Cumulative Impact Assessment and Cumulative Impact Management in Northeast British Columbia.*

## **1.0 INTRODUCTION**

The extensive agriculture, oil and gas, forestry and coal mining development across northeastern British Columbia (BC) has raised questions among communities, First Nations, resource managers and scientists regarding the potential for cumulative impacts as they relate to sustainability within the Region. Large scale development of these resource industries has fueled fears that the traditional life styles and sustainability of the Region may become compromised. In addition, the emergence of the potential for multiple coal mining developments, coal bed gas development and independent power production have added to the concerns. The issues of Northeast residents are not solely regarding the extent of industrial activity on the land base. In many cases it is the manner in which the activities are being conducted. Equally as emphatically presented has been the position that these developments bring to the Northeast a stability of economic opportunity and represent growth potential for the citizens and their communities that provide a desired life style.

Although many residents have raised the question, First Nations have been most vocal regarding their concerns, especially as they relate to Treaty Rights. The Treaty 8 Negotiating Table recognized cumulative impact assessment (CIA) and cumulative impact management (CIM) as an issue. In addition, the Oil and Gas Commission acknowledged the desire of local residents to utilize these tools to inform land and resource managers and decision makers in regard to the controlling or limiting of the amount and rate of advance of resource development in various areas of the Northeast.

## **2.0 BACKGROUND**

Northeastern BC was one of a few areas where Treaties were negotiated with First Nations (ie Treaty 8) providing one step towards stability for the region. This Treaty is being refined through negotiations regarding, land use, revenue sharing, shared decision making and Government to Government communications and protocols.

Since European settlement, the BC Northeast has seen historic development of agriculture, forestry, commercial recreation, oil and gas, mining and settlement that has caused marked change in the landscape. This has been an incremental process and a balance has been and is being struck with some protected areas and a massive conservation area (6.3 percent of the province contained in the Muskwa – Kechika Management Area) being created to protect the natural qualities of the Northeast Region.

Agriculture was the initial industry to find the potential of the Region and the farmers and ranchers developed lands to supply the economic base. Although other sectors have eclipsed farming and ranching with their recent rapid growth and reduced the relative contribution of this industry, the improved farm acreage has been growing at a steady rate until recently. A significant area of Agriculture Land Reserve remains undeveloped in the region and the agriculture land base remains a substantial contributor to the economy of the Region.

Forestry has been a mainstay industry in the Region since the 1960s. Production has steadily increased in the Dawson Creek, Ft. St. John and Ft. Nelson Timber Supply Areas, especially through utilization of deciduous species. This has resulted in the building of major mills to utilize the timber resource. The Forest Practices Code and more recently the Forest and Range Practices Act and regulations, along with

advancement of certification of company operations and ground breaking pilot projects have resulted in the forest industry being viewed as a sound environmental performer by locals.

Agriculture and forestry were the original basis for the economy in the Dawson Creek area. However, these resources were eclipsed by the coal mining industry in the 1970's when the province made a major investment in the necessary infrastructure (ports of export) and transportation (railroads) to Vancouver and Prince Rupert. The world economy did an about face on the planners of the day, as demand for steel and subsequently coal virtually dried up. The major investments of corporations and the province looked very much in jeopardy and mine closures and shutdowns of communities followed causing major disruption. Circumstances are now changing and the investments of the 1970's look very promising for the Region's economy. Economic developments in China, India and elsewhere are creating demands for coal that, at present, far outstrip the world's ability to supply. Coal mines are reopening and the provincial government has some 22 applications for new coal mines to meet these demands. The region stands to be a major beneficiary of this opportunity. The coal mine project as developed today will have land under development of approximately 1000 hectares with potential additions to deal with the associated infrastructure. The development of multiple mines will obviously have large short term impact on the site of development but this type of development is not widespread and the control and regulation of activity is constantly monitored.

Hydro-electric projects, have made the Region a major source of energy for the province. The proposed Site C dam on the Peace River is hailed by many as a wonderful opportunity and a necessary development. However, it is equally as emphatically opposed by the detractors of the project for the interruption it will cause to traditional lifestyles of the Region and to the flooding of the land that would form the reservoir behind the proposed dam. The largest lake in the province (Lake Williston) was formed by the W.A.C. Bennett Dam in the Rocky Mountain Trench.

The Oil and Gas industry is arguably the reason why the interest in CIA/ CIM has developed in the Northeast BC. This industry's activity in BC has contributed industry payments to the government for both royalties and land sales (the rights to explore) approaching \$2 Billion per year. In 2004 capitol spending in support of the industry equaled \$4.5 Billion and the industry has developed 11,400 jobs in the province. This contribution to the province's economy has resulted in the establishment of an Oil and Gas Development Strategy that is designed to further stimulate this investment. In making this contribution, the oil and gas industry harvested between 6,000 and 11,000 hectares of forest for geophysical exploration per year between 2000 and 2004. Also between 2000 and 2004 between 1,000 and 1,600 well sites (1,100-1,760 ha) were developed per annum. In addition, 1,000 and 1,700 kilometers of pipeline (3,000-10,200 ha cleared) were built each year during the same period. Along with all of the amazing positive contribution to the Region and the province, the extensive nature of the industrial activity has raised questions regarding the scope of the associated impacts.

Tourism historically has not been a large factor in the Region. The primary tourist activity has been centered on the communities along the Alaska Highway providing services to the traveling public on their way to and from Alaska and the Yukon Territory. Recent growth in the guide outfitting industry, the eco-tourism industry, river rafting companies and lodges have met the demands of the growth in interest in the wilderness by Canadians, Americans and Europeans. This industry is hard hit by the realities of resource development as the product they seek to offer is easily compromised by other forms of industrial activity operating or located on the same land base.

BC has been and remains primarily a resource based economy. Through legislation and regulation, as delivered by multiple Ministries, the province is adept at the assessment and management of applications for and management of, the activities proposed in multiple resource industries including agriculture, forestry, mining and others. BC also has a mature strategic land and resource planning framework enabling public input to and distribution of the land use activities on the land base. Despite this, **the province does not have a system or process to consider the potential effects and the impacts of multiple industries, each operating legally and within their own legislation and regulation, upon a common land base.**

Collectively the above events have brought residents of the Northeast to a discussion of the ability of the land base and the communities of the Region to absorb or deal with the new realities of resource activity around them. The concerns focus on sustainability of lifestyles, communities, their environments and the economic windfall and its benefits.

### **3.0 SUSTAINABILITY**

In the 1990s, international organizations were the first to promote the idea of considering environmental consequences when encouraging economic development and economic growth. The International Union for the Conservation of Nature (IUCN) in 1991 published “*Caring for the Earth*” and shortly thereafter the Bruntland Commission followed with “*Our Common Future*.” Over the last two decades the concepts have advanced and been adopted by many jurisdictions, including BC. The Province includes sustainability as a goal in several publications (eg *Creating a balance-Sustainable Resource Management in BC, Our forest future-Sustainable forest management in BC, Canada*). It is commonly viewed that ***to effect real change and achieve the intended goals, these commitments need to be delivered at the local and regional levels.***

Sustainability involves environmental sustainability, social sustainability and economic sustainability. Integration of these elements within the concept to meeting the goals of the people who live in the region and those impacted by the activities within the region is the challenge before Government. The management of a range of resources, whether for renewable resource management, extraction, conservation or protection, in an integrated manner, requires clear guidance regarding the overall goals. These can be articulated through a sustainability vision statement.

### **4.0 PROJECT**

The Oil and Gas Commission recognized the importance of the CIA and CIM issue and retained the authors to conduct an evaluation of the state of cumulative impacts and the tools proposed for management of the impacts.

#### **4.1 Project Purpose**

***To assemble relevant information regarding Cumulative Impacts related to agriculture, forestry and oil and gas development and the views and interests of key contacts within BC and Alberta for use in developing a strategic approach to Cumulative Impact Management within the Northeast BC Region.***

#### **4.2 Project objectives**

- ❖ To scope out the issue of “Cumulative Impacts” as defined by key stakeholders in the Northeast BC Region
- ❖ To recommend a strategic approach to long term resolution of the management of “Cumulative Impacts” associated with resources development
- ❖ To ensure the study, results and recommendations are conducted and provided in an open and transparent manner to all participating parties



### 4.3 Project Methodology

- ❖ Scoping discussion with senior Government officials, Oil and Gas Commissioner and Treaty 8 Government Lead Negotiator
- ❖ Project design based on concerns voiced by local residents relative to the topic
- ❖ Review of CIA and CIM literature and experiences in other jurisdictions
- ❖ Establishing a list of key persons/organizations concerned or involved in the Northeast issue
- ❖ Within the time and budget available, conduct interviews with key persons/organizations that were interested and available
- ❖ Compile the information gathered and integrate with the expertise within the project team to produce a report and recommendations

The study was based on the noted views of local residents regarding the concerns over resource development and sustainability and information available in the literature. The study team attempted to:

- ❖ approach these issues with a balanced view
- ❖ earnestly capture the views of the citizens of the Northeast, and
- ❖ search for the common threads that might provide solutions made in the Northeast for the Northeast.

### 5.0 BUILDING TO SUSTAINABILITY – Perspectives Received and Interpretations Gleaned

Interviews were conducted with a wide range of residents and organizations within the Northeast and others working on the topic of CIA and CIM in BC and Alberta. Over 50 people were interviewed within the following list of Government and interest groups:

#### **Government**

Ministries (MSRM, MOF, MAFF, MEM, MWLAP-now reconfigured and renamed)  
Municipalities  
Economic development commissions  
Regional district offices  
Oil & Gas Commission  
Land and Water BC

#### **First Nations**

Individual First Nations

#### **Communities**

Community economic development interests  
Local interest groups  
Land use planning Tables

## **Industries**

Forest  
Oil and gas  
Wilderness commercial recreation  
Agriculture

## **NGO**

Conservation interest representatives

## **Others**

Academics  
Consultants  
Treaty 8 Table

The following is a summary of the key comments provided by the interviewees, organized into practical components of sustainability and governance.

### **5.1 In general, the interviewees:**

- ❖ preferred that building on existing instruments, processes and products would be the most desirable in addressing the issue as compared to creating a whole new system
- ❖ wanted to see the benefits of controlled, measured (“responsible”) development
- ❖ wanted assurance that industrial activity was not doing long term harm to the quality of the environment of the Region

### **5.2 Sustainability**

- ❖ Vision statements exist within each of the LRMPs, however, there a statement for the Northeast Region or First Nations Traditional Territories does not exist
- ❖ Non-native residents of the Northeast have already noted their views, in general, through the vision statements, land allocations and general resource management guidance associated with each of the three (3) Land and Resource Management Plan (LRMP) areas
- ❖ The LRMPs were intended to guide further landscape and operational plans to protect, conserve, maintain or enhance the values identified by the participants
- ❖ First Nations did not actively participate in the LRMP processes due to the potential prejudice towards future land claims negotiations but have recently been vocal about what they expect from the management of the resources in the Region
- ❖ The previous Ministry of Sustainable Resource Management drafted Principles of Sustainability
- ❖ The Sustainability Principles, LRMPs and First Nations comments provide a basis on which a sustainability vision could be developed

### 5.3 Land Use Planning

- ❖ LRMPs have zones called Resource Management Zones (RMZ) that have been divided into sub-zones (eg Special Resource Management Zones, SRMZ) that reflect site specific management objectives
- ❖ Strategic level plans have been prepared for some of the SRMZs
- ❖ The LRMPs and SRMZs are for “...determining how our land will be used, both now and in the future” and how the natural resources will be managed for present and future generations
- ❖ LRMPs and SRMZs provide:
  - broad land use zones on a map
  - objectives that guide management of natural resources in each zone
  - strategies for achieving the objectives
  - a socio-economic and environmental assessment that evaluates the plan
- ❖ Land and resource based Ministries are responsible for the implementation of the LRMPs and SRMZs
- ❖ The Northeast LRMPs have been in existence for six (6) years or more and the original intent was to update them around this time
  - Fort Nelson (1997)
  - Fort St. John (1997)
  - Dawson Creek (1999)
- ❖ Since the development of the LRMPs, the following SRMZs are completed or under development:
  - Muskwa – Kechika
  - Dunlevy Plan
- ❖ There are several other Special Resource Management Zones that remain to have detailed work completed
- ❖ There are other areas under further planning, such as the Peace Moberly Tract
- ❖ Strong support exists in both the aboriginal and non-aboriginal communities for the LRMP and SRMZ processes and products
- ❖ It is viewed by all the interviewees aware of the LRMPs that:
  - the plans have not been fully utilized
  - validity and hard won gains of the process are recognized

- benefits would be gained from building from the base that the LRMPs provide, recognizing that area fine tuning and inclusion, through some means, of the First Nations values is essential.
- ❖ Each industry that manages land (eg forestry, commercial tourism, agriculture) could use the LRMP and SRMZ information in the development of strategic level plans for their operations (eg Sustainable Forest Management Plans (SFMP) - Fort St. John Code Pilot)
- ❖ Industry specific strategic plans identify the approaches to be taken in resource management and how they will address the values and general guidance identified in the LRMP and/or SRMZ
- ❖ Resource extractors (eg oil and gas industry, coal mining industry) do not do strategic level land use plans as they are justifiably not consistent with the business model
- ❖ Other related CIA/CIM planning initiatives include:
  - Treaty 8 Table Negotiations
  - Peace Moberly Tract Negotiations
  - Oil & Gas permitting
  - Oil and Gas pre-tenure plans
  - Community Economic Development plans
  - Government Regional Service plans
  - Forest Stewardship plans
- ❖ There appears to be a lack of coordination or leadership that would cause all with a stake in the outcome of this discussion and debate to be engaged in developing a resolution that will lead to sustainability for the Region
- ❖ Operational activities by resource extractors tend to be areas of major concern with the interviewees as they can have significant impacts on the environment, social well being of communities and/or economic viability of businesses
- ❖ The challenge before those who extract resources or manage resources is to conduct their operations in a manner that minimizes the negative impacts on these components of sustainability
- ❖ First Nations were not at the LRMP tables when the plans were developed but remain supportive of them but have the view that they would like them to be updated to include their interests and values
- ❖ The Timber Supply Review process of the Ministry of Forests was the only process identified that attempts to consider multiple resource and their integration

- ❖ LRMP Monitoring Committees exist but are not active and being utilized, probably for one or more of the following reasons:
  - long planned updates and reviews of plans are not occurring due to institutional cutbacks of staffing and resources
  - participant burnout
- ❖ There was strong support for both the updating of plans and engagement of the Monitoring Committees
- ❖ The adaptive management tools developed provincially have not realized widespread acceptance or implementation.
- ❖ Oil and gas is developing a type of tactical level plan in the form of Pre-tenure plans for the Muskwa-Kechika that is gaining support from the management team
- ❖ If LRMPs were to be used for the base of implementing a regional vision of sustainability, every effort should be made to build bridges between the Official Community Plans of the local communities and the Regional District plans

#### **5.4 Community Planning**

- ❖ Community plans exist for each of the major centres
- ❖ Stable industry with, good paying, family supporting, type jobs is desired by communities
- ❖ Municipal Government objective is to attract families to well planned communities to help the region grow and have the population see the area as a desirable place to live
- ❖ A desired outcome was to increase the size of industries and communities to the critical size where they will attract interest from national retail chains
- ❖ Northeast residents are grateful for the agreement between the province and the communities providing additional revenue sharing to cover some of the infrastructure costs associated with the rapidly building resource extraction sectors
- ❖ Aboriginal and non-aboriginal communities have a general view that supports development but in a responsible manner
- ❖ It is desirable to attract industries to provide a stable tax base to allow communities to develop and be maintained as desirable places to live
- ❖ Some interviewees are encouraging diversification of economic development (eg SCI-Tech North) working to grow and diversity the high-technology industry potential in the Northeast and the innovative use of the most leading edge technology in the resource based industries

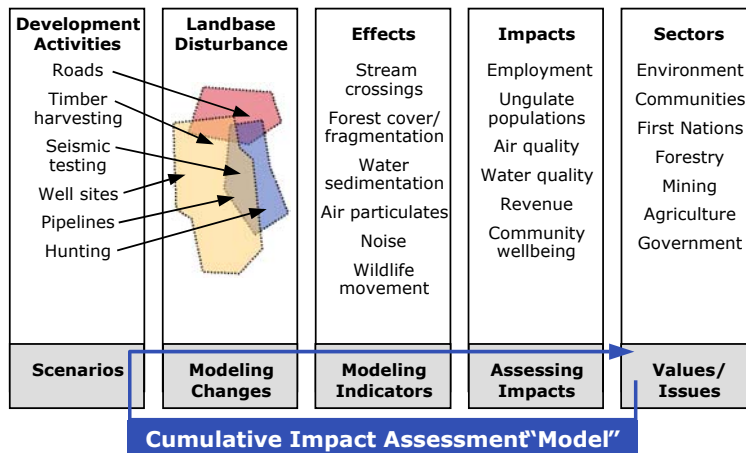
## 5.5 Public Consultation

- ❖ The majority of the Northeast Region is Crown land. Consequently, the public and First Nations have a right to be consulted on resource management and extraction activities on these lands
- ❖ Government processes for consultation have been developed to meet the fiduciary responsibilities related to Aboriginal Rights and Title
- ❖ At the same time industry agreements seek to not compromise the business timeline requirements due to requirements for consultation that exist within Treaty 8 Rights
- ❖ Oil and gas companies have provided funding to First Nations for use in building capacity to review permits and plans
- ❖ There is little consultation by First Nations at the strategic level planning due to limited capacity within the Communities and lack of a concerted effort to produce strategic plans
- ❖ The main area for First Nations consultation is related to short term operational plans involving:
  - primarily a reactionary approach to commenting on resource extraction or management activities which is not productive or effective from the perspectives of resource management or comfort within the communities that their issues are being heard
  - focus on providing technical comments regarding special sites, or concerns over small areas
- ❖ Timelines and process of consultation is a major issue in the oil and gas industry, especially but not exclusively with First Nations
- ❖ The need for rapid responses from First Nations to permit applications is recognized but has resulted in a process that is viewed as inadequate due to:
  - the process not being consistent with the capacity within First Nations communities and the requirement for consultation within the community, including elders, prior to responding
  - the short timeline for consultation required by Government
  - the allocation of funds provided to First Nations for reviewing permits are not fully utilized for capacity building and permit response
- ❖ It is only recently that those involved with consultation with First Nations are building an understanding and acceptance of the cultural concerns of First Nations
- ❖ First Nations would seek to improve consultation practices with both the forest and oil and gas industries such that cultural values are incorporated to a greater extent
- ❖ The First Nations view cumulative impacts and cumulative impact management to include a major social component related to respect for the land as a cultural requirement
- ❖ The General Development Plans, established to streamline the oil and gas application review process for a larger area of land than simply the development application for a specific site and efficiently incorporate First Nations comments, have not resulted in the desired product as they do not deal with the site specific areas of interest to First Nations.

At the same time oil and gas companies do not view the GDPs as satisfying their needs.

## 5.6 CIA/CIM

- ❖ CIA and CIM are an issue from the perspective of the accumulation of potential impacts of the activities from various industries on the ground (ie the magnitude of “footprint” on the land).
- ❖ Cumulative Impact Assessment (CIA) and Cumulative Impact Management (CIM) tools have been put forward as the solution to:
  - the concerns of First Nations and others regarding the issues of rapidly advancing resource development
  - address multiple activities and their impacts
- ❖ CIA and CIM are tools that are most effective when used in conjunction with a strategic plan or vision. In the absence of these guidance documents the use of the tools becomes limited and decisions or choices become subject to on-going debate
- ❖ Some have suggested sustainability should be measured using these tools
- ❖ Academically CIA and CIM is complex and covers a number of areas relative to land use planning, resource extraction and management, interaction between government agencies, industries and companies
- ❖ Cortex Consultants have described this complex issue through use of the following generic graphic



courtesy of Cortex Consultants Inc. 2005

- ❖ CIA and CIM involve both spatial and a-spatial issues and long timeframe
- ❖ The management of cumulative impacts involves:
  - the identification of values
  - assessing the impacts
  - identification of indicators
  - modeling changes
  - revisiting scenarios that have been developed for resource management or extraction
- ❖ The largest area where an operational application of a cumulative impact assessment and management system has been applied is at a sub-regional plan in Alberta
- ❖ There appeared to be different opinions regarding whether the approach to CIA/CIM should be a top down or bottom up approach, namely a planning and policy driven initiative developed in Victoria or a regional initiative supported by Victoria but built upon pilot projects relevant to the industries, communities and points of view of the citizens of the Northeast
- ❖ While there was not a lot of support to finding a one size fits all methodology, the respondents did believe that any attempt to apply this concept in the absence of a regional sustainability vision was impractical
- ❖ The ‘hot spot’ methodology of AXYS Environmental Consultants fits the bottom up thinking as the locally determined issues of CIA and CIM would provide the basis for the methodology and planning
- ❖ The strategic level of implementation of CIA and CIM for a region or sub-region was considered the best point of application as the detailed level of operations activities on every site is deemed far too costly due to data requirements
- ❖ There are two tools currently discussed in the Northeast as being useful for use in assessing cumulative impacts both at the general site level (ie AXYS Environmental Consulting framework) and site specific (ie UBC Faculty of Forestry research)
  - CIA/CIM framework proposed by AXYS Environmental Consultants and CIA/CIM research studies being conducted by the students of Dr. John Innes of the Faculty of Forestry at UBC
  - while some view these as competitive, the principles do not
  - most people do not understand the value of each
  - Albeit that comments were made by some interviewees that these are competing tools, the specialists/researchers view them as tools for use in different components of cumulative impact management.
- ❖ CIA and CIM are being viewed as a tool to express deal with the impact of industrial activity and the rate of activity on the land base.



- ❖ While some people are thinking of CIA/CIM as a decision making tool for use in resource management decision making, others think of it as a tool to inform strategic planners and decision makers

## 5.7 Regulatory Structures

- ❖ Currently, Government Ministries have individual legislation, regulations, policies and Provincial Service Plans that identify priorities and guide activities of individual Ministries with the responsibility residing within the Premier's Office to assist in integration of issues between Ministries
- ❖ It was viewed by many of the interviewees that the current governance system is insufficient to deliver a sustainability vision that meets the needs of the various interests and resource management requirements and transects the mandates of several Ministries (ie Ministries Service Plans need to be more integrated)
- ❖ Effective and efficient regional implementation of the components of a sustainability vision require timely decisions, approvals for initiatives and resources, both human and dollars, from senior management (eg Deputies Level Committee).
- ❖ There is evidence that the Peace Managers Committee is:
  - supportive of the desired integrated approach
  - working to address the issue
  - has found interim means (eg pre-tenure plans) to partially address CIA/CIM issue

however, they need to be given the explicit mandate and governance structure, backed up by accountability through performance measures of managers and staff
- ❖ To effectively use available CIA/CIM ,tools resource management needs the culture and support of the Government to succeed
- ❖ Currently the Government policy/regulatory structure includes:
  - Government Ministries Service Plans
  - Treaty 8 Table
  - IRM Business Group
  - Inter Agency Management Committee
  - LRMP Monitoring Committees
  - Peace Managers Committee
  - OGC Permit Approval Initiatives
  - OGC SCEK Fund
  - Conflicting Tenures studies

- ❖ It was generally viewed that industrial operations, especially in the oil and gas sector, need better regulated on-the-ground to ensure the activities respect the environmental values that exist and do not compromise the quality of life of the area for short term gain (ie develop, but do it well or right)
- ❖ There were differing opinions regarding the most effective implementation of planning products, standard operating practices, compliance and enforcement and industrial control measures
  - some felt there were flexibility advantages to the policy driven implementation approach
  - others were of the opinion that control must be implemented through legislation and regulation if the real desired outcomes and compliance and enforcement could be realized and checked through audit and administrative penalty
- ❖ There are a number of concerns from across interests within the communities that oil and gas industry controls need improvement, especially through greater compliance and enforcement of standard operating procedures. It was the view of many that adequate site specific planning, standard operating practices and compliance and enforcement inspections are either not in place or not being enforced, especially in the oil and gas industry
- ❖ The Forest Practices Code (FPC) and the new Forest and Range Practices Act (FRPA) are viewed as doing a reasonable job in the forest sector

## **5.8 Economic Development**

- ❖ It is broadly recognized and supported that there are multiple highly valuable and very lucrative industries active in the Northeast Region, each operating to it's own best desired outcome and the benefits to the province economically are very substantial
- ❖ There is a range of perspectives regarding economic growth in the Northeast but the importance of the economic activity associated with resource extraction was recognized across the spectrum of the communities
- ❖ The issue is not that development should be stopped but that it should be done in a more respectful manner for both the environment and social components of the Region
- ❖ Renewable energy projects were seen to be desirable from the point of view of community development advocates but this view, especially of the Site C development, was not shared by the First Nations as they see the project compromising natural areas of importance to them

## 6.0 CONCLUSIONS

The issues around CIA and CIM and the views of individuals in various sectors in the Northeast, can be summarized into the following:

- 7) The most commonly voiced concern was that the CIA/CIM issues not be viewed as a reason to stop, halt or unreasonably limit resources development but to move ahead within the objective of sustainability. The benefits of development were recognized and desired but within this objective.
- 7) A strategic approach to resource management and extraction and monitoring is needed
- 7) Integrated decision making between Ministries and between Victoria and the Region needs development
- 7) Consultation, between companies, regulatory bodies and First Nations relative to operational activities needs improvement to address First Nations issues
- 7) A practical and effective system of assessing the impacts of multiple activities on a specific land base is required
- 7) Standards and operational controls on oil and gas development activity need improving
- 7) Additional resources, people and funds, are required to develop and implement effective solutions to the above points

## 7.0 DISCUSSION AND RECOMMENDATIONS

### 7.1 Strategic Plan Components

CIA and CIM is a complex issue. If a system is to be effective in addressing the concerns, **it has to be simple, practical and strategic**. It also **has to build on existing instruments, processes and systems**, where appropriate.

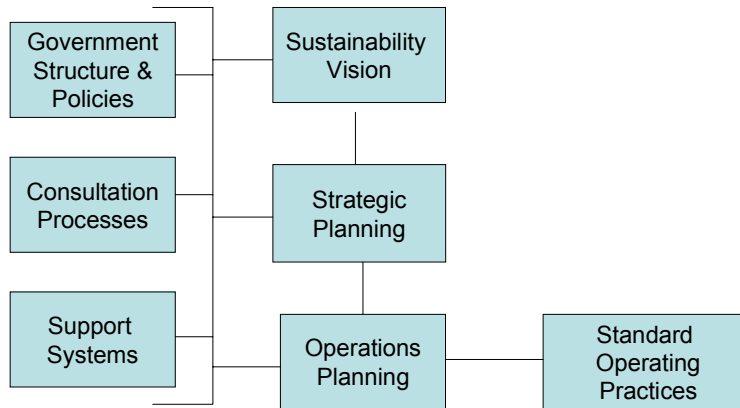
Developing a strategic approach to CIA and CIM for northeastern BC requires that the following **five (5) strategic plan components** be implemented in an integrated manner:

- 7) Sustainability vision
- 7) Government policy/regulatory structure
- 7) Consultation processes
- 7) Strategic level planning
- 7) Operational level planning

In addition, there are **four (4) support systems** that will determine the extent of continued success in each component. It is not critical that these be included in the initial strategic plan implementation, if costs and human resources are limited. However, they are important and included in this report for consideration and completeness.

- 1) Monitoring system
- 2) Planning support system
- 3) Adaptive management support system
- 4) Public reporting system

### Strategic Plan Components to CIA/CIM in Northeast BC



The following sections discuss each of the proposed Strategic Plan components and associated recommendations. Although each of these can provide benefit individually, **it is the integration of the package that provides the greatest potential for addressing the issues** noted in the study. Care is needed to build the required relationships and management tools within the Strategic Plan **increments** so that an environment of a large regional initiative does not create excessive bureaucracy, process and unrealistic expectations. Large initiatives have the tendency to fail due to their complexity.

The Strategic Plan has to be implemented through **an attitude change on behalf of all involved** (ie First Nations, industry, Government) and become a new way of doing business. This will take time and concerted effort from all parties. Assigning a senior person as a **“Champion”** with the necessary resources, skills and responsibility to work with the LRMP Monitoring Committees, encourage both improvements and implementation of components, and report progress to the public is critical to success.

The success of the implementation will be directly related to the willingness of all parties (ie Government, industry and First Nations) to **work cooperatively and collaboratively** in the development and implementation of the Strategic Plan. Each of the parties has to commit to bringing representatives to the processes that have the attitude to work collaboratively with the other parties towards a common set of goals or vision. This will also include information

exchange agreements, respecting confidentiality of sensitive data and provision of data and information in a timely manner to meet agreed upon requirements.

#### **RECOMMENDATION #1**

***Government appoint a senior person as a “Champion” to coordinate activities related to implementation of the Strategic Plan***

#### **7.2 Sustainability Vision**

The building blocks for a regional sustainability vision exist. The challenge for Government and the residents of the Northeast is to use these in developing a vision that includes the values identified in multi-stakeholder and First Nations consultations.

A “top down” guidance and bottom up regional effort to sustainability appears to be the most desirable approach to provide the guidance for responsible resource management and extraction in the Northeast Region. This should be clearly identified by Government on behalf of Northeast and BC residents and in conjunction with First Nations.

The development of a sustainability vision, utilizing the vision statements in the LRMPs, could be accomplished with the LRMP Monitoring Committees working in collaboration with First Nations representatives and using the draft provincial Sustainability Principles, LRMP products, updated data/research information and current Government strategic objectives to produce a draft document for consideration and approval by Government on behalf of the communities in the Northeast and all BC residents. It is expected the vision statement will guide the policies, regulations, priorities and activities on the ground. It would include the social, environmental and economic components that will allow the Northeast and BC to prosper over the short and long terms.

#### **RECOMMENDATION #2**

***Government give the LRMP Monitoring Committees the mandate and resources to work with First Nations to develop a sustainability vision for the Northeast that will guide resource management, development and conservation in the region.***

#### **7.3 Government Policy/Regulatory Structure**

If a sustainability vision for the Northeast is to be implemented effectively and efficiently, modifications to the existing governance model have to occur and include the following priority items:

- ❖ one Government Ministry to take the lead in encouraging the Northeast to move towards sustainability
- ❖ Ministry Service Plans that:
  - reflect the priorities and activities directly associated with the Region by having flexibility in the Provincial Plans that will allow regional variances
  - encourage integration of activities, regulations, policies and/or a mechanism for resolving contradictions between Ministries

- ❖ Internal Ministerial operating policies that include:
  - adequate staffing with the skills to efficiently and effectively engage in collaborative activities
  - performance measures of regional Managers consistent with the Northeast sustainability vision and associated Ministerial Service Plans
  - a mechanism for consideration of cumulative impacts without resulting in a view by decision makers that doing so will adversely affect the performance measures of Ministry staffs
  - integration of planning and activities between Ministries relative to issues related to CIA and CIM
  - mechanism for timely decisions, approvals for initiatives and resources, both human and dollars, from senior management (eg Deputies Committee) regarding sustainability vision development and implementation
  
- ❖ External Ministerial operating policies that include:
  - extensive collaboration between Ministries, companies, First Nations and other interested parties
  - good communications to interested parties regarding progress on problems and issues
  
- ❖ A mechanism to advance recommended changes or modifications to Government legislation, regulation or policy needed to achieve the sustainability vision and resource extraction and management objectives (eg collaboration between the regional ministerial staff with the Committees and forwarding the recommendations via the normal channels available to the “Peace Managers” to the Executive)

### **RECOMMENDATION #3**

*Government review existing policies and operational procedures relative to consistency with priority items noted above and institute the required changes.*

### **RECOMMENDATION #4**

*Government request the “Peace Managers” work collaboratively with the LRMP Monitoring Committees to identify required legislation, regulation or policy changes to meet the sustainability vision and resource extraction and management objectives.*

## **7.4 Consultation Processes**

Consultation processes exist in each sector. However, there have been deficiencies identified which suggest refinements are required if a sustainability vision is to be achieved and cumulative impacts minimized.

First Nations view the current system for consultation to be inadequate, especially in the areas regarding the Government processes and the capacity within the communities to respond. An adequate consultation process is essential, if resource extraction and management is to be conducted in a manner acceptable to First Nations. Such a process also has the potential to begin building positive working relationships with First Nations relative to land use planning, resource management, knowledge gathering and exchange and monitoring and adaptive management, all of which are critical to the management of cumulative impacts. The pilot project on consultation being initiated by the OGC with a First Nation has the potential to inform the development of a new process that will meet the needs of all parties.

Government processes for consultation have been developed to meet the fiduciary responsibilities related to Aboriginal Rights and Title and at the same time not compromise the business timeline requirements. However, the current process has to be changed to be consistent with the capacity within First Nations communities and the requirement for consultation within the community prior to responding. The short term operational plan referrals will be more efficiently and effectively responded to, if there is a previously agreed upon strategic plan on which the operational plans have been developed.

If the First Nations information is to be effectively incorporated into plans, a mechanism is required to get it to planning tables and at the same time respecting any confidentiality of the data/information.

#### **RECOMMENDATION #5**

***Government rationalize existing consultation policies from the perspective of meeting the short term and strategic needs of companies, First Nations, stakeholders and Government and within the resources available in each of the sectors or communities.***

#### **7.5 Strategic Level Planning**

Considerable experience and examples exist in the Northeast regarding strategic level planning. This expertise should be capitalized upon in a coordinated and consistent manner for use in achieving a sustainability vision and minimizing cumulative impacts.

The LRMPs and SRMZs provide a basis for managing for sustainability. However, not all the more detailed plans for special management zones have been completed. If these were to be completed and incorporated into updated LRMPs, they could be used in the qualitative identification of the levels of cumulative impacts tolerated (thresholds) within the special management zone. This would provide resource managers with an excellent tool for use in regional assessment of cumulative impacts and their management.

Each LRMP has an inactive Monitoring Committee that, if re-invigorated and given the mandate could provide an excellent mechanism to move towards sustainability in the Northeast Region. The land use products could provide the cornerstone for the strategic level planning relative to cumulative impacts assessment and management. As suggested by AXYS Environmental Consulting (2003), the review of the LRMPs would also provide a qualitative update on the condition of the areas relative to cumulative impacts.

Concern exists that a full opening up of the LRMPs would be disruptive to the Region. This is not the intent. The updates should include activities occurring since completion of the plans and the incorporation of First Nations values that were not considered during the previous planning process. The intent of updating land use plans is to refine the implementation of management objectives, include activities since the approval of the plans, include First Nations values and other issues identified by the LRMP Monitoring Committees.

Resource managers (eg forest companies, commercial tourism operators) operate on a land base for an extended period of time. Extension of the strategic approach to managing each resource using strategic plans such as the SFMP for forestry throughout the Northeast would provide additional strategic level planning information, improve sustainable resource management and assist in cumulative impact management.

Resource extractors (eg oil and gas companies, coal mining companies) operate on a specific land base for relatively short periods of time. Strategic planning does not fit well into their operations.

However, their activities can have significant impacts if the operating practices are not consistent with the sustainability vision. Long term resource extraction plans (eg pre-tenure plans) would be useful in integration of activities with other industries and cumulative impact management, especially in special resource management zones.

Coordination and collaboration between Ministries, between companies and between industries should be encouraged, if the footprint on the land is to be minimized. Consequently, companies should be required to look for opportunities to integrate operational activities on the land base, where possible. One Ministry needs to be the lead in monitoring progress and encouragement of this integration and resolving disputes between plans when they occur.

The land allocation and general resource management guidance in the updated LRMPs could be used in identifying the values to be addressed in each zone. They could also be used in developing the levels (thresholds) of cumulative impact that would be tolerated in each zone.

#### **RECOMMENDATION #6**

***Government re-invigorate the LRMP Monitoring Committees to update the LRMPs, adjust them to be consistent with the sustainability vision and incorporate First Nations values.***

#### **RECOMMENDATION #7**

***Government complete plans for all special resource management zones using a multi-stakeholder process with First Nations.***

#### **RECOMMENDATION #8**

***Government encourage resource management companies to demonstrate at a strategic level that commercial activities are consistent with LRMPs and SRMZs for the area to which they have tenure.***

First Nations have to become engaged in the development of strategic level plans. Currently there is a capacity issue from the perspectives of expertise and staffing. This will have to change, if the requirement to incorporate the values of First Nations into strategic level plans is to be realized. The responsibility for the providing and/or the building of capacity does not reside only with Government. First Nations have a responsibility to use an adequate amount of their available financial resources to address the problem, if they are to become partners in sustainability for the Region.

#### **RECOMMENDATION #9**

***Government and First Nations cooperatively develop the capacity for First Nations input into strategic plans.***



## 7.6 Operations Level Planning

Government and industry need to work cooperatively in building mechanisms that will encourage collaboration regarding resource extraction and management to lessen the footprint on the land and potentially reduce costs. This is especially relevant to the planning of site specific activities (eg Forest Stewardship Plans of the forest industry and the permitting process of the oil and gas industry). Currently operational plans are developed in all the industries according to guidelines, regulations, acceptable practices and corporate policies. In the implementation of the Strategic Plan outlined in this document, these operational plans must be consistent with the sustainability vision.

The ideal situation would be for strategic resource management and long term resource extraction plans (eg pre-tenure plans) be developed to guide operational plans. However, this would require all industry to stop for some period of time for these plans to be put in place. It is more realistic that operational plans be developed consistent with the sustainability vision and “first approximation” cumulative impact thresholds (see Adaptive Management Support Systems section), at the same time as the Strategic Plan.

Operational plans have to ensure the values and interests of local residents, including First Nations, have been addressed. The consultative process and capacity issues outlined above are critical to achieving this objective. The pilot project initiated by the OGC and First Nations relative to both on-the-ground practices and engagement of First Nations communities, is a beginning step to develop best practices that meet the needs of both the First Nation community and OGC. This should be evaluated upon completion to determine the extent to which the lessons learned can be extrapolated to other areas within the Northeast.

The regulations and guidelines for each of the industries have to be developed and integrated with land use planning so that special sites are not adversely affected and the footprint on the land is acceptable to all parties. This is especially relevant to the oil and gas industry. These should include such things as clearing forested areas (well sites), creek and river crossings, acceptable road and pipeline construction practices, archeological assessments, etc. It is critical that these be bound in effective regulations which include administrative penalties for non-compliance. There are several initiatives on-going or completed that could be used in developing or improving these guidelines for each industry (eg Oil & Gas Regulatory Improvement Initiative (OGRII), Timber & Range Impact Mitigation Committee Draft guidelines for timber and range mitigation, Fort St. John Forest Practices Code Pilot, Forest Practices Code). It should be noted that the current General Development Plans (GDP) are viewed by First Nations as inadequate for meeting their needs.

It is one thing to have regulations and guidelines and another to provide the comfort to stakeholders and First Nations that the cumulative impacts are being adequately addressed. A practical and effective compliance and enforcement system is required to obtain the confidence of the public.

### **RECOMMENDATION #10**

***Government establish or enforce policies that require companies to prepare operational plans and documentation that incorporates or comments upon the views of affected stakeholders and First Nations and shows consistency with the sustainability vision.***

## **RECOMMENDATION #11**

*OGC to continue the pilot project relative to standard operating practices and expand it, where appropriate, for others in the Northeast to benefit from the lessons learned.*

## **RECOMMENDATION #12**

*Government to develop compliance and enforcement and auditing capacity with public reporting and establish and apply administrative penalties to ensure laws, regulations and guidelines are met.*

### **7.7 Support Systems**

The Strategic Plan components can be implemented without support systems. However, the Plan will require the four (4) key support systems, adequately funded and resourced, if Government is to ensure the necessary data, knowledge and progress are available to move towards the sustainability vision and resource management objectives.

#### **7.7.1 Monitoring System**

The progress towards the:

- sustainability vision,
- resource management objectives in the LRMPs and SRMZs,
- “first approximation” thresholds,
- Standard operating practices and
- adherence to land use and site specific plans

requires a scientifically sound and practical monitoring system that includes First Nations Traditional Ecological Knowledge. Involvement in the monitoring or its evaluation is advisable to include representatives from the various stakeholders and First Nations. This could be done through the LRMP Monitoring Committees, augmented in the field by members of First Nations communities.

Based on the assumption that the Strategic Plan outlined in this document is accepted, the LRMP Monitoring Committees could include, within their Terms of Reference, the monitoring of progress relative to implementation of the plan. This would consolidate the process and involve knowledgeable people.

Monitoring begins with the identification of measurable objectives and indicators, at the regional, sub-regional and project levels. AXYS Environmental Consulting (2003) outlines an approach to monitoring. However, costs of monitoring are a concern to all parties. Care needs to be taken to ensure the costs and data collected are reasonable, practical and useful in measuring cumulative impacts and their management. Failure to include these factors in the monitoring process will result in it being short lived. The focus should be on use of existing data collection processes to minimize costs (eg forest cover updates, well site area clearings, etc).

The monitoring system should include a schedule for measuring change for particular indicators. As the monitoring data becomes available, each company, Ministry, planning table, etc would be expected to review the projections regarding cumulative impacts and make changes through an adaptive management process.

### **RECOMMENDATION #13**

***Government provide the LRMP Monitoring Committees with the mandate and funding to work cooperatively and in conjunction with First Nations in establishing a Cumulative Impacts Technical Advisory Group to develop a scientifically sound monitoring system, including Traditional Ecological Knowledge, that incorporates LRMP and SRMZ management objectives, cumulative impact indicators and “first approximation thresholds for the forestry, oil and gas, coal mining and commercial tourism industries.***

#### **7.7.2 Resource Data Support System**

Cumulative impact assessment and management are data demanding, especially related to developing models. In addition, data is costly to acquire and Government needs to ensure existing data is current, updated and readily available for use in planning and analyses. This is an area that requires specialized technical expertise that exists in Government and to some extent within industries.

The information for resource extraction and management, both at the strategic and operational levels must include the environmental, social and economic data bases. This will include the publicly available First Nations Traditional Ecological Knowledge and/or some version of the “Storytelling Information” concept (*Storytelling information management system (STIMS), 2005*), if sustainability as viewed by First Nations, is to be achieved. The methods regarding how this can be incorporated into the data bases for use by planners needs to be worked out in cooperation with First Nations.

It is not efficient to establish this specialized team just for the Northeast. However, it is just as inefficient to have a central data management organization and data base in Victoria that is not sensitive or responsive to the needs of the Region. There are regional data base management systems in Prince George and Nelson that should be reviewed regarding applicability to the Northeast. In addition, experience has been gained in the proposed Business Information Management System being discussed within the Integrated Land Management Agency of the Ministry of Agriculture and Lands.

It has been identified in a number of studies in the Northeast that data for cumulative impact assessment and management is limited. However, it is expected that to get the most desired level of information is beyond the financial capabilities in the short and medium terms of the Government and industries. Consequently, the identification of resource inventory data and knowledge gaps have to be identified and prioritized. This should be done in conjunction with the identification of cumulative impact assessment indicators.

### **RECOMMENDATION #14**

***Government, industry and First Nations work collaboratively to establish a regional data base management system that meets the needs of all the parties for resource planning and cumulative impact monitoring.***

## **RECOMMENDATION #15**

*Government provide the LRMP Monitoring Committees with the mandate and funding to work cooperatively and in conjunction with First Nations in establishing a Resource Data Technical Advisory Group to identify the cumulative impact assessment indicators, regional data base management system and priority resource data needs*

### **7.7.3 Adaptive Management Support System**

#### **7.7.3.1 Thresholds**

In most cases, an integration of strategic and operational plans will address most of the concerns regarding cumulative impacts. However, we do not have the integrated plans in place and thresholds need to be developed in a general way for special resource management areas for at least pre-tenure plan areas. The development of “first approximation” thresholds has to be based on limited scientific data. This will result, to a large degree, in a qualitative assessment being used that can be continuously updated and refined through the research and extension program and adaptive management.

If we are to use land use plans as the cornerstone for achieving the sustainability vision, it would be reasonable to assign subjective thresholds to each Resource Management Zone (RMZ). However, care needs to be taken in policy development so that one industry or company does not “use up the threshold” allocation at the expense of another company or industry. This concept of the “first in” and “last in” increases the complexity of management.

Advice from the principals (ie AXYS Environmental Consultants, Dr. John Innes, UBC Faculty of Forestry) of the two primary tools being discussed in the Northeast regarding use of the methodologies of assessing cumulative impacts should be solicited and an assessment made by the Cumulative Impacts Technical Advisory Group for specific applications and utilized, where appropriate, in developing and implementing thresholds and monitoring plans.

## **RECOMMENDATION #16**

*Once given the mandate for developing a monitoring system, the LRMP Monitoring Committees establish a Cumulative Impacts Technical Advisory Group with the first tasks to provide advice on interim thresholds (“first approximation) for the cumulative impacts indicators and use of existing assessment tools.*

#### **7.7.3.2 Research and Extension**

Knowledge and data gaps exist for the Northeast Region. There is a need for what most people would call research on topics related to thresholds, cumulative impact assessment tools and framework development. To be most effective, research of this nature requires a critical mass of specialized expertise focused on the issues related to the Strategic Plan. This could be a virtual centre of excellence regarding Cumulative Impact Assessment and Management consisting of scientists from British Columbia and Alberta universities. Some funding would have to be provided but this could be levered with other existing research funding available to the scientists (eg NSERC, SSHRC, SFM Network, etc).

In addition to conducting the studies related to the data/knowledge gaps and publishing the results in scientific journals, the scientists should be required to communicate the results in a practical way to operations people and interested parties in both Provinces. This new data/knowledge would be expected to be incorporated into planning, analyses, monitoring and operational decisions through adaptive management. The Extension program should also include developing and promoting new technologies (eg reduced seismic footprint, helicopter seismic programs, directional drilling, etc).

#### **RECOMMENDATION #17**

*Government and industry establish a R&D fund of \$1.5million/yr for research through a Cumulative Impact Assessment and Management Centre of Excellence working jointly on Northeast priority issues, funded by Government (eg \$0.5M/yr), OGC (eg \$0.5M/yr), COFI (eg \$0.25M/yr) and Coal Mining Association (eg \$0.25M/yr)*

#### **RECOMMENDATION #18**

*Government and industry, in conjunction with the establishment of the research fund, establish a User's Advisory Group to identify priority issues (ecological, social and economic) for work by the researchers associated with the Centre of Excellence*

#### **7.7.4 Public Reporting System**

It is critical that the public be informed on an annual basis of the progress regarding the implementation of the Strategic Plan. This could be part of the Terms of Reference of the LRMP Monitoring Committees for their areas and collectively for the "role up" to the Northeast Region.

The priority values of people change over time. It is important that these be periodically reviewed and where changes noted, incorporated into the sustainability vision and Strategic Plan. The process of review also provides a mechanism for communicating progress of the Strategic Plan to interested parties. This could most effectively be done through collaboration between the LRMP Monitoring Committees and Government.

Included in the annual public report should be an evaluation of solicited and unsolicited comments from interested parties regarding how the processes within the Strategic Plan are working and opportunities for improvement.

#### **RECOMMENDATION #19**

*Government mandate the LRMP Monitoring Committees to annually report on progress regarding the implementation of the Strategic Plan and periodically (eg every 5 years) review the public and First Nations values used in developing the strategic plan and recommend actions relative to any significant changes identified.*

## 8.0 SUMMARY OF RECOMMENDATIONS

The following is a summary of the recommended actions for the three primary groups involved in CIA and CIM:

### 8.1 Government

- ❖ Appoint a senior person as a “Champion” to coordinate the implementation of the Strategic Plan
- ❖ Re-invigorate the LRMP Monitoring Committees with the mandate to:
  - develop a sustainability vision based on LRMP results and First Nations values
  - complete SRMZs for each RMZ within the LRMPs
  - develop a monitoring system
  - to identify the cumulative impact assessment indicators, regional data base management system and priority resource data needs
  - develop “first Approximation” cumulative impact thresholds
  - produce an annual report regarding progress to the sustainability vision and CIA/CIM
- ❖ Identify legislation, regulation and policy changes required to address CIA and CIM issues, including required changes to operational procedures relative to achieving the Strategic Plan
- ❖ Rationalize consultation policies, especially with First Nations
- ❖ Increase, with First Nations, their capacity to provide input into strategic plans
- ❖ Review or develop, with industry, policies regarding operational plans for industrial activity and evaluate them relative to meeting the CIA/CIM strategic plan
- ❖ Develop a regional data base management system
- ❖ Continue OGC pilot project regarding standard operating practices for oil and gas and develop, with industry and First Nations, standard operating practices for each industry
- ❖ Continue OGC pilot project regarding consultation practices for oil and gas permit reviews
- ❖ Establish, with industry and universities, a research and development fund related to CIA/CIM that includes creation of a Users Group
- ❖ Develop compliance and enforcement and auditing capacity and administrative penalties

- ❖ Annual public reporting on CIA/CIM in the Region

## **8.2 Industry**

- ❖ Work collaboratively with the LRMP Monitoring Committees to fulfill their mandate
- ❖ Work collaboratively with Government in developing policies relative to operational plans for industrial activity and evaluate them relative to meeting the CIA/CIM strategic plan
- ❖ Work collaboratively with Government and First Nations in developing standard operating practices for each industry
- ❖ Work collaboratively with Government and First Nations to develop a regional data management system
- ❖ Work collaboratively with Government and universities to establish a research and development fund related to CIA/CIM that includes creation of a Users Group

## **8.3 First Nations**

- ❖ Work collaboratively with the LRMP Monitoring Committees to fulfill their mandate
- ❖ Work collaboratively with Government and industry to evaluate industry strategic plans relative to CIA/CIM
- ❖ Work collaboratively with Government to increase capacity to provide input into strategic plans
- ❖ Work collaboratively with OGC in completion of the standard operating practices pilot project and with Government and industry, to develop standard operating practices for each industry
- ❖ Work collaboratively with OGC in completion of the pilot project regarding consultation practices for oil and gas permit reviews
- ❖ Work collaboratively with Government and industry to develop a regional data management system

## 9.0 SELECTED REFERENCES

- AXYS Environmental Consulting Ltd**, 2003, *A cumulative effects assessment and management framework (CEAMF) for Northeast British Columbia*
- AXYS Environmental Consulting Ltd**, 2005, *A Decision-making Framework for Balanced Development*
- BC Ministry of Sustainable Resource Management**, 1997, *Fort St. John Land and Resource Management Plan*
- BC Ministry of Sustainable Resource Management**, 1997, *Fort Nelson Land and Resource Management Plan*
- BC Ministry of Sustainable Resource Management**, 1998, *Dawson Creek Land and Resource Management Plan*
- Dawson Creek Catholic Social Services**, 2005, *Dawson Creek Community Profile & Investment Guide, Volume II*
- Integrated Relations Unit**, Ministry of Forests, *Sustainable Forest Management in British Columbia, Canada*
- Integrated Resource Management Business Group**, 2003, *Creating a balance – Sustainable resource management in British Columbia*
- IUCN, UNEP, WWF**, 1991, *Caring for the earth-A strategy for sustainable living*
- Northwest Business**, July/ August, 2004, *Dawson Creek's Vision of the Future Taking Shape*. Periodical article
- Oker, Gary**, 2005, *Storytelling information management system (STIMS)*
- Peace River Liard Regional District**, 1986, *Dawson Creek Rural Area Official Community Plan*
- Peace River Regional District**, 1993, *North Peace Official Community Plan*
- Peace River Regional District**, 1994, *Charlie Lake Official community Plan*
- Peace River Regional District**, 1997, *West Peace Official Community Plan*
- Timber & Range Impact Mitigation Committee**, 2004, *Draft guidelines for timber and range mitigation-Peace Forest District*
- Urban Systems**, 1995, *City of Fort St. John, Official Community Plan*