

**REGIONAL LAND USE PLANNING and
CUMULATIVE EFFECTS MANAGEMENT:
LINKAGES and APPLICATIONS**

Workshop

VERBATIM RECORD

February 10, 2003
High Country Inn
Whitehorse, Yukon

Present:
SEE Appendix

Joyce Bachli, Recording Secretary

The workshop convened February 10, 2003, at 8:50 a.m.

1.0 Welcoming Remarks, Prayer and Opening Introductions

CHAIR BILL KLASSEN: Good morning. We have a very full agenda, so we are going to try and stay on schedule and make up the bit of time that we're late starting.

As most of you will be aware, we are meeting within the traditional territory of the Kwanlin Dun First Nation. So, I would like to invite to the podium Councillor Lesley Smith of the Kwanlin Dun First Nation for a few words and an opening prayer.

COUNCILLOR LESLEY SMITH: Good morning. I would like to thank you all for being here. It is a great honour to come here and welcome you to our traditional territory. So, could I say a prayer, please.

WELCOMING PRAYER - COUNCILLOR LESLEY SMITH

CHAIR BILL KLASSEN: Thank you, Councillor Lesley Smith. Some of you will be aware that this is the third in what is almost a series on cumulative effects assessment. At the two previous workshops of this nature that were sponsored by Northern Affairs Environment Directorate, we looked into cumulative effects assessment and management strategies; and at least one of the outcomes of those previous workshops was a recognition that there is a strong connection between cumulative effects management and land use

planning. So, we are considering those two processes. They have elements in common. Regional land use planning is an inclusive process that attempts to balance a broad range of interests and similarly does assessment and management of cumulative effects. In the Yukon I think it is probably obvious to most of us that the development of regional land use plans, something that is driven by the Umbrella Final Agreement, may be one of those necessary steps towards the effective assessment and management of cumulative effects.

So, this workshop will be focusing on the three questions that are outlined in the material in your package:

1. What are the key components of the Yukon regional land use planning process?
2. What linkages currently exist or could be established to improve management of cumulative effects?
3. How can regional land use plans be developed to incorporate effective strategies to manage cumulative effects?

One of the speakers at last year's workshop talked about the tyranny of small decisions, and land use planning will hopefully help us avoid that.

I would like to welcome you all to this workshop. Looking at the participant's list, I recognize many of the names, and I think we have a very good mix of talent in the room, and we should be able to come up with some useful answers to the questions that have been posed.

Helping with the facilitation of the workshop is Lyn Hartley, a policy analyst at the Environment Directorate at least for another little while, and Lyn will lay out how we're going to run things. Lyn.

LYN HARTLEY: Good morning. It's a pleasure to look out on this audience today and see the diversity of people here, just as Bill mentioned. This is, as Bill mentioned, the third workshop that we've had in the last three years. So, every year about this time, we've been trying to gather people to talk about cumulative environmental effects; and this year we were so pleased to be doing this jointly with the Yukon Land Use Planning Council. It's so wonderful that they came on. I just want to say a little bit about where this whole workshop came from. How many people were at the workshop last year, can you raise your hand?

Okay, so a sprinkling of people throughout, so you'll remember this. At the end of last year's workshop on cumulative environmental effects, and we were talking specifically about linear environmental effects, we realized that we really needed to be talking with land use planning. Cumulative environmental effects couldn't just be done on their own; we needed to start bringing in some other partners.

So, we were quite thrilled when we saw who was coming to participate to see I think it's at least two-thirds of folks who haven't been to previous workshops. It's wonderful to have a diversity. We're also trying to learn from the last two workshops and make sure that we're continually our knowledge, as well as how we're doing things in the Yukon.

The intention behind this workshop is we really want you to be talking about your own work, as well as learning from some experts from other parts of Canada. We see everyone in this room being an expert. Whatever your role is, your job is, your position in the community is, we see that you're bringing to this workshop your expertise and your local knowledge. We're hoping to combine that with some expert knowledge from some other places in Canada. Remember that throughout the next two days: You are an expert, and we need to be trying to pull out that knowledge and seeing how we can be looking at cumulative environmental effects, as well as land use planning. The whole intention is let's have some good dialogue.

(LYN HARTLEY EXPLAINS THE PROCESS - SPEAKERS FOLLOWED BY SMALL GROUP DISCUSSION)

CHAIR BILL KLASSEN: Thank you, Lyn. As Lyn mentioned, the Yukon Land Use Planning Council was instrumental in organizing this workshop, and I would like to invite Lesley Cabott, the Chair of the Yukon Land Use Planning Council, to the podium.

2.0 Welcoming Remarks - Lesley Cabott, Chair, Yukon Land Use Planning Council

LESLEY CABOTT: Thank you, Bill. Good morning, and welcome to the workshop. For those who have travelled to get here, I hope that your journeys were comfortable, uneventful and in good company. I also hope that you had the chance to enjoy our beautiful Yukon day yesterday and see those Quest mushers off on their inspiring journey to Fairbanks.

I want to first introduce the Yukon Land Use Planning Council, my colleagues who work with me on the Council: Tom Cove from Watson Lake and Albert Peter from Mayo. I hope that you will have a chance over the next couple of days to speak with them about your visions for land use planning and also to the Planning Commission members. We have two planning commissions established here now in the Yukon. Those are the Teslin Planning Commission and the North Yukon Planning Commission, and it is those commissions that are working on the regional plans.

Here from the Teslin Planning Commission are Bob Sharp, Brandy Greenwood and Brenda Oziewicz. Please meet them, along with the North Yukon Planning Commission members: Dave Brekke, Doug Brownlee and Shirlee Frost.

The Yukon Land Use Planning Council has three primary responsibilities. The first is to make recommendations to the parties of the land claims agreements, those being Canada, the Yukon and the respective First Nation with respect to regional land use planning.

Another responsibility is to assist planning commissions as they develop their land use plans.

Thirdly, we recommend to government the budgets for the regional commissions and act as the financial administrator.

The Council has been working hard to fulfil its responsibilities, and this workshop is one such effort. We have hosted a number of workshops over the last few years, which we believe to have been timely and relative to the Council's work. These have included the Challenges '99 Workshop, the Ready or Not Here We Plan Workshop, the Yukon Meta-Data Exchange Workshop and most recently last year the Common Land Use Planning Process Workshop; and that was with the goal of identifying a common land use planning process for Yukon. That is certainly a requirement of Chapter 11 of the Yukon Final Agreement. These workshops have all made substantial contributions to bringing about regional land use planning and the implementation of Chapter 11.

The Council, on a regular basis, conducts strategic planning sessions; and at our September session, we identified the need to focus upon the linkages that the claim calls for between regional land use planning and other resource management initiatives and legislation. One of the strongest links that the land claims makes is between the land use planning, Chapter 11, and the development assessment process, DAP, in Chapter 12. The arrival of the DAP Legislation, through the Yukon *Environmental and Socioeconomic Assessment Act*, will bring about the opportunity to create this link. Considering cumulative environmental and socioeconomic effects are a requirement of this new legislation. I would like to stress that while cumulative environmental effects have been the focus of previous cumulative effects workshops, both regional land use planning efforts and the new Yukon *Environmental and Socioeconomic Assessment Act* will require Yukoners to give greater recognition to the effects of land uses beyond solely their environmental effects. Considering economic, social, cultural and environmental effects has always been a part of the regional land use planning process; and soon we will have legislation, made in the Yukon, that will commit us to consider these, as well.

I thought you might be interested to know where the ideas that are shared at this workshop may end up. There are a number of opportunities to bring these into reality. One is through the general terms of reference that the Council recommends to the parties with respect to the work that each commission undertakes. These terms of reference, the marching orders so to speak, are

what the parties provide the planning commissions, which then form the broad framework for the regional plans.

A second opportunity is the common land use planning process that we developed at the workshop last year. While it is now becoming part of the general terms of reference and the planning process for the commissions, it is dynamic and definitely open for revisions and refinement. The planning commission themselves further refines the general terms of reference and the planning process for each region by developing their precise terms of reference. In these detailed descriptions of the plans for the plan, there is an opportunity for greater and more detailed thinking regarding cumulative effects of the land uses each commission will be considering during its planning process.

Lastly and most importantly, the plan approval bodies themselves, the Yukon Territorial Government and the Yukon First Nations, can adopt ideas that you generate here over the next couple of days through their approval processes to ensure that your ideas are brought into reality here in the Yukon.

The afternoon of day two of this workshop will be devoted to developing ideas for consideration by the council, the commissions and the approval bodies. This will be your chance to express the ideas that you think are important. I am very happy that Kevin Kriese has been able to come and speak to us about the planning work that has gone down in B.C. Last year Ron Cruikshank, who is the Director of the Planning Secretariat, and I travelled to Victoria to speak with some people over there who have been involved in their regional land use planning process. I left those meetings feeling inspired and with an even stronger conviction to see regional land use planning realized here at home, and I think you will be very inspired by what Kevin has to say. Regional land use planning is the link to the management of cumulative effects and the management of cumulative effects is a link to achieving sustainable development. We need more planning commissions to be established and more attention to the work of the commissions and to the potential that these plans offer for better land use decisions.

It is the vision of the Yukon Land Use Planning Council and indeed the vision of those who signed the UFA that there be a land use plan for each region in the Yukon. We must all work together towards this goal if we are to bring about sustainable development envisioned by the land claims agreements.

Have a great workshop, and again welcome!

CHAIR BILL KLASSEN: Thank you very much, Lesley. Before I introduce the keynote speaker, Kevin Kriese, I will just say a couple of things about the way we're going to manage the time.

(OUTLINE OF TIME MANAGEMENT)

3.0 Introduction - Kevin Kriese

CHAIR BILL KLASSEN: I would like to welcome Kevin Kriese. He is the Regional Director, the Skeena Region of the Ministry of Sustainable Resource Management, based in Smithers, British Columbia. Kevin is also a Registered Professional Forester and has a Masters Degree of Natural Resources Management. He has worked for the Province of British Columbia for more than 10 years with a focus on land use planning, first nations negotiations and forest management. As process coordinator for the Kamloops Land and Resource Management Plan (LRMP), he was involved in the first LRMP approved in the province. In the intervening years, he has provided support to completion and implementation of five other LRMPs in northwest B.C. Kevin.

3.1 Strategic Land Use Planning in British Columbia: 10 Years of Solving Wicked Problems - Kevin Kriese

KEVIN KRIESE: Thanks very much. I've never actually been a keynote speaker before, and I haven't been to a conference in a long time with 130-plus enthusiastic people. So, if I'm a bit nervous, you'll know why. It is a real pleasure to be here in Whitehorse. I got a phone call about three weeks ago, saying, "Do you want to go and speak at a conference on land use planning?"

I said, "Sure." I've been involved in land use planning, as you mentioned, about 10 years; and it's something that I'm still excited about. I find it really rewarding, and I still find it really challenging. So, land use planning is something that kind of gets me juiced a little bit. I think a lot of people in this room probably share that excitement. When they told me the conference was in Whitehorse, my excitement level jumped a couple of notches. It is a beautiful place. It has a lot in common with my home town of Smithers except we do have better snow, and the skiing is excellent. I work in northern B.C. and my region that I'm responsible for extends into places like Dease Lake, Atlin, Lower Post, Good Hope Lake. I think I actually may have a lot more in common, in terms of land use planning, with people in this room from places like Mayo and Watson Lake and elsewhere than I do with people in southern B.C. I hope I can give you some insight into what has worked and what hasn't worked in B.C., but I am also really interested in the topics you have today and finding out some stuff that we can steal to take home; because part of what you're going to see is that we're really involved in a continually changing and improving process, and we still have whacks of challenges on how we implement land use planning, and some of the ideas that you're talking about for the next two days are really interesting to me. So, I'm hoping and I know that I'll learn a pile, as well.

The title of my talk is "Strategic Land Use Planning in British Columbia," and what I really want to get at is there's been a major body of work that's been completed,

starting in about 1992 in B.C. I have used the term “10 Years of Solving Wicked Problems”. What I am going to walk through is first why did I pick that term and what is the backdrop for it. I am going to use that as a metaphor for why land use planning can be so doggone hard to solve.

Then I’m going to jump to what the situation in B.C. was that led us to embrace land use planning as a way of solving what were some very difficult problems. You need to really understand the context that B.C. faced; because in many instances, it’s different than what you have in the Yukon. So, the ability to draw comparison between the Yukon situation and the B.C. situation really depends on the ability to understand what those differences are, as well as what some of the similarities were in the context.

Then I’m going to talk about the core of the land use planning program that B.C. implemented from 1992-to-2001. I’m going to describe the approach that B.C. took and talk about what some of the accomplishments were and the lessons that we learned from that first about nine years of planning.

Then I’m going to describe what’s underway today, which will be a much shorter period of time where we try and complete the land use agenda, and I will draw specific reference to one of the plans we have underway in my region, which is the North Coast Land and Resource Management Plan.

Finally I will wrap up with some observations and recommendations.

First the term “wicked problems” - I first encountered this in an article I read in I think about 1991, called “*Complexity, Wickedness and Public Forests*,” and it came back to my attention this summer when I was reading a copy of the *Forestry Chronicle*. It really got me interested again, because it seemed to hit what some of the -- when I read it the first time in 1992, it told me what some of the issues were that we were facing in B.C.; and when I read it again, it told me we’re still facing some of the same issues. Really what I’m getting at is you need to understand the nature of the problem you’re trying to solve or else the solutions that you propose will not work, and they will be ill-fitted. This idea of a wicked problem tries to get at what some of the real underlying problems are with land use planning and public policy.

The actual term “wicked problem” was coined in a paper called “*Dilemmas in a General Theory of Planning*,” published in 1973. I think that’s a great title, *Dilemmas in a General Theory of Planning*,” because a lot of what we’re facing in land use planning is about these kind of paradoxes and dilemmas where theories of how things should work never seem to add up with what you’re facing on the ground. It’s always way, way harder, and it never seems to work as well as it lays itself out in the papers and in the theories.

When the authors, Retell and Webber, coined the term, they said, “We used the term ‘wicked’ in a meaning akin to that of malignant in contrast to benign or vicious like a circle, tricky like a leprechaun or aggressive like a lion in contrast to the docility of a lamb. We do not mean to imply malicious intent.”

Does anybody recognize some problems that have those kind of characteristics? The properties of a wicked problem are that first off there is no definitive formulation. If you ask everybody in a room what the problem is, they’ll all say it’s actually something different. For some people the problem is ecological degradation leading to unsustainable communities. For other people it’s the lack of economic opportunities, causing communities to go out and degrade their environments. Everyone has a different opinion about what the root causes are of the problem and have their own opinion on what the actual problem is itself, and there’s no right answer.

The second is there’s no stopping rule. Planning goes on forever, and this is one of its criticisms; but essentially when you get into a wicked problem, you continue to have to iterate through the problems, there’s no eventual destination. There’s no single place. It’s essentially an ongoing journey, and that’s very different than a lot of the problem-solving approaches that we’ve been trained in school to take on, which is you essentially have a problem, you get there and solve it, and you never go back to it again. So, there’s no stopping rule.

Solutions are not right or wrong. In other words, there is no one answer. There is no ability to say, “This is 100 percent.” Yes, you get a check mark, but just good or bad. They involve at some level some kind of difficult emotional, intuitive judgment about whether you’ve reached a decent place; and that involves the term “judgment,” which can be really, really difficult.

There is an inexhaustible set of solutions, and often people want you to try them all on, and often people want you to explore them all. There is interdependence among the elements of a problem. The solution to one part of your problem becomes either a solution to or a problem associated with another element you’re trying to solve. So, when you fix this, it leads to some kind of a chain reaction of events around and around. It’s really hard to nail down your problem as a result.

Finally one that I really like is “The planner can’t be wrong.” We’re supposed to be able to do things like trial and error. You can’t afford to do trial and error when it comes to regional land use planning. No group would accept that you made a mistake at their cost and say, “Gee, there’s five different ideas on what a good land use plan can be. We’ll just try all five of them in different places, and 10 years from now we’ll go back and see which one worked.” That’s not the kind of solution that can work in a land use planning context.

So, those are some of the properties of a wicked problem, as compared to typically complex but innocent problems, which are well suited to the scientific method where you essentially collect more information and build bigger models. You just get a lot smarter, hammer a lot more resources at the problem and eventually you get to a solution and move on. An example of a complex but innocent problem would be something like designing a bridge. You know it's right because when you drive the kind of trucks that you wanted to drive over the bridge, it stands up. A mine reclamation plan, even though it may involve complex biological systems as you try and rebuild certain kinds of ecosystems or vegetation or wildlife, you can test whether or not you did what you actually set out to do. It can be very complex getting there. It can be very expensive getting there, but it's not wicked.

Senn said that "Wicked problems tend to arise in a social context. They defy conventional problem solving approaches like the waterfall model, which is characterized by the usual steps of problem formulation, data collection and analysis, presentation of findings and construction of a solution." I think this is one of the key themes that I'll come back to later that when you have a wicked problem, your problem solving approach, which we're typically trained to use and which we often try to employ, doesn't work very well.

Back to the final reference on wicked problems, Allan Gould said in their article in 1986: "The forestry community is confusing complexity with wickedness", and as a result, they were talking in this case about planning for national forests and the processes that had been built in the '80's to try and solve their problems around old growth and clear cutting and so on, and the forest service at that time developed what was probably the most complex, comprehensive and systematic approach to planning that we'll ever see for a public resource. It was expensive. It took a long time, and not a single plan got through without being challenged in the courts. They essentially failed at their mission of getting a plan approved, even though they spent a pile of money on it and had more scientists than the Yukon or B.C. or anyone in Canada could ever put together. The problem was that the procedures and methodology that they had used and they developed were witness to the naïve hope that science can eliminate politics. They had confused complexity with wickedness.

That's where I'm going to end the opening piece on wickedness, and I'm going to move now to talking about what was happening in B.C. back mostly in the '80's and into the '90's. Most people here from reading newspapers or being involved in the resource management community are probably familiar either directly or indirectly with what was happening; but B.C. was essentially witness to ongoing confrontation, land use conflicts that rolled valley-by-valley across the province, names that became known in social context. If you went and talked to people over coffee, they'd be talking about places like the Steine, the Cormana, the Wallbrand, Khutzematen, Tatshenshini, Hyda Qwy. All these areas were the focus of large-scale public battles; and it culminated in essence in Chayoquot

Sound, which was the largest act of civil disobedience in Canadian history, where we had more than 600 people arrested. So, the conflicts were deep, and they were pretty tricky.

As a result about that time the Government, through a series of processes, initiated what was really a search for solutions or a large-scale examination of what we were doing in the province; and four of those initiatives included the B.C. Roundtable on Environment and the Economy, the Forest Resources Commission, there was an old growth strategy, and there was something called the "Dunsmuir Agreement" where people from various sectors and industry and government sat down and talked about "what kind of planning approach would it take to get us out of the pickle that we're in." Collectively those resulted in a situation about 1992 where people realized that there was no longer a social consensus on land use and forest management in B.C. It had evaporated. Everyone recognized that we had major, major problems and that no one was comfortable with the status quo any more, that we had to have some fairly significant change.

Not only did we have major land use problems, but everyone also recognized the status quo in terms of problem-solving approaches hadn't worked. That previous approach had involved managing single issues. So, you pick on that valley that was the topic of the day, and you put a process together around it. You get some technocrats in a room, they do some studies, they come up with a recommendation, and the politicians decide. A place like the Cormana, they cut it in half; no one's happy. Other places they put a land use plan together that's more comprehensive; no one's happy. But that old problem-solving approach had been tried, and it was just simply not working.

Another piece that came together was people realized that there were so many players and such a divergent set of interests and people with such different sources of power that no one on their own had the power or credibility to resolve the problem, even the elected officials, that they could not just impose a solution on the province and make it stick, that our stakeholders either inside the province would protest, our markets externally would protest and not buy our products, and that's a situation that we still face today, that somehow you could not just impose your will on the solution and that you had to find some other root of getting actual genuine buy-in.

So, up to that point, B.C. had been confusing complexity with wickedness. In 1992, a new government swept into power, and they made a number of political promises around land use planning. That became essentially the core of a new land use planning program that started about 1992. The first element was a protected area strategy, which included a commitment to double the province's protected areas using a system of GAP analysis.

Second they formed an independent commission on resources and environment to undertake the strategic land use planning.

Third is they created a policy of doing subregional, very similar sizes to what you call your “regional plans”, which became known as “land and resource management plans”.

Fourth, a major piece, is they implemented a new code of forestry practices, which essentially imbedded land use planning as a tool to drive forestry operational plans.

Key features of that land use planning program were: First it was comprehensive, all resources at once. Previous to that time, you’d have a forestry plan separate from a wildlife plan separate from the mining plan, separate from this plan and that plan. All of them didn’t come together, and they didn’t talk to each other very well.

Second they became multi-agency processes. This may not seem very revolutionary, but for a long time in B.C. the agencies in a region like mining just never sat down and talked to each other and were never accountable to actually solve their problems together; and it’s just a bizarre thing when you look back in history how that could have evolved, but that’s the way things were. So, multi-agency planning was a new paradigm.

Third and probably the most significant is that B.C. embraced public participation using consensus techniques and interest-based negotiations. In 1992 when they embraced that as a province-wide policy, consensus building had been used in a few little pilot projects in the States, and you found little isolated outposts of it; but I don’t think there had been another jurisdiction that had embraced it as a comprehensive program across an entire jurisdiction for a major policy initiative. So, it was fairly revolutionary at the time. Tools like interest-based negotiation were just coming into the parlance. There wasn’t a lot of expertise on how you actually use them. So, at the time in 1992, these were revolutionary steps that B.C. took to try and change its approach to problem solving.

So, what did it get us? If you look back and fast-forward from 1992, we did a lot of work, a lot of people busy; and at the end of the day, this map shows you a status report of where plans were completed by January, 2002; and the areas that are coloured in orange are the plans that were complete. That adds up to about 19 different plans that had been approved; 16 are what we now call “LRMPs” and three were regional plans. There are some subtle differences, but they’re not important. They covered about 73 percent of the province. I should say that of those plans, the three regional plans that were approved were not consensus plans; but of the 16 LRMPs, all but one were. So, 15 out of 16 LRMPs were successful in the sense that they achieved a public

recommendation that everyone could support, and they were subsequently implemented and approved by the Government.

Imbedded within those plans, the key goal was to get some zones in place across the land. So, here is a composite map of what the province looks like if you add all those plans together, a whole bunch of different colours on maps that have some meaning and there are objectives attached to, et cetera. The point is we got a product. We have some zones, which we didn't have before. The primary purpose of land use planning at the time was to help implement this goal of the protected area strategy. So, B.C. was successful in meeting its goal of doubling the protected area system. You can see the green is what was protected prior to 1991, and the red is the protected areas that were added on subsequent to that, and there was a scientific basis for adding those protected areas.

This map shows on the left-hand side a picture of what ecosections were represented in protected areas prior to 1991. The areas shown in red essentially had little or no representation. The areas shown in yellow had fairly modest amounts of representation, moving up to blue and green were reasonably or well represented.

So, as you move to the map on the right-hand side, you can see there are a heck of a lot less ecosections that don't have any representation at all. So, we did some good things using the science of ecosystem representation. You see a lot more of the ecosystems that are represented in that blue and green colour over on the right-hand side. Those are some of the accomplishments in terms of the actual zoning and the products that B.C. produced.

I want to talk a little bit about how we learned whether or not the processes were working from other senses and things like building social capital and building buy-in from the public. I just want to stress that what I'm presenting up here is the cumulative knowledge that has been gained. There are a whole bunch of evaluations that have been undertaken over the duration of the planning process. So, as these processes were complete, in most regions we undertook local evaluations where we'd finish the process and get everybody together in a room or do some kind of a survey and say, "What did we learn? What worked, and what didn't work," and produce a little report to hand off to other people. So, it was an ongoing process of trying to learn from our little experiments across the province.

We also had a bunch of province-wide workshops much like this where we'd get everyone in a room and say, "What's working out there? What kind of tools and techniques do you have?" And those were very successful in helping us move the agenda forward.

Finally we were fortunate to have a bunch of academic groups at SFU/UBC and elsewhere who were doing academic research on the process to try and look inside the black box and take more of a rigorous approach to see whether the processes were well structured and so on. So, there is a bunch of academic research if you're interested and if you're process-oriented that I could point you to which I think is really helpful in terms of what we learned in more detail around process design.

In terms of lessons learned, what did people actually think; because at the end of the day, it was a social process, and our test is going to be did people like it or not. I'll speak to a couple of things. One is the communities that were involved. I have to stress that B.C., with a population of three-and-a-half million people, it's hard to get everyone even knowing what land use planning is. So, there is a real group of people who understand land use planning and the ones who were involved, and those were really the test of whether or not land use planning succeeded. For the most part, we had broad support in those communities that participated.

I came across the situation a few months ago where a group of people had moved into town (one of our land use plans), and they proposed a change to the land use plan and said, "Gee, we think there should be a new park over here." Holy smokes did people get upset, because what had happened was people who hadn't participated and hadn't bought into that plan that they'd developed with their own blood, sweat and tears were really mad that someone would come in from outside without having read it or understood it or understood the tradeoffs or understood its intent and suggest that it really wasn't very valuable. The community was very, very strongly defending the plan that they'd developed, and I didn't have to do that from a government perspective. So, it actually made my life really easy. But they had this buy-in that was just incredible to watch.

In some cases, the planning processes have actually kind of created a shift in communities, where there was a culture of fighting and sectors not getting along to where they've created what I call a "cultural collaboration." They understand that the only way that they're going to be able to succeed in the long term is when they can find solutions by working together, and you see that taking off into other kinds of processes in the communities. When you have issues pop up, they know that the way of solving it is to get together in a room, to sit down, talk about their interests and try and find a solution; as opposed to where it might have been "Let's go and get a campaign together. Let's go and hammer on each other for 10 years and see if we can beat these other people up." That paradigm has shifted fundamentally in most communities to this culture of a more collaborative one.

However, most of the communities are still concerned that their plans aren't being implemented. They had pretty high expectations coming out the back end that government would go away and do a whole bunch more planning work and a

bunch more science and implementation and so on, and we haven't been able to deliver all their expectations. There's an ongoing concern about that.

The forest industry is the industry that was the most significantly involved and directly affected by land use plans and is still the dominant resource sector in B.C. by a long shot. In most areas, land use planning has given industry their social licence back. Turn back to the late '80's, and industry essentially was losing. There was a possibility on the horizon that industry would not be allowed to operate on public lands, and that's how they operate in B.C. That was a real possibility, and industry has been given that social licence back, because they came to the table and created what people could see was a vision of a sustainable industry.

Certification became a dominant theme in a lot of sectors, primarily in the forest industry, that these plans were becoming the basis for industry getting certified. So, when they want to go and sell their product to clients in Europe and North America, primarily down in the States, they can say "These plans demonstrate that we have public buy-in and that we have sustainability," and that's worth an enormous amount to an industrial sector who is trying to sell products into very competitive markets where the consumer at the other end says, "I don't want to buy trees that are coming from forests that aren't managed appropriately." So, we've had a real benefit that we didn't plan for but which has become really central to planning and that is helping in certification efforts.

Industry remains concerned about their long-term access to the land base, and they were looking for more results-oriented plans. Environmental organizations, a lot of them didn't participate in plans, but a whole bunch of others did; and where they participated, they were often leaders in the process, and they have really strong buy-in to the results. In a lot of cases, they have expectations that there will be more detailed planning carried out at the landscape level or they identify a wildlife level which hasn't been met yet; but we're working on it.

The mining sector walked out of land use planning processes in the late '90's, and primarily they were concerned that the process was designed around forestry, which it was, and that it did not do a good job of addressing subsurface resources; and they complained that the land use planning processes, among other policies, contributed to a poor investment climate in British Columbia.

So, in general what did people say? First off the plans took too long, and almost everybody agreed with this, that the shortest plan to approve took about three years, and the average was probably four-to-five years, and some took as long as seven years; and that resulted in just way too much time from a public process that was very intense. There are stories of marriages breaking down and so on. I can't document those, but I know it caused lots of personal stress, people giving up work time, personal time; and the same thing with the civil servants, many of whom were doing the jobs on the corner of their desk.

A lot of people complained that the objectives in the land use plan were ambiguous. As you search for consensus, at some point you try and massage the language to a point where people can agree, and that often means you kind of just go one level above the point where you're actually exactly clear about what is meant. So, you find some more general terminology so people can move on, and that does lead to a level of ambiguity. So, questions like "What the heck is a special management zone? Your definition of "special" is different than someone else's definition of "special," and we're unable to see whether or not we're actually achieving that on the ground.

In some cases, while the objectives were ambiguous, they may have been too prescriptive around process or how you get there; and in other cases, and I would say this is fairly universal across most of the plans, clear targets were missing. Planning wasn't actually finished. A lot of plans got delegated down to more plans. So, instead of dealing with an issue, they'd say, "Well, let's create a local plan, and we'll deal with that one in the future, whether that be detailed access plans or biodiversity plans or something else." So, from a planner's perspective, it's an ongoing industry; but in terms of trying to create certainty, it's not really the best thing to do.

In a more general sense, there was a concern from some people, saying, "Where was the science? A lot of these decisions were made by people talking, and we didn't see the scientists in the room. We don't see how people used science as a basis for their decisions."

Finally, how about monitoring, and that's a piece that we're trying to tackle now. If you've got a plan, we have to make sure that we're monitoring both its intent as well as its actual implementation.

That takes us forward to about 2001 when a new government swept into power, and you'll catch a theme here: A new government in power; a new land use planning program. It kind of signals the political element of land use planning. The Liberal Government had what they called their "New Era Commitments." The first one is they want to get land use planning or comprehensive land use planning finished by 2004. A lot of economic sectors said that this ongoing planning process that could take decades is just causing too much uncertainty for the economic sectors; and as a result, the government is committed to finishing six more LRMPs by 2004.

In addition to that, they want to have a stream-lined process. They have to get those timeframes down so it's more manageable from a public perspective, from a government perspective; and that's going to mean we focus our processes more on substance. There were processes that took a year, a year-and-a-half just to agree on their terms of reference; and they'd have very long and interesting debates about the colour that the map should be, whether you should

call it “special” or “integrated” or something else; lots of issues around labelling and procedural. We’ve got to move past that and focus on the real power of the consensus, which is on the substance. What do you want to have happen on the land in 100 years, in 50 years, in 20 years. So, we’re trying to make that shift to a more substantive focus. In one sense, that’s a structured consensus. We’re not seeking consensus on everything. We’re seeking consensus on the things that are the most important and the most fundamental. It’s easy, very easy to get diverted into stuff that people think is procedurally important and spend a whole pile of time on it when you find out later that you then collapsed all of your tough negotiations into six weeks and say, “Boy, we spent three months talking about that doggone socio-economic report, which maybe didn’t make a lot of difference in the end; and then, we had six weeks to do the hard stuff.” So, we’re trying to structure the consensus around those issues that are fundamentally the most important.

The third “New Era Commitment” is using science as a basis for decisions in a clearer manner.

I’m going to talk briefly about the North Coast LRMP, which is an example of these “New Era Commitments” and tries to incorporate the learnings from the first 10 years. We have a website. This is a terrible website address, so if you want to know more, just do a search on a good search engine for North Coast LRMP. That LRMP was convened as a public table in February, 2002. It’s deadline for completion is December, 2003. So, in total we’re targeting a 22-month public process, and that’s down, as I said, from an average of about four years from the previous ones.

In terms of streamlining the process, we’ve employed what we call a “purasectoral model”. For process people, you’ll know what that means. There are only about 19 people sitting at the table, whereas in a lot of cases it was 25/30. In some cases, they had like 70 people participating in these processes. As government-appointed co-chairs, we’re supposed to provide more leadership at the table. I won’t spend a lot of time on the process side, but I want to focus a little bit on the science-based piece; because I think that’s most relevant to what you guys are trying to do in this workshop in the next couple of days. Trying to build science more clearly into the process, the first thing on the coast is there’s been something called a “Coast Information Team” formed, which supports three LRMPs on the coast; and it’s unique in that it’s co-chaired by Government First Nations, it’s funded by Government, industry and environmentalists; and its purpose is to provide independent science for the three LRMPs. So, it’s a unique model, the three LRMPs, and I just flag it; because if you’re interested in this kind of stuff, it’s actually a very groundbreaking kind of process.

Another piece we’re doing in the north coast is incorporating explicitly, using ecosystem-based management; and imbedded within ecosystem-based management are two concepts that directly link to the concepts of cumulative

effects. The first one is using thresholds, both as a basis for analysis, as well as a basis for actual management decision-making; and that relates back to trying to understand what the range of natural variation or variability is within your ecosystems as a framework for how do you get to thresholds.

The second one we're doing in trying to make it more explicit is using a criterion indicators framework that's been developed for Canadian Council of Forest Ministers and is being used for sustainable management planning. That includes basically identifying criteria indicators and targets. Again I'll just flag that to give you a sense that we're now on the road of trying to build in these kinds of tools, because issues like targets are very much the kind of tools that I think you're looking for around how do you grapple with this cumulative effects piece in regional land use planning. So, we're now just trying to build those pieces into the planning framework ourselves. We're using a tool called "environmental risk assessment" and another one "spatial temporal landscape modelling," which I can explain to people a little bit about later, but basically fancy computer programs.

The point that I want to dwell on a little bit more is about in these wicked problems, how do you deal with the integration of science and decision-making; and what we've done, through a couple of our research staff and some of our technical folks, is develop what we call a "collaborative decision support framework," and I'll just expand on that a little bit. Typically the common approach for integrating science within management is that science is over here, ivory tower, scientific method, very pure; and management is over here, kind of messy, sometimes a little bit dirty, and scientists provide wisdom over to the managers, who read it, they get extension notes, they go to some workshops, they come away much wiser and they make good decisions.

In that paradigm, researchers develop a model, and they propose applications in a management context. Well, we all know that that model fails for a whole bunch of reasons. First, it assumes management decisions are based primarily on improved knowledge of the system; and if you go back to the wicked problem definition, if these are wicked problems, that really doesn't come true, that management decisions are based on a whole bunch of other social factors, as well as on the knowledge of the system. Often science ignores social, economic and political objectives; often. There are scientists in the room, and I don't want to be too critical, but that's often. What we've tried to develop in the North Coast LRMP is a collaborative approach where management and science are linked in an ongoing way actually imbedded within the process; and the goal is to increase the understanding by decision makers. That means not only the decision makers in the statutory sense but also the decision makers in the sense they're the key stakeholders who are at the table; provide information in a relevant timeframe. It's great to have science, but if you've got perfect information that's a year too late, it's useless. You need to have information that comes about in a timely manner so it's actually employed.

You need to involve and inform the stakeholders. The science has to be credible. We had an example of where there was some excellent science done by some people in a very far-away institution somewhere down in Colorado. They tabled this eloquent, beautiful map on the planning process, and it was wrong, and people jumped all over it. Even though their methods were wonderful, they had not actually been on the ground the way some local people had. They'd made some assumptions. They stated them in the scientific method, and that was all great; but they were so wrong that people just basically threw the entire product out. I think that was unfair in a sense, but it was reflective of how the disconnect between science and management can take you down some paths which aren't very productive.

The final piece is we want to make sure that the decision-makers are much more articulate about documenting the rationale for their decisions. Where did you use science? What kind of tradeoffs did you make? What were the numbers that lay behind your eventual choice? If you can be more articulate about how you got to those, that wisdom that comes at the end of your process, then you can show where science was imbedded in the decisions.

This is what our little analysis team calls their "egg diagram," and it tries to show the collaborative framework that we're using for integrating information and analysis and science within the process. You'll see on the outside of the egg, the egg essentially represents all the people who were involved in the decision-making process. The outside of the egg is the participants, the stakeholders in the community; and as you move down through the centrepiece of the egg, it's what we call "topic experts," people like the caribou habitat specialist and the grizzly person and the timber supply person and so on; and at the very middle of it is a core team who essentially create a modelling environment which integrates the knowledge, skills, questions of the people on the outside of the egg with the domain experts in the middle through a dynamic modelling environment that feeds back on an ongoing way throughout the process.

I just want to get this point across, though, that essentially they are not viewed as separate bubbles, one feeding the next. They have to be built together. They have to be integrated, and that's really what the egg is designed to represent.

Here is another one that tries to show that the information piece is a piece about science. Talk about knowledge, you've got topic experts and published material, but you've also got local knowledge, First Nations, traditional ecological knowledge. That knowledge comes from all the pieces of the egg, not exclusively from the scientists. Over on the one side you have all these models, these tools, which are very useful and can be a bit dangerous sometimes.

On the other side, you have other kinds of tools; and the reason I wanted to show this is notice the top bullet point on the tools piece "beer coasters". Don't forget

there are some really, really simple tools where a bunch of people sitting around with informed judgment can get you the 90 percent solution with very little effort; and you have to try and use those tools if you're going to get planning decisions in the right context and the right timeframes.

So, the message from our modelling folks is that the modelling process must adapt to fit the decision-making process and not vice-versa.

So, where are we at with the North Coast LRMP? First the process itself is actually on time. They've met their major milestones and are now entering scenario development phase. So, in terms of process, we're on schedule to meet this 22 months.

Strengths: It's got a stronger scientific basis. It will be more credible locally and internationally. We have First Nations participating on a government to government basis, which is very significant in British Columbia; but there are a bunch of risks. There's too much work, there's more information to collect, there are more scenarios to analyze, there are more issues to discuss, there are more policies to understand. Every table meeting you go to is two-to-three days long every six weeks with two or three days of working groups in between, and there's not enough time on the agenda, there just won't be; and these things continue to come up every meeting, "I want to talk about this. I want to talk about this. We need more time on that topic." There's not enough time. These are public volunteers. Government staff, they're paid, but they're busy, too, and we have other planning processes that we have to move on to.

There's not enough money. Even though we're spending what I think is an awful lot of money on these planning processes, we could triple it, we could quadruple it; and we would not go through that menu of things that people want us to do to call the process "credible".

It's also too complex. We get a lot of information overload, people asking, "Can we talk about this"?

And you say, "Well, we talked about that six months ago, and you were there asking questions. You just happen to have forgot about it, because what we talked about last week pushed that knowledge out the other side of your brain."

Then you get what I call "The big fat questions." So, what is ecosystem-based management? What's a reasonable risk? To whom, in what timeframe? What is sustainability? Some people think one leg of the stool is too long, the other leg of the stool is not long enough. You can sit in the pub and talk about this endlessly, which is useful. What's fair? To whom in what timeframes? These really pressing questions that underlie what we're trying to get at in the land use planning that haven't been solved through all this analytical stuff that we've done

and essentially come back to ethical and political constructs that you have to still deal with. They haven't gone away.

So, where are we at? We learned a whole bunch of things. We've changed our process. We're going faster. We're going smarter. We've got some things that are working. We still have a lot of people out there, going, "Yes, this is still not 100 percent; because at the end of the day, it's still a wicked problem." You can't get away from that.

So, where do you go from here? Observations and recommendations, and I'll keep these fairly brief: First, fundamentally land use planning is about people, and we can't lose sight of that. At the end of the day, the recommendations we would use from B.C. are: Collaborative process needs to be fundamentally imbedded in your process. There is still a large temptation in B.C. to turn our backs on collaborative process. There's a lot of people who say it was a waste of time, didn't get the results that we want; but in my opinion and I believe in the opinion of most of our practitioners, that would be a serious error, that that's been a big strength in B.C. Use consensus-building techniques. Use interest-based negotiation techniques; but don't lost sight ultimately it's a people problem.

Observation 2: Science and information are often used as a replacement for judgment. It's easy to stand around a problem, which is really a judgment problem, a moral trade-off problem or a political problem and say, "I don't want to disagree with you people or have a knock-down, drag-out difficult debate about what the right solution is. Let's do another study." And you see these tables that sort of wander around the process, kind of avoiding what's really there in the middle, which is a trade-off that they have to make, which is a disagreement, a fundamental disagreement by humans that they have to try and resolve; and they want to say, "You're the experts, give us another solution", and avoid the real problem that they have to face. Don't fall into that trap.

Second is imbedded in that is you need to find some way of bringing that science together, and I recommend using this collaborative decision support process. Engage your technical people in the process. Bring those domain experts to your planning table. Let them be there, witnessing the debates and the trade-offs that are going on with the public. Bring them together as a whole and not as separate entities.

You need to also clearly understand and establish the role of science in social issues. You need to get that straight. They are not a replacement for one another. If you're having a social choice problem, be clear about that and make sure the scientists understand that.

You also need to bound the issues. Rigorously scope your information and analysis. You can't do it all. You have to pick the most important pieces, and that's really hard because something is important to everybody; but you have to

find some way of saying, “Yes, these top five or top 10 or top 15 issues are the ones we’re going to spend our resources on.” Also pick on the ones where you know that the back of the envelope is going to get you there. Use the back of the envelope. Don’t build a \$10,000 or \$100,000 model to solve a simple process, and that means using the simplest and most defensible tool for the question.

Finally my last observation is that leadership does matter. If I started over again, I would recommend the first thing to do is go out and either find your best staff and bring them together into a team; and if you don’t have the people with the right skills, go and get them. Because at the end of the day, it’s going to be a handful of people amongst the public, amongst the First Nations, amongst the governments; and there will probably be three or four key leaders that you will be able to point to in one process that are the difference between why that process succeeded and why another process failed. It’s always those key leaders who are going to eventually make the thing happen.

Also use multi-disciplinary teams. Again don’t let your people work off in isolation, ignoring the complexity and the interconnectedness between the problems they’re trying to face.

Finally invest in your staff. Bring them to conferences. Let them share their ideas with other people who are doing the same kind of work and facing the same kind of problems. Train them. Invest in the kind of skills that are needed for problem-solving, for partnership building, for communicating.

I think that’s it. I wish you guys “good luck.” I’m really excited. I think the topic that you’ve got is really, really relevant about trying to integrate cumulative effects with land use planning. That’s really where we’re at in B.C. about trying to build science into our process more explicitly. I wish you a really good couple of days, and I’m excited to participate. Thank you.

3.2 Questions and Comments - Kevin Kriese

C CHAIR BILL KLASSEN: Thank you, Kevin. We’ll take time for a few questions, and then, we’ll have Lyn explain the discussion session. So, are there questions?

Q JEFF HAMM: My question is with regard to your egg diagram. In the centre of your egg diagram you have the core team. You made a reference earlier to having some of these experts working off the corner of their desk. In your North Coast LRMP, are the core team dedicated simply to the completion of the land use plan?

A Good question, are they? One’s corner of the desk, but he’s very good at that. A couple are, yes; the answer is “Yes,” we’ve put more resources into having those people at least dedicated to the work load that they need

for that. We've had to actually do that partly by consultants. One advantage of consultants is when you pay them to get a job done, you can say, "I need that job done by this time," and it's a little more strict that way.

Q MIKE WALTON: Two quick questions: I'm curious about multi-agency cooperation, and was there a specific accountability document built into that? You may talk about multi-agency cooperation, but what was the hook? Where is the accountability for that?

The second question is: Because protected heritage areas are not an issue in the Yukon and we have no disagreement about the importance of that, I was just wondering, upon reflection what would be your observation if protected areas, as a concept, were not part of the planning process?

A I'll try to deal with the first one. In terms of accountability of the multi-agency group, there were interagency management committees formed in every region, and they were mandated by the senior levels of government to undertake land use planning and protected area strategy implementation. So, they were given a job, they were given a chair. Their bosses told them to do it, and they were essentially the group ultimately accountable for regional delivery probably in the same way as your regional land use planning structures are mandated and have accountability. So, yes, they did have accountability for one specific set of issues, and that really did drive them to focus on the mandate and get it done.

The second question: If protected areas weren't on the table and you were still doing land use planning, what would drive the agenda? That's a good question. In some ways, I think actually the planning agenda would have done a better job of a whole bunch of other things, i.e. trying to deal with forest management issues like how many roads are too many roads in grizzly bear habitat, which we never had time to get around to; where should public recreation take precedence over commercial recreation? Where should snowmobiling not be allowed for back country skiing? We had a whole list of issues, probably about 25 of them, and you're familiar with them all; and because protected area strategy work was on the agenda and it's so tricky and so damned consequential, because it's a decision that's essentially supposed to be forever, it took up probably 50 percent of the mental energy, and we skimmed over the problems more lightly. So, my guess is if the protected area strategy hadn't been around, we would have gone much deeper around other kinds of resource tradeoffs between the different resources.

Q GARY MILTENBERGER: Kevin, in Yukon we've got three forest management planning processes going on, one in the southwest, one in south central and one that's kind of the third or fourth time around in

southeast starting up; and these are being done in isolation from the regional land use plans. I'm just curious if you'd kind of give us your thoughts on what sort of pitfalls we might be walking into by doing that.

A It's a good question. Obviously what I suggested earlier is that the resources need to be planned in an integrated fashion, but there is room for -- and in B.C. we have -- forestry planning that goes on as an output or a next step beyond land use planning, more at the tactical level. So, as long as you're integrated at your strategic level and you're not stepping on each other's toes with regard to whether forestry is acceptable and the values that forestry is trying to incorporate, in my mind or in our context, those are land use decisions at the strategic level. Then forestry can focus on things like what's the best silviculture strategies, access regimes, some of the more tactical issues around forest management planning. Then you won't have a problem with the interface between the two. But if you're both dealing with the fundamental questions about "Should this happen on this hectare of land" then you're likely going to be having a conflict.

Q RON CRUIKSHANK: British Columbia has not really settled on land claim agreements as a means of dealing with First Nations rights. I'm wondering what impact that controversy had on the planning program there.

A It's really different from the start to the finish, because aboriginal rights and title have evolved so much in B.C. since '91. '91 was the first Delgamuukw Case, and we just had another one more recently. It's been different for every planning process, but I would say it caused some uncertainty. You couldn't come to final resolution of a land use planning process in the absence of land claims. It caused a lot of consternation by some people at the table saying, "How can we even do this?" But the ultimate result has been I think actually that land use planning is emerging as either a predecessor to or in some cases, for First Nations who aren't interested in the treaty process a replacement for, at least in the interim, land claims. So, you get cases where most of our LRMPs now have this government-to-government relationship where First Nations are sitting with us at the table on a government basis, and they're actually bringing a lot of their issues around rights and title to the planning table to be integrated with the process; and we're hoping that could become a springboard to eventually solving land claims. More recently I think we've actually got a better solution about how the two can link together with an eventual solution through the treaty process.

CHAIR BILL KLASSEN: Kevin, I would like to thank you for a most useful presentation, and I will now ask Lyn to tell us how we're to operate at the tables again.

LYN HARTLEY INSTRUCTIONS FOR GROUP DISCUSSION - 25 MINUTES

The meeting adjourned at 10:03 a.m.

The meeting resumed at 10:33 a.m.

4.0 Introduction - Ron Cruikshank & Bonnie Hurlock

CHAIR BILL KLASSEN: The next presentation following the presentation on land use planning processes in British Columbia, we are now going to look at land use planning in the Yukon. This presentation will be provided by Ron Cruikshank and Bonnie Hurlock. Ron is Director of the Yukon Land Use Planning Council and has 13 years of professional planning experience in northern Canada, in a variety of planning categories. For the past four years through the Yukon Land Use Planning Council, he has assisted and coordinated in the implementation of Chapter 11 of the Umbrella Final Agreement, the chapter on land use planning. He is familiar, because of his professional experience, with planning processes, regional planning, both in the Mackenzie Valley, under the *Mackenzie Valley Resource Management Act* and through Yukon First Nation Final Agreements.

Following Ron's presentation Bonnie Hurlock will come up, and we will have the question and answer for both of them after Bonnie finishes speaking.

Bonnie is the Executive Director of the Teslin Regional Land Use Planning Commission. She has lived and worked in the Yukon for the past 20 years. She came here initially, working with the Northern Affairs Program developing policy for the Northern Land Use Planning Program and was involved in the Greater Kluane Regional Land Use Plan. She has also worked as a manager at the Teslin Tlingit Council and Kwanlin Dun First Nation. Prior to coming to the Yukon, Bonnie worked for many years in the field of regional land use planning in Alberta.

So, I will invite Ron to come up and speak, followed by Bonnie.

4.1 Land Use Planning in Yukon - Ron Cruikshank

RON CRUIKSHANK: Thank you, Bill. I feel like the poor golfer who has to tee-off after Tiger Woods' hit. The next time I organize a workshop, I'm not going to be the guy who follows the keynote I've decided; but I would like to thank Kevin for his excellent talk. I would like to make a bit of a connection between his speech and my current situation. Kevin's last point was "invest in staff;" and if Lesley's around my contract ended last week, and I would just like to reiterate the point that Kevin made about investing in staff.

Speaking of staff, I would like to introduce the staff that I work with, and if they could just stand up: Gerald Isaac at the back, First Nation Policy and Planner in our office; Jeff Hamm, you can't miss him, the big tall guy and Rhoda Rebban if she's around, she's our financial administrator and Shawn Francis is the new man in our shop, planner. So, that's who works at the secretariat for the Council.

I am going to speak mostly on regional land use planning because that's what I know about. I don't know a lot about cumulative effects, and part of the reason that we're having this workshop is so that I and my staff become more familiar with the relationship between planning and cumulative effects. I haven't had a lot of experience dealing with cumulative effects in the regional planning world. We didn't deal with it a lot when I did the work in the Mackenzie Delta before I came here.

I am going to begin with a little introduction: My personal journey into the world of cumulative effects, because it's something that I've had to get into over the last about month. I'll then talk about the context for planning in the Yukon, the status of the planning work here. I'll talk about the common land use planning process that we've developed as an opportunity to manage cumulative effects, and then, a bit about the future of planning in the Yukon.

When I was first introduced to cumulative effects as a potential topic for a workshop and Rob Walker approached me about following up the previous workshops with one on regional planning, I hadn't attended the other workshops; but a few Yukon examples of cumulative effects immediately came to my mind. One was the difficulty that the salmon are having in the Yukon watershed, and it's not likely that one alteration or change in the system that we're causing that's causing the population decline; it's likely many. So, that was one example that I had.

The second was the Southern Lakes Caribou Herd and the difficulty they're having in the greater Whitehorse area because of our presence here. So, those were two that popped out of my head right away as far as Yukon examples.

A third came to my mind, and that was because we were working on a presentation or a display for the Cordilleran Workshop, and that was the cumulative effects that the Chamber of Mines talks about. They talk about the land and resource decisions that are being made throughout the Yukon and the cumulative effects of them and the impact that it is having on their industry. So, these were the ones that came directly to mind when I entered into my thinking. One is a cumulative environmental effect, and the other is a cumulative economic effect; and they're both cumulative effects, but I couldn't immediately link them, but I knew they both were cumulative effects that were relevant to the Yukon.

So, I talked to the Council about holding this workshop, the Council, being a council that knew regional planning, made the point that we really need to get

into the topics of cumulative effects that are beyond just the environmental effects that have been the theme of the last couple of workshops. They also pointed out, as Lesley did in her presentation, that through the strategic planning work that we did, we identified the need to link to the DAP Chapter and the YESSA legislation that's coming down the pipe.

Thirdly, the natural thinking that arises when you think about understanding cumulative effects and managing them through regional planning and the opportunity that presents to attain something called "sustainable development". So, this was the kind of thinking I was doing and others were doing prior to this workshop.

I then asked Rob Walker for some documents on what cumulative effects was all about, and he sent me a Steven Kennett paper; and in it Kennett concluded in his look at how cumulative effects assessment is currently done in most jurisdictions, that project-by-project assessments only allow you to do so much thinking on cumulative effects; and it's really the regional land use plans that are required to be written and considered to really give you the context for a proper cumulative effects assessment. He also points out that government versus project proponents should assume the primary responsibility for addressing cumulative effects. When I got thinking about what the land claims allow us to do, I think that this particular point could be brought into reality here in the Yukon, and this could happen particularly if we define the relationship between land use planning and that DAP Chapter, Chapter 12, as well as other legislation and policies and management. As I got further into this, I realized that this workshop was a real opportunity to bring some improvements to how we do land and resource management here in the Yukon.

I had a few other thoughts while I was getting into this world. One is the point that the Council brought that the regional planning process allows for the positive effects of land uses to be considered. If you've ever read the legislation on cumulative effects, it's almost always evaluating the adverse cumulative effects. People ask, "Well, where are the positive effects considered in all our thinking about potential land use?" I think that regional planning does allow for the positive effects to come forth.

My last thought on all this is that cumulative effects alone and understanding them isn't really the core of our land use conflicts. It's weighing the positive and negative effects of land uses that's the core of the conflicts. I think Kevin talked about this core problem, and it's really a values problem; but I think cumulative effects, while they're important to understand, we really get at the core of the conflicts when we try to evaluate the positive and negative effects of different land uses. That was sort of my mental immersion into cumulative effects and their relationship to planning.

The Council has begun to consider how we're going to link these planning processes, and there are a lot of different linkages that we need to think about. There are the ones just from the land claim agreement and all the other chapters that deal with land and resource management in one way or another. The DAP Chapter I have highlighted there, because it's probably the most important for this workshop. Then there are other processes that may occur outside of the implementation of land claim agreements, which these plans must try to integrate, as well. So, there's quite a challenge there, and we're just beginning to get into how it's all going to work. We're planning to produce a series of discussion papers on this, and we will involve obviously the other half of the link as we do these.

The really interesting thing I think the DAP legislation does offer us, though, is to expand our thinking beyond the environmental. The quick definitions, and this is précised from the legislation, is the environmental assessment will be done with the definition of "the environment" being air, land, water, living and nonliving components and their interactions; and that the socioeconomic assessments will be done regarding the economy, health, culture, traditions, lifestyles and heritage resources.

It's that second set of assessment elements that I think we need to deal with. It's coming down the pipe, and we haven't really thought that second one out. We've got some experience with doing environmental assessments because we've been doing them here in the Yukon and elsewhere for years, but that whole second set of assessment criteria is something which we haven't got into yet. In your discussion groups, you may key in on that. It opens up a can of worms, I think, in a lot of ways; but it also opens up a lot of opportunities. So, it's the socioeconomic effects that I think we need to give some more thought about before that legislation comes in.

The Yukon, as anyone who has worked here knows, is experiencing a lot of changes in the way that we manage land and water. The land claim agreements have come in. Devolution is about to occur. We have a new Government just elected. We have the new act coming into place. Regional land use plans are being developed, and single resource management plans are still continuing to be written. I asked my GIS tech man to try to give me a graphic to illustrate how we're feeling in the Yukon. I couldn't integrate any of the text for this one, but this is sort of what happens when one wave of change occurs somewhere; but if you actually ask it to demonstrate four or five waves of change arriving at the same time, this is how you end up feeling. If you're a boat or a land user floating on that, it can be a bit of a rocky ride.

To continue with the wave analogy a little bit further, I think all these waves of change are intended to create a better Yukon; and any time the waves come together, if you've played with a two-year-old in a bathtub or knew anything about wave theory, when the energy from waves meets one another, they can create

one large wave if it's done properly or if the energies work with one another, but if the waves don't come together, they will actually really destroy one another. What this really calls for, of course, is integrated resource management amongst all those waves. Recently the Yukon Territorial Government held an IRM workshop, and I thought, "Boy, that's a smart thing," because we need to get our act together to make sure that this wave actually does come together and all the energy leads to a better Yukon. Defining what "a better Yukon" is, though, I think is a real challenge. The claim gives some guidance that sustainable development is something we all should be striving towards. I think the regional land use plans can do a lot to define what a better Yukon is region-by-region as we work our way around the Territory. That's the end of the wave analogy.

I'll get into a little bit now about what regional planning is. Most people, and I think rightly so, think of regional planning as a way of making all these land uses happen while avoiding conflicts. Despite the fact that the Yukon is a fairly undeveloped region relative to the south, we still have all these land uses, and they still do conflict with one another. Our goal is to meet resource needs while avoiding resource conflicts, and regional planning can do some long-term thinking about sustainability. I like to call it the "long-term health of a region."

What does regional land use planning do? It establishes a vision for the region. It uses comprehensive knowledge, scientific and traditional. It provides options for the future before making those decisions so people can see what might be coming and what option they want to choose for their future. It should be the basis for decision-making, and that one is absolutely crucial; and it needs to be reviewed periodically and it needs to be flexible, because information changes, the world changes.

I just would say here that first one, "establishes a vision for a region," I think if the first land use plan in a region does that, it's probably done its job. I'll talk a little bit about that later.

The planning cycle is another crucial concept. The land use plans that get produced is only really the first stage. The approval process usually requires a bit of massaging of that first plan; but the implementation and revision is crucial to the flexibility and adjusting these plans over time. We would hope to have a planning cycle of five years. That's roughly what the land use plans are usually cycled through.

A bit about the land use planning program that was done before hand and some of the problems it had, the Kluane Plan and some of the other planning efforts, I think you can't plan before you've got land claims settled; the reason being if you haven't settled who owns and who manages the land, how do you make a decision on how the land is to be used? I think now that we have some clarity on who owns and who manages the land, we can get into the question about how

the land is to be used. I do think, as Kevin pointed out, that regional planning can improve certainty and clarity with respect to land management and use.

We can begin planning -- and this is some of the technical parts of how we get the job done here in the Yukon, we can begin planning here after the claims are settled and when Canada, Yukon and First Nations agree to establish a commission and when they agree on what Lesley was talking about, the general terms of reference or the marching order for the commission. Canada will no longer be a signatory to the commission establishment of agreements after devolution. So, that's a significant change as far as how the planning commissions get going. We have many First Nations which have settled claims, and we've begun to develop planning regions and bring some clarity to some of the overlap problems that exist as far as Chapter 11 is concerned; and we have begun, as you know, in two areas, north Yukon and in the Daak Ka region with the Teslin subregion. It's actually not a subregional plan but the area that was available for planning because they settled the claim being currently active. These are the four main stages. With the Teslin Commission, general terms of reference have been developed and the commission has started up. They are involved with preparing the plan, and Bonnie will talk a little bit more about their whole process. We hope to have an approved plan or at least at the approval stage in about two years.

There is the map for the north Yukon region.

One of the key concepts is that the people who sit on these commissions are not representatives of the parties. They have to remove their hats and become citizen planners for a while and represent only the interests of the planning commission and Chapter 11 while they're sitting at the table. That's a hard thing for a lot of people to do, but it's crucial for their independence as an independent public body. They're comprised of First Nations and government. One-third will be nominated by the Yukon First Nations, one-third by YTG in the future commissions, and then, one-third based on the population of the planning region. We have 7.4 million dollars for land use planning in the Yukon, which was for the first 10-year period. The Council's budget is \$447,000 a year. That gives you some idea. The goals are really sustainable development by balancing economy and conservation needs. The plans are to meet local, territorial and national interests. This is a question of scale: What scale are they planning at? You will find that when you do regional planning, regional, territorial and national interests all come together. It's a really tricky thing for a planning commission to deal with. We have to involve local people, respect First Nations knowledge and culture and obtain this illusive sustainable development.

The concept that the planning commission is doing the planning work or the production work and the parties are approving and implementing the plans is a crucial one. So, we have one body doing one thing, the production, and the

primary responsibility for implementation will be the approval bodies and how they're organized.

We have developed a common land use planning process. These are some of the products from our last workshop. You can find this stuff on the website to get a little bit more detail about what we discussed. As Lesley discussed, this is still conceptually open to further refinement and greater detail; and we're using the fact that the Teslin Planning Commission and other planning commissions will give us greater clarity on elements of the planning process that seem to work here in the Yukon.

A whole bunch of the products that come from a land use plan, a lot of these are very useful to other organizations: issue identification, data collection, resource assessment reports, integrated resource management strategies (how you're going to bring it all together), forecasts for land use, i.e. the future, developing scenarios, measures for mitigating land use conflicts, cumulative impact assessment statements, and then, of course, the draft plan. All these products, if you're involved in land and resource management in one way or another, are very useful to not only planning groups but to whatever you may be doing.

Planning is occurring throughout the north. This actually isn't a complete list of all the regions that either are being planned or have plans. I know that there are some more now in British Columbia. There's one just downstream from Dawson that's undergoing some planning in Alaska.

My last point is that we have kind of a hole here in the Yukon, and we need to get on with filling that hole with the guidance that the regional planning efforts will give. I'm hoping that in the next 10 years we can fill that hole.

Just before I go into Bonnie's talk, she's developing the first plan for the Teslin region, and I have a few comments about the first plans; because I was doing one for the Mackenzie Delta area. They're the most difficult because establishing a common vision and the values associated with that is what the first plan does primarily. They're also the most important plan, because they set the stage for future plans. You're going to revise the plans in the future, but you don't tend to do a complete overhaul. So, the first plans are most important, because they really determine the future beyond the five-year period that they are usually in place for.

Lastly you can't do everything in the first plan. You should anticipate future revisions allowing you to perfect the plan and the mechanisms that will make the vision that you create into reality. When I think about this, I think about the link to cumulative effects and the thresholds that everybody wants in these plans. You may not be able to do that in your first plan. You can anticipate refining that kind of thinking later on, but in your first plan get the vision for the region set.

That's all I would like to say, and I will introduce Bonnie for her talk on the first plan that's being developed for the Teslin planning region.

4.11 Land Use Planning in Yukon - Bonnie Hurlock

BONNIE HURLOCK: I would like to say "good morning" and to thank Kwanlin Dun for hosting the workshop in their traditional territory. I would also like to thank the workshop sponsors, the Environment Directorate and the Land Use Planning Council, for making this opportunity available to the Commission, government representatives and all of us Yukon professionals to allow us to learn from the experts in the field of cumulative effects management.

I would also like to note that some of our Commission members aren't present today, and that includes Richard Sidney and Sam Johnston. However, we do have another Commission member who is present, Patrick James. Patrick sits on the Commission, representing the Carcross Tagish First Nation as the Teslin Commission will eventually expand or extend into the greater Daak Ka region.

The members were appointed to a three-year term in August, 2001. I am sure many of you already know this, however, I will repeat it anyway, that the Commission is a public body established under Chapter 11 of the Teslin Tlingit Council Land Claims Agreement. Its primary job is to develop and recommend a regional land use plan to the Governments of Yukon, Canada and the affected Yukon First Nations. Once the plan is approved by the parties, the Commission has a role in monitoring compliance with the approved plan and making recommendations on variance and amendments to the plan.

In July, 2002, the Commission hired staff, and that's how I got to stand up here today. We also established a planning office in the community of Teslin. The first piece of work that the Commission undertook to do was to develop the precise terms of reference, and that's primarily what I'll be speaking about today. It was developed by the Commission to use as a guide to direct the planning process and the work activities to prepare the regional land use plan.

A summary of the precise terms of reference is contained in our information brochure, which the Commission published in early January. I have a bunch of copies here for anyone who is interested if you would like to come and see me over the next couple of days, and I'll hand out copies to you. Most of the information I will be talking about today is in the brochure, and it's also on the website. Just to note that Bob Sharp, one of our co-chairs is heading up the project to develop a website with Tim Hodgson, a contractor. The website will also house the GIS database information so people will be able to go on there and do their own individual analysis and play around with it and not have to worry about affecting the baseline GIS information.

The precise terms of reference are developed specifically under a particular clause in Chapter 11, which states that the detailed instructions approved by the Commission to carry out the planning process must address the Final Agreement, principles and objectives for the planning and management of the natural resources in the Teslin Tlingit Council traditional territory.

Now, I just want to make a comment here, because when I present some of this information, I'm going to try and address what this workshop is all about, and that's linkages; and to conceptualize how we see some of the linkages that need to be addressed in the Teslin planning program. One of the things that we thought about right at the very beginning is that the Commission may very well be preparing the first regional land use plan in the context of the Yukon First Nation Final Agreements and that this is a really big responsibility. As Ron pointed out, whoever goes in the lead, often it takes more time to do things and, as well, can be setting precedence. So, the Commission is very aware of their responsibility and is taking this mandate extremely seriously. They want to get it right. They recognize that they need to be knowledgeable about the Final Agreements, to be innovative in designing effective land management and planning tools and to also be very sensitive to the Teslin Tlingit culture and traditional life ways.

The regional land use planning and management regime must sort out how the various interests in lands might be accommodated in the final draft plan. The Final Agreement clearly relates planning to human needs and includes a number of guiding principles, for example planning must be about the well-being of the Teslin Tlingit and the region's residents. The Teslin Tlingit and regional residents must also provide input into land use planning. The plans must provide for the conservation, development and utilization of the land and natural resources in the region. The processes are to be systematic and integrated with all other planning processes. Planning requires the active participation of the three levels of government, and this is a really important point for the further implementation of the plans. Planning is about promoting and extending certainty, which other people have already talked about. And finally, planning is required to recognize and promote the cultural values of the Teslin Tlingit and to utilize their knowledge and experience.

The Final Agreement provides a comprehensive, legislative policy management and planning framework for the integrated strategic management of the Teslin region's natural resources. So, the Commission had to think through this framework and what it means for the planning program. Personally myself I believe that understanding and building these new relationships among the three levels of government, the many resource management agencies, the independent regulatory bodies and resource advisory boards and councils will in the end determine the success of land use planning; because it will be through building these relations that the trust will be developed to actually move forward with practical solutions to the issues faced by the regional residents.

So, to help understand the complexity of the linkages between the planning commission program and all of these other processes, we developed a table that describes the functions, structures and responsibilities to prepare and approve and implement and monitor the regional land use plan. Jeff is kindly taking care of all the technical stuff for me. I'm just going to run through that, because I think it's an important framework.

The Commission, of course, is the program sponsor and has the mandate to develop the plan. It develops the precise terms of reference, the plan. It facilitates public participation and representation of the interests. It has to liaise with all the coordinators and decision-makers. It has a responsibility to review and comment on development proposals during the period that the plan is being developed so we're not in a situation where there's a total freeze on anything happening in the region. Also, the Commission reviews the terms of reference for other sector resources planning that may be occurring at the same time or simultaneously to the planning process going on.

The decision-makers, of course, are the parties, the TTC, Yukon and Canada. It's Government's responsibility to set the goals, policy, legislation, et cetera; to approve the general terms of reference and also to approve the plans and any plan amendments.

We have a policy coordinating committee, and I believe this is a very important committee. It's called the "Senior Liaison Committee," and it represents the parties, including CTFN because of the commitment of the parties to eventually broaden the region. That committee is responsible for coordination and Interpretation of policies and programs and to meet and work with the Commission. It also reviews the precise terms of reference and will comment at key stages of the draft plan preparation.

We also have a technical working group, and this group is responsible for helping to coordinate information. The technical working group is made up of representatives from all the parties again, as well as the Yukon Land Use Planning Council is on the technical information, and the Commission chairs that committee. It's our primary point of contact with Government. We anticipate working and we are working extremely closely with the technical working group, and we will be meeting with the senior liaison committee at key stages. We have a meeting scheduled with the senior liaison committee during this week to review the precise terms of reference.

Now, in terms of planning process coordination, because there is a requirement to do that with all other planning initiatives, the key is that the Commission itself is working to communicate and coordinate and link with these other processes, such as the Teslin forest management planning that is currently going on; and as well, any new planning initiatives that would start up in the region, they would

submit the planning terms of reference to the Commission for comment, and we would then work with them to see how we could coordinate our efforts for public consultation, et cetera.

Now, for plan implementation, of course the resource management agencies are involved in that, and we have the parties again, and then, we have various boards and councils. For plan monitoring, the Commission has a role. At the bottom I put “dispute resolution” only just to identify that there are mechanisms in the Final Agreement for the parties to use if there are problems that arise during this process.

There are many other linkages that must be understood in doing the regional plan. For example, the traditional territory of the Teslin Tlingit Council overlaps with many traditional territories of other First Nations. As I mentioned earlier, the Commission is working very closely with the Carcross Tagish First Nation because of the commitment that Government has made to expand into the greater Daak Ka region.

With the permission of Carcross Tagish First Nation, I want to give another example of linkages. Unfortunately, I don't have that on my computer. So, I'm not going to be able to show you that. What the Carcross Tagish First Nation Lands Team did is went through their Final Agreement and they identified all the land use planning processes that they would be involved in, and they are considerable. Just for example, there are about nine processes at the local area planning level, and then, about another nine processes that are on a broader special management area or habitat protected area planning level; also including, for example, their Southern Lakes Caribou Recovery Program and the Kusawa Park special management area. All of this stuff has to be linked together in the planning process. It's a big job, however, I think it's a very important one. As I said, building those relationships are critical to the success of the plan.

I am going to switch topics a little bit here and talk about the planning process that the Commission is following. The process is pretty generic. It is also laid out in our information brochure. The Commission has made a commitment to carry out a community-based planning process. What we're meaning by this is that consensus-building will occur from the community outward. Community consultation will focus on sharing knowledge, articulating values, principles and interest; and the intent of consultation beyond the community is to share the community views with others and to invite others to share their views and interests with the community and with the Commission.

I want to point out that the Commission is an independent forum where all points of view can be expressed freely and debated openly. It is structured to encourage participation by the public, stakeholders and government.

I can just very briefly run through the planning process. We have almost completed stage two. So, for the program start-up, our main piece of work was the precise terms of reference and to inform the public. The Commission approved the terms of reference in September, and we've published our information brochure. We still have some more work to do in that area. We have to meet with the First Nations with overlapping territories and inform them about the program. Under stage two, the research and mapping, we have two contracts out. One is for land-related policy framework, and Laurie Henderson is working on that for us. The other contract is to put the GIS planning database in place, and we have Olsen & Olsen, planning consultants from Calgary, working on that. We anticipate those two contracts being completed by the end of March.

Early next fiscal year we will be moving into Stage 3 and 4, which is the issue identification stage and develop the plan, goals, interests and values. Now, in issue identification, what we will be doing is documenting what concerns the people, Government agencies, stakeholders, et cetera. Also, we'll be conducting community consultation. Listening to what some of the other presenters talked about in the sense of not biting off too much, I think one of the things that's really important is to make sure that the issues that you're going to deal with are very well defined and that you identify who needs to be involved in helping you come up with a solution to those issues. For example, the Commission decided not to go with the broader, interest-based forum from the beginning but to expand the participants on the Commission as needed to address key issues as we could identify the people that we would need to have at the table. Also, we will be working, as I mentioned before, very closely with the technical working group, and we will be holding joint planning sessions with the technical working group and the Commission at key stages of this work so that we have all the input and support and information from the government representatives.

Now, under stage 4, develop the plan, goals, interests and values, this is where we're going to decide what's important for the region and the people, how do the people want to use and protect the land in the future; and we will be preparing a sustainable land use strategy as part of this stage. We will be working closely with the community to do this; and at this stage also, we will be looking at the planning tools, for example, the land use designation system and other planning tools that we will need to develop to address the issues.

Stage five is basically develop the plan scenarios. Stage six is to form the consensus, two other really key stages. Then the final stage, of course, is pulling it altogether into the final draft plan and developing an implementation plan.

As I have mentioned, a couple of the products already that we will have done by the end of March, and then, a few other products; because we're trying to set this up to be product-related so we actually pace ourselves and get things done in a short period of time. We'll be doing a regional issues and opportunities report, as

I mentioned already, the sustainable land use strategy; the resource assessment report, and then, the final draft plan and implementation plan.

I just want to point out that the Commission has decided to get all this work done using a combination of staff resources and contracting out for specific planning projects to professional consultants. What we have done is broken up the work tasks and activities into smaller contracts, rather than contracting out the entire planning process and plan to one consultant; and by doing this, the Commission hopes to maintain greater influence over the planning process and the overall planning work plan. We hope this approach will help the Commission to ensure the principles and objectives of Chapter 11 are addressed through a community-based planning process. For example, the Commission is working very closely with the Teslin Tlingit Council Lands and Resources Department to ensure their cultural and traditional land use database can be used to ground-truth the scientific information produced by governments.

We have how we're going to get all of this work done summarized. Our work plan in the precise terms of reference is a little bit more detailed, but I tried to summarize it a bit here. It's always useful to do that, because each time you go over it, you make a lot of improvements. So, I hope this is an improved version from the original in the PTOR. As you can see, we basically have completed Phase one and two and the products that we have got from that are the operating policies and procedures, our precise terms of reference, the information brochure, the website. We've held a community open house. We'll have the land use policy framework and the GIS planning database by the end of March, and we're consulting with the senior liaison committee. We're working very closely with the technical working group. We will be having a meeting with the elders seniors in the community, and we will be meeting with the First Nation overlapping jurisdictions shortly to incorporate their views and comments on our PTOR.

Then early April-to-June we'll be moving into Phase 3 and 4, and I have sort of combined them here, because I don't always think all that linear, and I kind of see things as looping around a bit. In these two phases, we will be documenting the issues, doing further data collection and developing the vision for the region, defining a resource value criteria and indicators. The products will be the regional issues and opportunities report and the sustainable land use strategy. Again we will be going through another stage of consultations and coordinations with the same people and groups that I mentioned already in Phase 1 and 2.

Moving on to Phase 5 and 6, which is the plan scenario and forming the consensus, these are all fairly standard activities that occur in a planning process; and what we want to achieve in these stages -- this would happen roughly between July and December -- would be to have our land use designation mapping, the land use scenarios, have other planning tools

developed. Again we will be carrying out the consultation and the coordination with the technical working group, senior liaison committee, et cetera.

We anticipate the final stage occurring roughly between December to July of 2004, and then, the final stage, which is, of course, implementation once the parties approve the plan. It would be an ongoing activity, and that hasn't yet been finalized. The Commission will be, of course, addressing some aspects of implementation in the final plan.

What we're trying to do is get this completed within the three-year time current term of appointment of the Commission members, and they were appointed in August, 2001. So, their term would be up in August, 2004.

That's all I have to say, and thank you very much.

4.2 Questions and Comments - Ron Cruikshank & Bonnie Hurlock

CHAIR BILL KLASSEN: Thank you, Ron and Bonnie. We'll take some questions.

Q MARK O'DONOGHUE: These land use planning commissions are independent of government; and from my experience, the biggest thing that can torpedo support for a plan when it's developed in a community is when it comes to the approval stage, the different governments that implement it start picking and choosing the parts that they like and start tinkering with a lot of those really fine tradeoffs that people decided around the table. I'm wondering if there's anything in the process that you're doing to engage the political level of the different governments to make their eventual buy-in to the whole plan more likely?

A BONNIE HURLOCK: Well, we're not working directly at the political level, but we are working at two other levels through the technical working group. We're working with technical people within governments, Canada, Yukon and the First Nations; and as well, we're working with the senior liaison committee, which is at a deputy minister level. That's our mandate, to work at those two levels, and we feel that it's very imperative that we work very closely with both of those groups throughout the planning process to ensure that when we get to the end everybody is on-side as much as possible so it does get approved and it does get implemented. That's about as far as we can go with our mandate.

A RON CRUIKSHANK: As the fellow from B.C., Kevin, pointed out, there is a big relationship between politics and planning. The one thing that the land claim agreements do is they exist regardless who's in power. What you're trying to do, the foundation is solid no matter which government is in power. So, if you base your land use plan more on what

the land claim agreement says, the politicians almost have an obligation to respect what that claim is saying and what you're doing based on that claim, regardless of the changes.

Now, it's obviously impossible to guarantee that if at one stage in the planning process you get general agreement from a government, and then, that government is not re-elected, by the time you get to the approval process -- and it's quite common, this happens in First Nations and this happens with Territorial Governments, as well -- it's not the same government, and you may have to do a fair bit of massaging before you get that plan through the political approval process, because you've had a change in the political structure. There's an obligation on behalf of the approval bodies, i.e. government, to respect what the land claim agreements do and respect the independent public bodies that they create in these regions, i.e. the politicians should listen to what the planning commissions have to say.

A BONNIE HURLOCK: I just want to add to that, also if it's a community-based driven process and if it's supported by the community in the region, I think that goes a long way to sending a message to the political level in terms of approving the plans.

Q JILLIAN McKEE: I just was curious when you said something about it not being an interest-based approach but you're inviting people to the table as needed. I wonder if you could talk a little bit more about that and who you are inviting in that way.

A BONNIE HURLOCK: Sorry if I left the impression that it's not an interest-based process. It will be, but what we're not doing is establishing a broad planning table at the beginning of the process. For example, we're not extending the Commission beyond its current membership and inviting other interested organizations' representatives to be part of the full process. The Commission will stay as it is, a six-member, seven including Carcross Tagish First Nation, core body that will work with the technical working group and the senior liaison group; and as we deal with specific issues, we would invite others, through both the planning community consultation processes and through maybe specific meetings, et cetera, to be involved if they have an interest and a need to be involved in solving those particular issues.

What I'm saying is it's a little different than the B.C. model where earlier this morning I heard with the B.C. model, they brought in a fairly large number of people to sit as a planning team throughout the planning process.

Q BOB BAILEY: I take it that the technical working group you describe, is that how in the sense of Kevin's talk about the B.C. model, that the science gets integrated with the planning process, through the technical working group?

A BONNIE HURLOCK: Pretty much so, as well as through the contracting of specific professional consultants to assist and work with the Commission and the technical working group. Personally I think it's quite a good arrangement, because the technical working group members come from each of the parties, and they then can coordinate throughout their governments. So, rather than us trying to run to every department and make contacts and liaison and get information and whatever from all the departments within government, we have a one-window approach into each government.

Q NORM SNOWSHOE: I have a question for Ron in regards to process. Ron helped a lot in developing the Gwitch'in Land Use Plan and establishing a process to do it. I was just wondering how different are the new processes, compared to the land use planning?

A RON CRUIKSHANK: How different is the NWT from the Yukon?

Q NORM SNOWSHOE: Yes.

A RON CRUIKSHANK: I'll tell you the establishment of a planning commission in the Yukon is a really difficult thing. In the NWT, the establishment of the commission comes with the settlement of a claim, a planning board on that side, whereas here there are a lot of steps and a lot of politics that we have to negotiate before we even get a commission on the ground.

The other thing, and I think probably even more significantly, is the difference between the resource management legislation in the NWT and the environment here, i.e. the *Mackenzie Valley Resource Management Act*, which is the empowering legislation for land use plans in the NWT, gives the land use plans some teeth once they are approved. Secondly, it integrates the land use plans and the land claim agreements into broader legislation for the entire Mackenzie Valley. It is really a modern act, and there are a lot of good things about it. It's going through its first iteration of testing it, but they basically swept the resource management slate clean -- not entirely -- in the NWT and brought in a modern piece of legislation.

We have components of that here in the Yukon. The YESAA stuff is new, but there wasn't that same clearing of the table to really handle the land claim agreements and integrate the land claim agreements. So, the

context and the environment that they work in in the NWT is different than here in the Yukon. Those waves of changes are still happening here in the Yukon, and it's going to affect how effective the regional plans can be here.

CHAIR BILL KLASSEN: I would like to thank Ron and Bonnie again and we have 15 minutes only for the table discussion.

LYN HARTLEY INSTRUCTIONS FOR GROUP DISCUSSION - 15 MINUTES

The meeting adjourned at 11:30 a.m.

The meeting broke for lunch at 11:45 a.m.

The meeting resumed at 12:50 p.m.

5.0 Introduction - Rob Walker & Rose Kushniruk

CHAIR BILL KLASSEN: Having looked at land use planning this morning in both British Columbia and the Yukon, we are now going to shift focus to cumulative effects assessment in the Yukon. We will have two speakers on that topic in the next session, which runs from just about now until two o'clock. The first is Robert Walker. Rob has been in the north for about 23 years and is with the Environment Directorate of DIAND here in Whitehorse. He's been involved with cumulative effects assessment in the north for the last 11 years in environmental assessment, monitoring and study designs. He was drawn to the Yukon about five years ago, and he enjoys its treasures, he says, with his family.

Following Rob and also participating in this presentation will be Rose Kushniruk from the Asek Renewable Resource Council. Rose is a member of the Champagne & Aishihik First Nations, and we are fortunate to have her here to share her experiences with us.

So, we'll have Rob speak first, and then, Rose, and then, we'll have the question and answer session following that. Rob.

5.1 Cumulative Effects in Yukon - Rob Walker

ROB WALKER: Thank you very much, Bill. It's a wonderful pleasure to be here to speak with you today about these issues. I work with Lyn; and partly because I work with Lyn, I like to get involved with the participants a little bit in my presentations. I really do believe that the experts at this workshop are sitting at the tables in this room. So, as I go through and talk about cumulative effects in the Yukon, I'm going to be asking you people to provide the examples that I will then work with in the talk. Hopefully this will be fun, and hopefully it will work.

To start off, I think it would be a good idea to provide an opportunity for you as groups to work together a little more and get to know each other a little more and to start off with the first little nub of information that I need to make this talk work.

You will see on your tables there is a piece of flipchart paper, and I would like you to take three minutes; and by the end of three minutes, I would like you to have written on that piece of paper three things you value in the Yukon. Then we'll put those on the wall and start talking about them from there.

(FLIPCHART PAPER FILLED OUT OF ITEMS VALUED AND PUT ON WALL)

ROB WALKER: I will just go through a few of these things. We have things like: back country, Yukon people, wildlife, sense of community, clean air, clean water, small population, economic opportunities, sustainability, open spaces, opportunities, family. There are lots more about clean water, healthy ecosystems, being connected to the land, Yukon people and the diversity that we have here, sunlight, wilderness, ability to influence and change decisions, sense of community, our awesome landscape, a slower pace of life, opportunities to develop, learn, grow; noncongested wilderness, more opportunities.

So, that's a great cross-section of values. You will notice the slide I put up on the wall was an attempt to try and capture a broad range of values that encompass both taking care and maintaining the biosphere, which supports us, but also providing the opportunities in the sense of community that seem to be part of what make us whole.

Today I am going to talk about cumulative effects in the Yukon or you are. By the time we're finished, I hope people will have a sense of what cumulative effects are, why we need to pay attention to them, explain some of the language and concepts and to extract a number of examples of cumulative effects in the Yukon.

I just put up a broad definition. "Cumulative effects are the effects of one or more action, combined to create a greater or a different effect."

I come from the world of environmental assessment, and I got drawn into cumulative effects with development of the *Canadian Environmental Assessment Act*. It doesn't really have a definition of "cumulative effects," but it directs us to look at cumulative effects of the project we're looking at, combined with the effects of other projects and activities.

This is pretty good, but to be honest legislation draws boxes around things; and I don't think it really fully grasps the level of connection that exists in our world. It doesn't ask us to look at perhaps all of the influences that are occurring. It just

starts with a single project and the projects that are overlapping it. It's hard to use it to project into the future and say, "What do we want this place to be like, and what plans do we need to make, and how do we want to manage our activities on the landscape now so that we can have it how we want it in the future?"

Today I would like us to think a little bit broader about cumulative effects than just what maybe some of you are familiar with from the *Canadian Environmental Assessment Act*. Let's consider a single project. When I think of a single project, I break it down. It's a very, very, very tiny project that has only one action. If we take a mine, for instance, there are a huge number of actions involved with that mine. It involves water, landscape, transportation, building roads, installing culverts. Even building a road has many actions to it. There is surveying, clearing trees, removing the organic material and building a roadbed. So, when I actually think about how the effects of our actions interact, it is very easy to see that a single project actually can have effects that interact within itself.

When we have the effects from large and small projects and activities interacting together, they can combine with natural change or global change to affect things that we value; and unfortunately sometimes, can lead us to lose things that we value.

Of course, if we can find ways to successfully manage cumulative effects or the changes that we're making in our world, I'm really talking about managing human activity, the activity of us. Often we get lost in the language of managing the environment or managing fish or managing something else; but for the most part, nature does that, and we have to manage our activities in relation to that.

There are a few little principles that underlie cumulative effects. One is that the world is interconnected. Kevin said this earlier, that often in trying to solve a problem it connects to another issue, which connects to another issue. When you solve one, something else goes a little off the track. It's because things are highly interconnected. Just to mention the quote that Chief Seattle made many years ago about "The world is like a vast interconnected web."

One of the important things is the level of connection between all the components, between us as individuals with each other, between us and our work places, between how we manage developments, between how those developments interact with the environment, how those changes in the environment then maybe affect another industry or another value and ultimately affecting people somewhere.

The world is a complicated place. What happens is when we affect one component of the world, the effects can be felt along the connections to other components; and because things are interconnected, effects of one action or thing can combine with effects of other actions.

“Cumulative,” when I first heard that word, I had never heard it before; and that was good, because it allowed people to move forward and develop an approach based on how our activities have been changing the world and the landscape and to develop a science or a body of knowledge or understanding about it. Along with that, of course, comes more words, some of them even more mysterious than “cumulative”. Not to get caught up in the jargon of it, I will go through some of the language but always try to come to the simple, underlying concepts. There are many people here who have worked hard and helped develop the science of cumulative effects and have maybe contributed some of this new terminology to us. Terminology is very useful when people are using it, but at a basic level it’s the bottom understanding.

When I talk about cumulative effects, I believe there isn’t really a right way or a wrong way to classify cumulative effects. They do have basic characteristics though. If we imagine the connections in the world being very complicated and if you take maybe two or three of those connections and tug on them a little, the effects are unpredictable. If you tug on a different string over here, you get a different combination of effects. So, there is almost an unlimited number of possible combinations of effects that can result in changes to our world. Some of them are perhaps now beyond our grasp, but certainly we deal with many of them on a day-to-day basis and manage our activities in relation to them very effectively. So, there is this spectrum that goes from understandable to really being more than we can grasp. Looking at that spectrum of effects and changes in the environment, though, we can see that they do cluster into groups.

I actually have found that one of the very best ways to understand cumulative effects is through examples. Examples explain themselves largely. So, I’m going to come around and try and draw out some examples. Lyn will note these down on a flip chart for us, and I will try and use those examples as I go through some different types of cumulative effects. Would anyone be willing to volunteer? Anybody here have a cumulative effect that they have observed in the Yukon that’s close to their heart?

BOB SHARP: We put salt in with the gravel and we put it on the roads at high temperature. That in turn has reduced accidents on the road, but it’s attracted caribou to the roads. So, we’re putting caribou on the road for a longer period of time and increasing the likelihood that they’re getting hit by vehicles.

ROB WALKER: The example is we use road salt on our roads sometimes, and the road salt attracts caribou to the roads. So, because the caribou are on the road, they get hit more often, resulting in fewer caribou. This is a repeated action. The road gets salted repeatedly, and the caribou are drawn to it repeatedly and get hit repeatedly. Thank you.

Anybody have a burning desire to share an issue here?

IAN CHURCH: There is that series of effects, and then, there's also your insurance going up.

ROB WALKER: I like that. Ian pointed out that another connection from caribou being hit on the road is we damage our cars, and our insurance rates go up. When you think of cumulative effects, we can almost always draw some connection very directly to us. Otherwise we don't tend to worry about them as much.

IAN CHURCH: Do you want one that's close to your heart? Fatty food.

ROB WALKER: Anybody here like to share something? I'm asking if you have an example of cumulative effects from around where you live.

SPEAKER: Mine everybody is familiar with, United Keno Hill in the McQuesten Valley, increased tourism in the valley, beavers building dams in the river, people hunting all affect the fish and wildlife in the valley, as well as historic logging for the mine.

SPEAKER: Multiple placer mines in the same watershed.

ROB WALKER: Multiple placer mines in the same watershed, yes.

Anyone over here? When you look out your back window, is there something right in your neighbourhood that you feel is a cumulative effect?

Maybe I'll change my question a little. I believe that when we have cumulative effects they eventually affect something that we value. Maybe I'll just ask what bugs you.

SPEAKER: Having clean water.

ROB WALKER: What bugs you?

Lyn, why don't you share a cumulative effect with us while you're here, or what bugs you?

LYN HARTLEY: I am so pleased you gave me this opportunity. One of the things I realize right now is the cumulative effect of

meetings on my time. I have so many meetings happening that I'm just not getting down to my work. It's just half an hour at a time, going to a meeting.

MARIE: I was going to say "shitting in the woods," but it was related to repeated raft tours down a river and people using the same stretch of bank as an outhouse over long periods of time. That was my cumulative effect, because I step into it.

ROB WALKER: That's very good, yes. That would be a repeated impact I think.

Anyone else like to share one more?

SPEAKER: I'm going to bring one near and dear to our hearts, which is the Mayo-to-Dawson powerline and the cumulative effects of planning or lack thereof on the part of multiple parties that caused -- I used to research in Brazil, and it's what we used to call the "pecado original," which is the original sin; how something like that can turn into the original sin and the series of effects that that powerline has had, and it's not even up and running yet, is pretty significant.

ROB WALKER: Linear development, I once wore this sweater to a meeting when we were talking about linear developments. I actually quite like it today for cumulative effects, as well. It kind of has that full patchwork of the landscape effect happening, and it's actually all interconnected threads.

I will run through some types of cumulative effects. There is a type where the action repeats before the effects of the first action fade away. I think Marie's experience on the riverbank addresses that one. This is also called "crowding in time." We have the same action that occurs over and over in a small area. Perhaps forestry is an easily-grasped example of that where repeated removals of a piece of landscape occur. This is also known as "crowding in space." This one gets into some very nice jargon. It's also known as "the nibbling effect" as the landscape slowly gets nibbled away or even an incremental sequestration of habitats. There was another term I heard earlier this morning. They're all along the same line.

Cumulative effects can occur from many actions with different effects. What happens then is the effects may interact with each other. Perhaps the powerline example fits here. Perhaps not. Interacting effects - two effects can interact with each other or not interact with each other, basically they're neutral with each other and they just add on. So, people repeatedly using the bank as a toilet is the same effect. It just adds on, and there gets to be more and more and more and more of it. The same perhaps with removing landscape for roads, cottages, logging, quarries and so on. It's repeatedly the same removal of landscape, and it adds continually to itself.

Sometimes effects can interact with each other. A good example of that would be biomagnification where something like mercury is captured by algae in a lake, and that's eaten by small benthic organisms. If a benthic organism eats 10 algae, then he's got 10 times as much mercury in him as the algae; a fish eats that, and he's got 10 times as much as the benthic organism; and a human eats that, and there could be 10 times as much again assuming each level eats 10 of the one below it.

Sometimes effects can cancel each other out, and sometimes they're synergistic, which means Effect A plus Effect B equals Wednesday, something completely different that perhaps you didn't expect at all.

Some project are called "growth inducing," and that's because the development actually makes more developments more likely. Roads are a good example of that, and energy projects are a good example of that. The President of the United States has a thing called "the Commission on Environmental Quality," and in 1997, they put out a report and tried to summarize the types in this fashion with a table, in which case we have single actions or multiple actions; and we either have additive processes or interactive processes.

Too much stress can cause undesirable change.

Now, I think the thing to think about here is I've talked about these effects. Maybe they're adding up or maybe they're multiplying, but what's really important is the response to that effect. What happens when people canoe down a river and they camp at a campsite every time they go down that river, and they realize there's some toilet paper accumulating in the woods there. Well, at some point there is just too much, and they just stop going down the river. It's not that each time they go a little less distance down the river. They go from using it to perhaps not using it. So, although we can see and monitor changes in our environment, when we look at these changes adding up and adding up, we really have to be thinking about "How are things going to respond to those changes, and how are those responses going to affect us?"

I will just go back and finish with this slide, because I think it points to what we're trying to do here today. I started with the first half of this slide, which was a definition of "sustainable development". It goes on to say that the concept of sustainable development does imply limits. They are not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and the ability of the biosphere to absorb the effects of human activities. Technology and social organization can be managed and improved to make a way for a new era of economic growth.

Today we're here trying to organize ourselves to understand how do we manage our effects on the environment so that we can have a new era of economic growth.

Thank you.

5.11 Cumulative Effects in Yukon - Rose Kushniruk

ROSE KUSHNIRUK: Hi, I'm Rose Kushniruk. I've been asked to share with you an example of cumulative effects from where I come from. I am from the Haines Junction area, the Champagne & Aishihik First Nations. The area that I want to talk to you about is the Aishihik area. Aishihik has been home to the Champagne & Aishihik people for thousands of years. It was home to a lot of my ancestors, my great grandfather, my father, my grandmother, all those people; and it's home for me and my family, as well, today. We go back out there from time to time.

There have been many impacts on the Aishihik area, on the landscape, the fish, the wildlife and the way of life for all the people. Here is a picture of Aishihik, probably what it may have looked like before my time probably through the eyes of somebody like my great grandfather. You can see that it looks very nice.

Here's another picture of how Aishihik used to look.

This is a picture of my great, great grandpa who made that area his home. I often think about how it might have looked through what he may have seen in its natural state, as compared to someone like me who's grown up with those effects, thinking that they're normal effects, but they're not.

There are only a few people alive today who have seen Aishihik in its natural way; so, yes, we often wonder how it looks. I'll just give a brief history of Aishihik. In 1839 there was a subsistence economy. The first big impact that happened on the area was probably the highway; and with the Alaska Highway came the Aishihik airport and with that a road going into Aishihik. This is a picture of how people started travelling up and down the Aishihik Road. So, that was perhaps the very first big impact on the Village of Aishihik there.

With that came many other things, many social impacts. In 1960, we had the airport closed, and many people moved to Haines Junction. Here is just a picture of a dog team travelling up and down the road, another picture of the highway, people just enjoying life in Aishihik.

The next big event that probably happened was in 1972 when the Aishihik hydro facility was initiated.

Then the next impact that we have is the bison that were reintroduced into the area in the mid-1980's. There are still many studies going on of the impacts of the bison on the hunting, fishing and trapping. Some people say they're not impacting other wildlife and some people say they are, so that's yet to be determined.

There are a series of events that happened in the Aishihik area, but perhaps the biggest impact in this area was the Aishihik hydro facility. There is a picture of actually my great, great grandma fishing long ago on the lake when there were healthy fish populations, an abundance of all different kinds of food. For trappers there were a lot of things for them to trap.

Here is a picture of my great, great grandfather again. A picture of some kids of the area.

At the time of the dam I was two years old. That was 31 years ago. It has taken that long for some people to realize the cumulative effects this hydro facility had on everything. It was a good example of poor planning and actually a good example of what not to do.

Recently the Champagne & Aishihik people and government went through a Water Board hearing process for the renewal of this licence; because how it was operating in the past didn't call for very good monitoring practises. The people were asked at this time to state and prove their losses and how their losses were affected by the dam, the water. It was really hard for the people, because since the water affected everything, trying to prove your losses for everything was really hard and confusing for a lot of people; because there were a lot of physical effects and a lot of social effects on the people and the land. With this whole process of the dam, it opened up a lot of people's eyes, particularly my generation who are now clearly seeing the cumulative effects. So, it's a good thing, too, because we are more aware and wanting to ensure that we can try to limit these effects.

A lot of the things that happened during that time were hard to measure. You had to feel them. One of the biggest effects on the dam, like here's a picture of the Village of Aishihik, and that's a normal lake level. The low water levels affected many things.

There's another picture again of it being natural.

The low water levels affected largely the fish. In the low years there were no age classes found for those low years, so there were complete age classes wiped out. That's an example of what science was able to tell us at this time. The people who depended on the lake white fish and other fish noticed just from being out there that there were a lot less fish.

Here is a picture of Aishihik at low lake when the waters were low. Another big effect was the access. It became limited in low years. You can't launch your boat, plus you can't eat as many fish as you would like. Then there becomes a gap in your traditional food consumption what affects your health; and it just goes on and on and on and on.

Another social effect is just learning the stories and perhaps just being out there, getting teachings from your family members.

One of the big effects that this caused, too, was my grandparents used to eat muskrats and those types of things; but I didn't grow up with them because the muskrats are no longer there. I don't eat them any more. My daughter doesn't eat them. So, there is an effect there all on its own.

The drinking water was also affected. People couldn't just go out and get water any more. You had to go way out or get your boat or bring it in. it just became harder. There's a picture of kids long ago eating traditional foods.

One of the other big effects that this caused was erosion. This was very noticeable on structures around the lake, the village; and this is a picture of a grave house sinking in from erosion.

Today the only thing that we found that has kept the fish populations from collapsing thus far has been an underutilized aboriginal fishery. I work for the Champagne & Aishihik Lands Department, and I know there are a lot of younger people more and more wanting to go back out onto the land. A lot more people are going back out on the land. So, I think we have to work towards managing our resources and being very careful in planning to prevent future effects.

Since then the Water Licence has been approved for an additional 17 years. Now finally there is a better monitoring program that's being worked on with the partnerships. It's something that we should have thought about long ago when this dam was first coming in, to plan for those monitoring programs. Today I have to live with these impacts. So does my daughter and probably her kids. This is a good example of the wide range of cumulative effects that happen in an area. I mentioned the other ones, the road, the bison, the impacts on the hunting and trapping. Those have a whole bunch of impacts that come along with them. Surely the greatest one for this area has been the dam physically and socially.

So, that's the example from my area.

5.2 Questions and Comments - Rob Walker & Rose Kushniruk

CHAIR BILL KLASSEN: Thank you very much, Rose, that's an excellent example of how cumulative effects actually impact us in our daily lives. Are there questions for Rob and Rose?

- Q BOB SHARP: I have a question for both. Your last slide indicated that human actions on the landscape ought to be such that the biosphere is able to absorb the effects of human activities. Yet the capacity of a biosphere to respond to activities is uncertain. We don't really have a good predictive clue as to how different environments will respond. What does that suggest to both of you about cumulative effects? We don't know how things will respond.
- A ROB WALKER: That's a very good question. We do know that the environment and ourselves as individuals have a certain resilience. We have a certain ability to repair ourselves and to cope with a certain amount of stress or change. You're right, knowing how much is too much is a very tough question, and we can only base that on the best of our understanding at the time.
- C BOB SHARP: We don't want to go over the edge, though.
- A ROB WALKER: You don't want to go over the edge. There is the concept of the precautionary principle, which says if you're unsure whether this is going to go over the edge and there is some uncertainty about it, it's better to step back than to step forward. I actually prepared a very different talk; and just a couple of nights ago, speaking with my wife, I turned the part I had deleted into this talk. I had a little cartoon in there from Zarro, which has two cavemen standing there, talking. The one's got the club over his shoulder, and the other guy has just carved a wheel out of stone. The guy with the club over his shoulder is saying, "Whoa, this is getting out of hand. I think we'd better just put down our tools and forget how to talk." It's not really an option for us to go back, and we are continuing forward. So, yes, knowing absolute limits to the environment, we just have to keep doing our best to guess what they are really with as much knowledge and studying as we can. We need to use observations of the environment, and traditional knowledge is a terrific tool for that sort of thing, because we have a long-term record of very perceptive observation of the environment, which we can compare with today and even the rate of change today with. We have to look beyond our borders. We have to look for knowledge and understanding from other jurisdictions. We have woodland caribou herds here; and there are woodland caribou herds elsewhere in the country, and some of them have maybe been pushed over the edge. So, we have to just do the very best we can.
- A ROSE KUSHNIRUK: I think in the case for Aishihik, I mentioned that there are different monitoring systems being put in place, so, hopefully through those ... Times have changed. We have a lot of

community-based management systems being set up. We have a lot more people being employed out on the land, like the habitat stewards. We have local resource councils, those types of things. It's a good time because of the different ways we look at managing our communities and our lands now has changed to the people who are actually out there. All we can do is hope I guess.

Q MIKE WALTON: This question is for both of you. I guess we have the benefit to look back 30-some odd years, Rose, and say, "Now we can see the effects." If we are now sitting where we are and we're looking forward, the question I have for both of you is: Should we be investing in modelling to look forward, computer modelling based on whatever those might be; and if we are, should modelling be a formative or a major or a substantive part of land use planning?

A ROB WALKER: Well, I would like to say "yes," we should do as much modelling as we possibly can. I would also like to say we should pursue every other avenue as much as we possibly can. Models are wonderful. They can really help inform us of what the future might look like if we pursue certain avenues. Models are also a little tricky. There is often a wide range of inputs that go into a model. Sometimes they kind of go into this black box where there's a lot of math and things going on, and then, out comes a map or a prediction of the future; and the prediction of the future is based on what went in and someone who set up the math in the model. So, these models are set up based on what we know now and often based on best guesses; and one of the interesting things about models is they force you to make guesses when you don't have information and all of a sudden you say, "My goodness, we should find out some information about what we're taking this wild guess at!" So, I think models can be very useful that way.

I think to really have a buy-in to them, though, because they do get mysterious, that you have to have a really high level of participation in getting the information that goes into the model and talking about what comes out of it. Often it is easy to change a few numbers, and the answer comes out a little differently. That's my suggestion.

A ROSE KUSHNIRUK: Like I said a little bit earlier, we do have a lot of good examples of perhaps one of the best models being set up in Canada with all the community-based management programs, those types of things; but modelling is good. We're going to a community-based management approach. Maybe we're making our own good model here right now with input from community people.

Q JAN ADAMCZEWSKI: My question is to Rob. I've worked with you guys and your colleagues on Little Rancheria Caribou Range in trying

to look at cumulative effects and so on, but what I'm wondering about is is there anything in legislation coming or pending that gets us away from this project-focused approach; because so far even with the Kaska Forest Resources documents the last two years, it's always still a 10-year project, or it's a 20-year plan or something like that. Then you respond to it, we respond to it. I know you're working really hard to build in the cumulative effect, which is really the key one in this case, but in terms of legislation and formal processes that will address cumulative effects, is there anything out there, or is it just kind of in the very early stages?

A ROB WALKER: Well, we certainly do have the tools, project-by-project assessment in which we can look and we can deal with some cumulative effects; but then again, there are some we can't. I mentioned growth-inducing projects like a road, you put a road in, it's hard to predict what other activities that is going to make maybe economical or desirable or that "George wants to go down there and set up a cabin just off that road, as well." I don't think that a project-by-project assessment can fairly deal with that type of issue.

So, in terms of legislation, I'm not sure there really is something that comes at a higher level than that. Land use planning certainly does, and land use planning could allow us to say, "Okay, we're going to have a road here, and we think that there could be these many developments of these types on that road, and that should be enough on that road. Then we need to do something else." That way you could, by planning, avoid running into a cumulative effects problem.

There are other tools. The Government of Canada has another cabinet directive called "strategic environmental assessment," and it's designed to just try and look at the full potful of issues that come with making a decision, whether it's a decision on a controversial project or a decision on a new policy or a decision on a new funding program, it's supposed to try and get you to look at it. So, what is that final outcome of this on sustainable development. There are some other tools around. Most of them are guidance. I think the key words in that last quote I put up are "social organization." I think we have to have coordination between all these levels. We need land use planning that fits and talks to project assessments and gives us guidance. It needs to be informed by people who are doing research and collecting information. It needs to tie into someone who's issuing a land use permit or promoting some tourist development. I think we need coordination.

LYN HARTLEY INSTRUCTIONS FOR GROUP DISCUSSION - 15 MINUTES

The meeting adjourned at 1:45 p.m.

The meeting resumed at 2:00 p.m.

6.0 Introduction - Frank Duerden

CHAIR BILL KLASSEN: The next session is entitled “Principles and Concepts of Regional Land Use Planning,” and Frank Duerden is well qualified to speak to that. He is a professor in the School of Applied Geography at Ryerson University, and an associate graduate faculty at the University of Guelph. He has got long-standing interest, as well as practical experience in the field of land and resource issues both in northern and rural regions. In the 1980’s he directed the Yukon First Nations Mapping Project. He was involved in introducing Geographic Information Systems (GIS) to several Yukon First Nations. He was involved in drafting the Land Use Planning Chapter of the Yukon Umbrella Final Agreement, and I recall his involvement in identifying and prioritizing land use planning regions in the Yukon and, in fact, was an advisor to the Yukon First Nations on the first land use planning exercise in the Kluane region. So, Frank Duerden.

6.1 Principles and Concepts of Regional Land Use Planning - Frank Duerden

FRANK DUERDEN: Thank you. First I’ll start on a rather strange note. You’ll probably see in your programs that I’m “Dr.” Frank Duerden. I congratulate the Planning Council for awarding me a Ph.D., because I don’t, in fact, have one. Nevertheless I will gladly accept it. Thank you.

What I’m going to talk about right now I guess is a bit of a mishmash of land use planning and cumulative effects. What I want to try and do is really trace through technically and very generically a planning process; and from time to time, talk about its relationship to cumulative effects. To start off with, these are the central questions I will be looking at as my talk progresses. I want to start, though, with firstly some context about why we are planning and what this business is all about. I don’t mean to bore you, because I think a lot of you know this already but just for my own self-assuredness I guess.

First of all, what is a land use plan? It’s a document, I think, that will guide the ways in which land is used in the future; and because land is basic to all human activities, it’s intractably related to the biosphere. Land use planning becomes a very powerful tool for influencing regional economies and the quality of life.

So, why do we plan? Well, land is a finite resource. They don’t make much of it any more, and there are numerous claims upon its use: Economic claims, environmental claims, social claims and spiritual claims; and all these things are pretty well central to well being in the broader sense. Historically the various demands on land and various land uses have come into conflict with each other. The classic sort of conflict in the Yukon sometimes has been conflicts between,

for example, First Nations harvesting and a mining activity. There have been general conflicts between human land use and environmental quality and a whole raft of different values we can relate to environmental quality, from some rather esoteric ones to some very hard ones that we experience. In other words, we can go right through from deep ecology on one hand to the human experience on the other.

So, if we can develop a strong sense of how different land uses relate to each other and to environmental quality, if we can anticipate future events, then we can use planning as a tool for ameliorating conflicts and identifying the most desirable land usage within the region.

I think that planning can also serve as a very important local development tool, as well. Land generates wealth; but historically in the north, much of the value from land, and I'm using "wealth" in a very broad sense here, has not been captured in the region in which the wealth is generated. Simply from an economic standpoint, the leakages have been quite phenomenal, and we have some data on this from way back that tends to illustrate this. So, by anticipating economic trends and by identifying resource potential, planning can serve as a tool for helping regions realize and retain local benefits of economic development.

So, what do we plan? We plan to avoid conflict, to get a sense of what the future will be like, to avoid duplication and to avoid waste. We plan to try and develop a better world and a healthier world. Really if you look at planning, it's a mixture of pragmatism on one hand and ideals on the other. I think that really if you strive towards some sort of ideal, the pragmatic is also tied up with things like health and jobs and so on.

Let's just get a little more context here. The driving forces behind the idea of large-scale planning in the north, I think, were with the events about 25 years ago when demand for northern energy pitted the land use system of industrial society against First Nation land use systems and really pitted the conservationist lobby against the development lobby. The result was a very long and fractious debate, and it really exemplified how little was really known about northern environments, northern economies or the way of life of northern peoples or the way of life of First Nations. From this debate was born the notion that by anticipating land use trends, measures could be taken to ameliorate conflict before it arises; and this is really what we learned, I think, from the Berger Commission. That was 25 years or so ago. The reason there was a Berger inquiry was because of these conflicts and because there were no mechanisms in place to address these conflicts and very little understanding of northern geography at the time I think.

Land use planning in the Yukon is defined as "comprehensive". So, when we talk about planning, we're not just talking about the economy or the environment; but we are really recognizing that the environment and the economy are very

closely tied together and tied in with the well being of regional populations. A healthy economy requires healthy people. A healthy population requires a healthy environment, toxin-free maybe and maybe reflective of the spiritual values of traditional land users.

In the Yukon some very tangible parts of the economy depend upon a healthy environment, tourism and community harvesting. Maybe I should also note in this, I was involved in the negotiation of Chapter 11 way back in the dark ages, so long ago that I don't want to really remember, but I guess it was sometime in the late '80's. People perhaps wonder why there is Chapter 11 and why land use planning is part of the land claim agreement. It wasn't a matter of sentiment. When this was being negotiated, I think there was a good, clear understanding that land use planning, putting it in the agreement meant it had to be done. It meant there would have to be a planning process. It was one way of ensuring that land, control over the land, if you wish -- maybe that's not the right word to use and it's an unfortunate choice of words maybe -- but certainly the benefits from the use of land and the ability to deal with the environment would rest within regions, that too often in the past in the history of the Yukon this had not happened. It was Yukon with a very porous economy, massive leakages, massive population turnovers and so on and so forth, and with a First Nations population that had been adversely impacted by industrial-type development. I don't think it was malicious, but it happened. This is one way of ensuring that in future, there will be some way for all of Yukon society to deal with the question of the orderly development of land and the orderly management of the environment.

Time and space, I'm going to talk about quantum mechanics at this point, which is probably a lot easier than talking about land use planning in the Yukon. I just want to draw the relationship here between cumulative effects assessment and land use planning, and that is that they are both tied up with time and space. Impacts take place over time. It takes time for impacts to be transmitted, and the transmission of impacts is something that is central to cumulative effects assessment. All things on earth exist in a spatial context, and they're connected either through they are next to each other or through pathways, and they take a look at regional planning. Regional planning is about time and space. If identified sensibly, a region contains pathways through which impacts may be transmitted, and the regions of space in which the impacts will be most immediately felt as a space. Planning is concerned with the future and with what the future may look like. There is a time element.

I have used some terms here which are a bit abstract. What do I mean by things being transmitted through pathways and so on and so forth? Well, river systems, ecosystems, migration paths, mobility in the environment. That's the way things are transmitted through space. They're also transmitted through contagion as land use is spread out or transportation corridors grow and so on and so forth.

We can talk about time in other ways, as well in the Yukon. I think an immediate sort of sense in the Yukon, we can talk about time as the sequence of events that impact upon this part of the world. Boom, recession, recession, more recession, boom, recession, land claims, land use planning, you can go on and on and on, all these events come crashing through the system.

There's a nice picture. What I've done here is try and identify sequentially what I think the steps are in a planning process. It's not rocket science. We need to demystify land use planning I think. A lot of what we hear understandably lies in very much a political context, boards and regulation and so on and so forth; but the hard core of planning really is the technical stuff like what do we do to develop a plan. These are the steps that I suggest are involved. I will be opening up each of these boxes in a moment and talking about what's inside them. We've got them there. You state your broad objectives. We identify the region. We look at data needs. Then comes the difficult part: Deciding what this tells us and looking for a course of action, developing very specific objectives and developing a strategy for achieving these objectives; and this then, of course, becomes this thing down here, the plan, the deliverable, something that's tangible. Then following this we have implementation, making the thing work. The plan doesn't end when somebody produces a document. Many people say "Phew, that's Chapter 11 done with. Okay, great!" It doesn't end at that point. I'll be talking about that a bit later.

Broad objectives, I could go on at great length about this, but this will be a starting point. This is from Chapter 11, very much Bruntlund. If you're into sustainable development, this is a statement about what the very broad ideas are behind land use planning. I don't think anybody, maybe I'm wrong, most people would probably not disagree with those sentiments; because there's probably something there to please everybody. The notion is development, sustainable development, and the emphasis on certain types of values. I do have to say, though, if you go back to 1973 I think it is "Together today for our children tomorrow" and take a look at the position that was articulated by Yukon First Nations at that time and their statement about the future, they stated that they wanted a future in which there was an environment for their society, for Yukon First Nations people, a traditional life for harvesting and so on and so forth; and also an environment where they could participate in the industrial world. That's pre-Bruntlund by about 10 years or so. So, these sentiments or notions have been kicking around for a long time.

Region identification, planning regions, what are they all about? Now, the thing about planning regions really is a question of scale and how we identify them. Planning regions are at the large scale. Well, why do we plan for the large scale? Well, one reason is because things happen at the large scale. It's also a characteristic of Yukon geography that things are at the large scale. Biosystems and so on and so forth are the things that transmit impacts. Watersheds, what goes into a watershed can affect thousands of square miles. You know this. I

mean this is like “Mickey Mouse” geography, I know; but I’ve got it in my notes so I’ve got to say it.

First Nations harvesting, this is a land use activity that can cover several thousand square miles. In terms of discreet use, it all adds up to several thousand square miles of land. The industrial sectors use land over vast areas, transportation corridors have an impact over a large area. Therefore, things occur at the large scale, therefore it is sensible to plan at the large scale.

So, what do we mean by “the large scale”? We can look at different types of scale. We can talk about the individual scale, the local scale, the area scale, the regional scale and the global scale; and they all influence each other. The individual scale, of course, is home. It’s where you live, one square kilometre; more like .1, but we’ll give you each one square kilometre. The local scale we’re talking perhaps at the community, 10 square kilometers. The area? I would go no more than 100 square kilometers, 10-by-10, nothing. At the regional scale, we’re talking thousands of square kilometers; and beyond that we have the global scale. And all these scales interact. It is from the global scale that often we get the messages that affect what goes on at all the other scales. What’s going to affect what goes on in a region in the Yukon may depend on the price of gold, the price of oil and natural gas, how prosperous potential tourists are going to be and what’s happening in terms of global warming. It’s all started someplace else. So, the global scale feeds down, then, to the regional scale. I’m saying we need the regional scale, because events take place at the regional scale. Effects are transmitted through the regional scale and a lot of human activity in the Yukon, although it may occur discreetly, does affect very, very large areas.

So, once we’ve spoken about scale, we have the question of regional identification. How do you identify a region? In geography there are all sorts of smart theories about how you do this, most of them pretty useless, because they’re actually impractical. Certainly if you take a look at two ideas which we do see really I think in the Yukon, one approach, of course, is to take a watershed approach. As I said earlier, watersheds are entities through which impacts can be transmitted, that whatever lies within a watershed will be affected by some action within a watershed. So, it’s a way of tracking impacts. It defines fairly clear pathways in which impacts may travel; and to some extent watersheds, I think, from a cultural standpoint also track out traditionally action space in terms of the use of the land. But also, there’s a question of culture, and in the Yukon and in Chapter 11, there is a notion that planning boundaries should be, as far as possible, coterminous or the same as cultural boundaries, in other words First Nations boundaries. The reason for this is on one level you’ve got the physical idea about watershed. We talk about cultural boundaries, you’re here talking about action space, the sense of home, the sense of places to which people were historically attached. So, maybe some of us thought, well, this isn’t such a

bad idea, then, to identify planning regions this way, because people will be able to relate their heart and their head to the land that we're talking about.

One problem we do find is the world isn't a very tidy place. There are a lot of messy edges to it. The watersheds and cultural boundaries don't necessarily match up. I know this has been the source of a lot of wringing of hands and conferences and subconferences and goodness knows what in the Yukon. I don't think it's such a big problem myself, because certainly at the core of planning regions, there is tremendous congruence between watersheds and cultural groupings. They are very much the same thing.

It's really in the core of regions, not on the very edges, that you get the concerns and you get the problems and you get the things that have to be addressed. I think there is too much preoccupation with boundary problems quite honestly; but there I'm a guy from Toronto who's just editorialising.

Data needs - so we're moving now from defining the planning region and general statements about what we're trying to do to talk about data. Data is absolutely basic to any good planning process. Understanding your region in as much detail as possible is important. You need to identify significant environments and resources, identify current issues, forecast future trends and objectively make decisions about approaches to future land management.

Lack of data can have a number of important consequences, adverse ones. First of all, it may lead to spurious assumptions or arguments or allow false conventional wisdoms to apply. For example, in the 1970's the north was largely represented as an empty land in need of economic development. I'm not saying there is no need for economic development in the north. Don't get me wrong here. But the idea was if this is an empty land, not too many people there, and the people who are there really, well, you know, they just sit around in the communities all day and do nothing, which was the conventional wisdom, then this is a good reason why we should be developing the north industrially.

In the 1970's there were very few studies, for example formal studies of First Nations harvesting and their values and their value to the communities economically, spiritually and so on and so forth. I know that in 1980, I was in the Yukon, and the only study I could find on harvesting at the time if I remember rightly was something put out by a group who was involved in the pipeline; and essentially what it said was there were probably about four people in each community who were involved in harvesting from the land. Therefore, perhaps it would be a good idea to build a pipeline.

Of course, as you come up through the 1980's, you find this notion of the empty land and so on and so forth is a complete myth. There are a whole series of studies looking at the use of land, the use of land by First Nations, imputing replacement values in terms of their value of harvested food, producing maps of

land use and so on. What you found was a very busy landscape and a different type of economy. In other words, data can be used for what you might call “political reasons,” which is rather difficult.

We also need data if we’re going to talk about planning, and we have to understand the relationship between different types of data, how things relate to each other. You need a lot of data. You’ve got to be able to describe a region in detail, describe the different phenomena in detail; and you’ve got to be able to make the linkages, cause and effect.

So, where do we get data from? Well, I just threw this out, and I guess we could all note each of these boxes if we wanted; but there is no such thing as one data source. What essentially is it you’re synthesizing? You’re pulling stuff from all over the place. So, if you’re planning for the Teslin region, for example, then you’ve got to paint a picture of that region, using a multiplicity of sources to produce a synthesis. Here we’ve got traditional knowledge, which I will talk about in a moment. Census material, pretty common stuff; but projecting future populations is really important, because we are concerned with the future. Projecting future trends is important. Existing mapped information is important, and there’s a truckload of stuff around the Yukon I’m pretty certain from the stuff I saw when I was involved in land claims and since. Some of it doesn’t see the light of day, and a lot of it is probably moulding and falling to pieces; but there is a lot of mapped information. Government departments map a tremendous amount of information. It’s a matter of really seeing if we can synthesize it, if it’s compatible and so on and so forth.

There’s a contribution of government departments, and there is the role of consultants’ reports, expert opinion and so on and so forth. What I’m saying is you’ve got to dig for data wherever you can, and I guess we’ve got to be fairly imaginative.

Traditional knowledge plays a very important role. The fact that Chapter 11 calls for the use of traditional knowledge in land use planning is not sentiment. It’s not, “Hey, we’ll put that in there because it will keep people happy.” There’s a very good reason it’s there, and that’s because First Nations geographies are very intense geographies. They’ve been on the land for 8,000 years or more; and over time the mental images, the land use, the land use practices and so on and so forth have built a living geography. It’s not a past geography. When we talk about traditional knowledge we tend to say, “Well, that’s about the past.” Because people are connected with the land, they can describe the land very well, and they can describe the land and fill in a lot of gaps that conventional geographers have not been able to fill. That’s because a lot of data collection by geographers and scientists in the north, out of necessity, takes place at a fairly large scale or at a sample scale, whereas people living on the land have been able to work at that fairly discreet scale developing and pulling together geographic knowledge. So, it’s really important. These are people who know the

land intimately. As I said, it's in Chapter 11 where it says "Well, that means we get a signature on the paper. It is there because it is an important part of developing a plan."

The future - So, we've moved now from talking about information. We've got a region. We've got an objective, a very broad objective. Now we come to the real nub of the planning question, using this stuff to develop a plan; and here you're really asking a number of questions:

What current trends are apparent in a region, population shifts, economic trends, et cetera? Whatever happens in a region is going to be subject to what happens outside. The Yukon's history is really a history of the world. What's happening in the outside world is affecting what has happened in the Yukon. So, you've got to have a sense of what sorts of events that are going to perhaps come along in the future that is going to affect the well being of the region that we're looking at. I think I'm repeating myself by saying that oil and natural gas developments and so on depend on distant markets. We've got to understand those demands, we've got to understand what drives tourism and what the prognosis for the future is there and what the health of the environment is going to be. That's not just a matter of somebody dumping something into a river in the Yukon. That, to some great extent, is also a matter of the health of the global environment.

Climate change - If the climate is changing, and it appears very much that it is, how is that going to affect ecosystems within a region? How is it going to affect the things that you market? If we get a really spectacular global change, there won't be any Yukon Quest any more for example.

So, we're trying to get a sense, then, in developing a plan, of the future; and there's a question, then, of techniques. What techniques do we use to get a handle on the future? There is no one technique, and I'm just throwing together a battery of things here about the region. You know, your forecasted population; we can simulate change based on baseline data. We can have cumulative effects modelling. "At last," somebody said, "he's mentioning cumulative effects." Well, we can model cumulative effects; what if? We can build scenarios. We can canvass experts' opinion. There are techniques for doing this, but what you would do is you would bring together a board of experts within the Yukon and given them future scenarios and try to get them to converge on what they thought would be the most probable future for a region, given current trends.

A very important part of this process, also, is surveying the local population. They're centrally involved. What are their concerns? What are their values? What are their aspirations?

So, I think this is sort of the hard work of the planning process here, turning towards developing a plan. I was involved in the Kluane planning process, and I

guess one of my feelings about that wasn't really there. It wasn't perhaps as strong as it should be, that component of the planning process.

I thought I would throw this slide on the board just for the hell of it, the role of GIS. Everybody has GIS. Every government department probably has it, and it's used for various sorts of things. Of course, there's an expectation that GIS will be used in the planning process. If we're using GIS, I think the emphasis has to be on the "IS" as much as the "G". It's an information system. You can make really beautiful maps in GIS, really flashy stuff. Consultants can just blow people away by producing a really nice looking map that tells us nothing, but the cartography and the colours are just brilliant. Using GIS in a planning process, I think you've got to consider: Well, what information have we got to display using GIS? How do we use it? How do we synthesize it? How do we pull it together?

If we're talking about cumulative effects, GIS is a very well known tool, because the idea is, of course, you can take one layer of one type of activity and put another layer of another type of activity on top of it and come up with something completely different, which is maybe generating what the effects of two types of activity interacting are. Of course, this depends upon the quality of your data. How good are the data, and do we really understand the linkages between the two types of phenomena that we are talking about? To be a bit provocative, I put at the bottom there "Do we fulfil the types of conditions for using GIS sensibly in the Yukon?" Maybe we do; maybe we don't.

The assessment of the future - specific objectives - Coming out of this, then, is how we looked at the state of the region, ideas about the future and so on and so forth; we then articulate specific goals and objectives for the region in terms of what we want to do. It is time to make hard decisions.

One thing about planning is there is sort of this old-fashioned school of planning that says "Once we have planning, we can just accommodate anything." Well, hard decisions are going to have to be made maybe in terms of what you trade off, one thing for another. I'm not saying that it is worthwhile to play the economy against the environment, but in many instances, no two types of land use can occupy the same piece of land at once. That's a very simple way of putting it. So, hard decisions have got to be made. The environment is not overly forgiving. It's all very well to say we can't have "A" and "B" next door to each other and me and you are happy, but of course, the environment isn't very happy. We may be content, but down the tubes goes the ecosystem.

Strategy for achieving objectives is the next stage, and we do up a plan. Here we've got the sorts of tools that you might see in a plan: Zoning, land use in specific locations by land use type or zoning land very, very broadly. So, you might say in a certain area, you'll have high tolerances to development; in other areas low tolerances to development and so on. Personally, I don't like number one. I think it's far too dictatorial and restrictive. I do favour number two.

When you do up your plan, the plans don't exist in isolation. Existing tools that there are: The use of resource councils, maybe a protected area strategy as an example, so on and so forth; but you use these outputs of other government departments as tools to help you attain your goals in the planning process. You also may use screening in the process. This is a deliverable.

So, what do you see in a land use plan? What are you getting? This is what you see, an explanation of the planning process, something clear and easily communicated so the people in the region and the people in the Yukon know what this is all about. It's not rocket science. It's something that is tactile and is readable and is understandable.

A description of the region - what the region is all about, how it's structured, how it works, what its problems are. Discussion of the current trends and their implications. Identification of the future, what is the way we want to go and what are the tools we're going to use to get there. That is what should be in a plan. Actually it's easier for me to say that than to develop it, but I thought at this point I'd say that. A facetious comment, but that's what's in a plan.

Then implementation, here we go, the only thing we know with certainty is that the future will not turn out in the way it was forecast. So, you say, "Why the hell do we bother developing a plan, right?" Two things are important here about implementation. The first is we're developing a plan, because the alternative is too costly; because by developing a plan, we've reduced uncertainty. We've taken off the table all those things that are peripheral. We've managed to focus at least on what the probable futures are going to be like; and from a benefit-cost standpoint and the cost to society and governments, I think it is money-saving, so it is important.

The other thing is no time ever have you arrived with a plan and said, "Here's our plan. This is what we said it would be like in 10 years, and it's turned out just like this, fantastic." It never works that way, because if it did, I wouldn't be talking to you. I would have made my first 50 million by now if we knew what the future is going to be like. We don't know what it's going to be like, but the point is this: Once the plan is in place, then you're going to have to manage that plan. The planning process doesn't end when somebody says, "Well, here's the Teslin plan. There you go, folks. That's it. The process is over." You have a long, long period of implementation where the commission has got to ensure that the plan and development are hand-in-hand. Maybe the plan is modified as events take place that were unpredicted, and the commission may have to screen new developments for the region to see whether they're compatible with the plan. So, the implementation is incredibly important. You've got to have a good implementation strategy.

Given the fact that this is about cumulative effects, I thought I would just point out where cumulative effects would play into a planning process very quickly.

Region identification, there's a commonality because of what I said about the notion of time and space earlier on. There's a commonality in terms of data needs and data review. There's a role to be played in developing scenarios for the region in the future. We can use cumulative effects assessment to see "what if." We can simulate the future. It becomes a strategy, and we're the strategists for achieving the objectives of the plan. It may well be that you put in your plan an approach to screening; and on an ongoing basis, then, it is a tool that can be used in implementation.

Thanks.

6.2 Questions and Comments - Frank Duerden

CHAIR BILL KLASSEN: Thank you very much, Frank, for helping us understand what's involved in planning and what planning is not. Are there questions?

Q JEFF HAMM: I'll take a poke at your GIS modelling, Frank. You talked about the value that models might have. I'm wondering if these models necessarily have to be spatially explicit; and by that I mean do we have to actually pretend, model out a region and move our little industrial pieces around on there to do the model, or can we abstract that a bit to help us better understand the interactions between these industries? I'm thinking a bit of some of the cumulative effects modelling work that has been done in Alberta and we have started to investigate here, just taking away the actual physical space and looking at the relationships and modelling these relationships say between forestry and the energy sector in terms of road construction? Could you speak a little bit about the value of those models?

A FRANK DUERDEN: I think I've got two feelings about them. one is that, yes, those models are incredibly valuable, because they allow us to get a picture about how different activities will interact as activities really without considering the specific geographic space. They allow us, I think, to tell us generally what to expect; and in that way, I think you're right that we don't have precise information about a region, but we have information about activities then we can trace through impacts in sort of an a-spatial sort of sense. By that we can look at the types of connections that occur.

Perhaps critically we might say, "Well, that's only one part of the real world." The real world does exist in real space with real landscapes, and some really theoretical geographers would probably say that "Every

landscape is different and, therefore, you can't take one generic experience and use that anyway."

But I'm not debunking the value of the first approach. In the absence of anything else, it is the only real approach you can take I think on the one hand.

On the other hand, its value goes beyond that, because I think in terms of seeking out relationships it's important.

Q ROSE KUSHNIRUK: I'm just curious, the Kluane Plan was the first plan worked on in the Yukon, and you mentioned that you were a part of it. What are some of the pitfalls that you guys went through?

A FRANK DUERDEN: Oh my goodness! Quite seriously, I made a sort of cheap shot at the plan just to get everyone excited, I guess; but the Kluane Plan was a useful and very necessary exercise. Probably not enough attention has been paid to it in terms of what positively can be learned from that experience. A major problem with the Kluane Plan, of course, was it was developed when there was no land claims settlement. If you're a First Nation and you don't have a land claims settlement and somebody says, "Heh, let's plan for your land," you're going to be saying, "Well, just a moment, we don't have a land claims settlement yet, and this may pre-empt what we want to do with our land." In fact the First Nations were involved with good will; but at the same time, they, of course, had to keep, I think, an eye out for their interests quite rightly. I think that the plan should have perhaps taken place after the land claim had been settled.

It was the first plan of this nature in the Yukon, and I think a number of things could have been learned from it and should have been learned from it. There was a superb technical planning office here. Outside that, I don't know that too many people really understood the nature of planning, and I think there was a capacity problem, which is something I think is being overcome now. I think that was a problem.

I guess also that the thing I've tried to bring across today and perhaps not too well is this notion of how we take information and how we actually structure that in the centre of a plan; and I don't think that was as strongly there as it could have been.

Q RON CRUIKSHANK: This morning we heard Kevin talk about the B.C. planning program being driven somewhat by the desire to create protected areas across the Territory. You in your presentation mentioned that planning in the north came primarily as a result of the desire to have

some large-scale industrial activity. There seems to then be two almost opposite drivers for initiating planning.

The Council is responsible for making recommendations regarding priority planning regions in the Yukon. So, I think the assumption is that we may have settled claims right across the Yukon at some point, and we can't do all the plans at the same time. What drivers do you think that the Council should use to try to prioritize which region requires planning? I don't mean to put you on the spot with that one, but ...

A FRANK DUERDEN: Well, you certainly did. I think it's fairly obvious that if, in fact, we saw on the horizon a major event that was going into a region that would impact that region, be it a major mine and the Yukon could do with a major mine right now, I do understand that; a major mine, pipeline, oil and gas development, something like that, that I think would be something to move a region up the list in terms of priority for planning; because they are going to be hit by I think a lot of controversy, land use issues, land use problems that need to be addressed. Whereas in another region, well, there are not the pressures, and they can perhaps wait a little longer.

Q JILLIAN McKEE: I just wanted to ask you a question about this scale that you were talking about at the beginning and the idea of how impacts happen on regional scales throughout watersheds and ecosystems. What I'm wondering is is there a case to be made for starting planning? Does it always have to start at that scale, or is it best to start at that scale; or is there something that can be gained from starting at a smaller scale, more local scale, where things may not be quite so complex and we can get a handle on more site specific situations, and then, build up from there and integrate to a regional scale?

A FRANK DUERDEN: It's a good question. I guess it's a matter of what your objectives are. I think if you take your approach, it sounds like a bit of a spread-shot approach, we'll do here, here, here and here; there's a lot that gets left behind, and you're taking those areas out of context. I think that that's the problem quite honestly. But you're really talking about area plans, aren't you? Is that what you're talking about, local area planning?

Q JILLIAN McKEE: Yes, something like that.

A FRANK DUERDEN: I think local area planning is a distinct process, distinctly different than the type of regional land use planning that is envisaged in the Yukon. When you say "something to be gained," it sounds like the one thing that may be gained at a sort of social level is that it will provide people with experience of the planning process, maybe from

a capacity-building standpoint or something like that, to be involved at the local level; but that's not the objective of regional planning. I don't think I've answered your question too well, quite honestly.

Q JILLIAN McKEE: Well, I think one of the things, working for a First Nation, I'm finding that what traditionally may not have been considered issues at a local level for a local plan, like City planning or more urban-oriented planning, from a First Nation perspective there actually are a lot of issues that are more traditionally regional planning issues, because they have a lot to do with water quality or protecting the wildlife that come right into the urban centre or protecting a land base or culturally important site. So, there are a lot of issues that are relevant on an urban or more local scale that maybe at one time were more traditionally regional planning-type issues. So, how to work at that scale but realize that these issues, especially like water or wildlife, have much bigger regional connections.

A FRANK DUERDEN: Can I talk to you at the break while I think about it?

LYN HARTLEY INSTRUCTIONS FOR GROUP DISCUSSION - 20 MINUTES

The meeting adjourned at 3:15 p.m.

The meeting resumed at 3:30 p.m.

7.0 Introduction - George Hegmann

CHAIR BILL KLASSEN: The next session is entitled Managing Cumulative Effects through Regional Land Use Planning: A Practical Framework. It will be given by George Hegmann. George is an engineer and a senior environmental scientist with AXYS Environmental Consulting based in Calgary. He specializes in environmental impact assessment and cumulative effects assessment, both process and implementation. He has conducted numerous assessments under regulatory review, has recommended methodological approaches for assessing and managing cumulative effects and frameworks for managing cumulative effects. He's provided guidance to assessing cumulative effects for recreational and energy projects in western and northern Canada and has conducted numerous workshops - I expect some of you have attended workshops that George has conducted on cumulative effects assessment and environmental impact assessment.

So, George, we'll turn it over to you.

7.1 Managing cumulative effects through Regional Land Use Planning: A Practical Framework - George Hegmann

GEORGE HEGMANN: Thank you. I am in the unenviable situation of being the last speaker of a long day. The ranks grow thin. I certainly hope and ask for your patience to just make it through this last session. I am going to be going through a lot of detail; and although the two individuals in the next slide may be facing quite a challenge, the challenge equally may be to survive my next presentation in regards to hearing you at the other end when I'm finished to have some good discussion.

By the way, when I first saw this picture, the first thought that went through my mind was how big the polar bear must be, the one that chased these two up the ladder. I am not sure what they used for bait

I am here to talk about Managing Cumulative Effects through Regional Land Use Planning: A Practical Framework. The presentation is going to start with some definitions, always a good place to start. Then what I'm going to do is go through the workshop questions. I took the liberty of looking at the agenda for this workshop and borrowed verbatim the questions which you're supposed to answer. I'm going to talk about thresholds in detail. I'm going to talk about effects management. Then I'm going to look at some case studies, what's going on out there in the real world that people are doing and things that are happening that may provide some interesting stories that you can use; and these case studies include things called "plans" of various sorts and frameworks, as well. Then I'm going to draw some conclusions.

Assessing, managing and planning for the future. What is the future? In the Yukon, some individuals may think, with a rather jaundiced eye that there isn't very much going on and what would be the point of doing regional land use planning and looking at cumulative effects if there's nothing much happening. Well, I would suggest that's actually not quite true. There is a lot going on, and maps such as these, and there are similar maps in the Northwest Territories and other provinces, they suggest things. They give hints as to what's going to happen sometime in the future.

Now, there are maps that you can get, as well, that are straight from the Yukon Government; and there are leases here for oil and gas dispositions. What would happen if an exploratory well found something, something big. In the Liard region in British Columbia, that's already happened. Now, you look and see what's happened in those areas and you think what would happen here if that was the case. All of a sudden, the case for having regional land use planning becomes much stronger.

Before I continue, as I said, I am going to get into details. Unlike Dr. Frank, who with his excellent presentation, gave an overview of various material, I will be going into quantum mechanics.

The first thing: What do we want? Now, of course, over time many, many different views of this. This is one of my favourites. It's an elder from the Inuvialuit settlement region, from Inuvik, Billy Day, a gentleman I am honoured to have met on a number of occasions. In my view, this is one of the best examples and certainly very much in a northern context that to me says "What is it that we want" where the "we" happens to be a community in generations of individuals who have lived up in that area; and they are now facing an interesting, if not somewhat uncertain future, but when has that never been the case.

Now, getting to the questions. There are three. If people look to the first page of the agenda, they will see a number of questions which this workshop is trying to answer. I am going to not give the definitive answer; and by the way, always believe very little of what I say and always test it in your own context and with your own experience and judgment. What I am doing is I am providing some suggestions as to the sorts of things which we could consider as answers.

First of all, the term "cumulative effects," which by the way is a term I just wish never had come into existence; but unfortunately we have to deal with it; cumulative effects, and I'm going to add to it this thing called "assessment and management," and I put it together. You'll see this term "CEAM." It's not uncommon. It's becoming somewhat in vogue. Although I'm always wary of buzzwords, I'm using one myself, and there it is.

Regional land use plans, we've heard of that. And then, I puzzled until my puzzler was sore on the issue of what was linkage. What was being referred to as linkage? Well, there's my view. This view is positioned in the context of looking at regional land use plans and this thing called "cumulative effects assessment," and I see them as inextricably linked. I will go into some detail as to what I mean by that, but fundamentally after I think I figured it out in my own mind, although there will be 100 different versions of that, it is a transfer of information between these two parts and a sharing of that common knowledge towards the common goal of managing cumulative effects. Sobeit.

Now, what are regional land use plans really saying? Have we ever noticed something very interesting about these plans? On one hand, we have this little voice saying, "Permit and encourage things, i.e. development."

On the other side, conservation, "Minimize and reduce," it says. What are you going to do with that? What do you do with a plan which says this, and then, in the next paragraph it says this? What do you do with that? What difference does it make in terms of any difference in dealing fundamentally with cumulative effects anyway? Well, let's find out.

The first thing I wanted to mention is the difference between a bottom-up and a top-down approach. In this world we are forced, for certain types of project situations, to assess this darned thing called “cumulative effects”. All right, fine. Every time we do that with an individual project, we start looking at certain pieces of information. We look at what the project does and how it interacts with the road around it, et cetera. But in the end we hit a brick wall, because there are things which we just don’t have any more. Wouldn’t it be nice if we could get that stuff?

Well, in this hierarchy, and it’s perfectly shaped this way, the local area plans, and that term, I’m glad, has been brought up in a previous session, is an excellent example of what I see as the next step. Local area plans are very focused. Often, for example, there might be an access-related one or a recreational, back-country use one or what have you with the granddaddy of the regional land use planning on top. Now, in this hierarchy, project CEAs feed into this and feed into the above. In reality it actually works both ways as we shall see.

Now, what are the key components of regional land use plans? Again I’m in the unenviable situation of being the last person of the day, everyone already said everything there was to say. So, heck repetition is good. So, here again, from my view, in regards to looking at regional land use plans, taking regional land use plans and wrestling them down to the ground and saying, “Okay, look, what have you got?”

And this is what I see that comes out of them. They provide a vision, management objectives, this thing called “zoning,” baseline description, state, single point in time and trend from now into the future, a description of allowable activities (You’re in/you’re out. No, you can’t come in here. You might and we’ll look at you carefully.), tiered restrictions on activities, effects management measures and the issue of process. The point is many of these plans are guidelines, not statutory, which is also the case here in the Yukon. And they are anticipatory. We certainly heard a lot about that.

Now, what linkages currently exist to improve CEAM? Remember these are lifted directly out of the agenda for this workshop.

Well, we can identify regional issues of concern and valued components, that is things out there which are important enough for us to care about and do something about. It gives us appropriate geographic and temporal boundaries, geographic, study areas, lines on the map, call it what you may; and temporal - some period of time where we’re going to look at things. Studies and monitoring requirements can be established, as well; and you can do it before projects are permitted. That is, get yourself ready, get the information you need with your baseline; or after the projects are approved as followup. Also, environmental

baseline and land use information that indicates specifically environmentally sensitive areas of the developments, culture, important sites and other regional-wide information. Now your arrows are in your quiver, and you're ready to go.

What linkages could be established to improve CEAM? In the outline it says "Management of cumulative effects." I have combined assessment and management together. I will say, though, that in the evolving world of figuring out what this all means, the "M" for management is leading beyond the "A" for assessment. We're starting to realize the limitations of assessment and realizing that management increasingly plays a much greater and more important role.

So, what linkages could be established to provide clear, meaningful and useful resource objectives to assist evaluation of cumulative effects significance, whether it's in a project specific basis or otherwise? One of the most frustrating things that I keep bumping into while acknowledging on the one hand its use and utility is something like the following:

The land use plan will improve ecological integrity. Well, who doesn't want to improve ecological integrity? Who doesn't want sustainable development? Thank you. Please give me something else, and you don't get anything else. Anyone who is doing plans, please don't do that to anyone. Don't leave people hanging on the edge of a cliff, "Great, ecological integrity!" I have no idea what it means. Nobody knows what it means. What am I going to do with it when you don't know what it means? So, don't put it in except as a broad enough objective that immediately it's followed up by something that says "Okay, ecological integrity, I'm going to wrestle you to the ground. This is what I really mean by that."

Thresholds in each zone against which we can look at the incremental effects of proposed projects. I will say I know right now that today there is going to be a good presentation tomorrow on the subject of thresholds in more detail than I will be doing today. So, you will be getting some more information tomorrow on that subject, as well.

Here's one you don't hear very often, but I work for proponents, and I work various sides of the fence. I tell you, clear jurisdictional responsibility. Who's in charge here! It's not always clear. In terms of proponents, for example, industry's point of view, they're coming in and saying, "Look, just give me a level playing field and tell me what's going on."

The next question: How can regional land use plans be developed to incorporate effective strategies to manage cumulative effects? This one took a little bit longer. Develop and implement such plans within what are called "frameworks". Don't worry too much, I'll explain in a moment what that means. Develop and implement thresholds specifically targeted at particular land uses and features of concern. Develop and implement regional data bases to provide necessary

information. Create a regional advisory committee to oversee regional initiatives and start, if possible, with dispositions.

Where does cumulative effects start? The things we do out there, projects, things we build. A bulldozer comes in, build things, project.

Activities, truck driving along a road, bang, you've got an activity. Whatever, hunting, fishing, trapping, things people do out there.

Now, for industry this is a precursor to everything. If you start this, fate is now set. There will be cumulative effects. You've set yourself up if you do not test dispositions. I'm not saying that here in the Yukon or necessarily anywhere that should be the case, but the question needs to be asked, and then, at least recognize what the implications of that are. Disposition means someone spent some money, sometimes millions of dollars, for only the potential if they're lucky to actually find something out there. That is where, in many cases, cumulative effects starts early in regards to industrial use. Tenure, for example, in regards to forestry is an equivalent.

How do regional land use plans help manage cumulative effects? Avoidance, management and focus - now what's this slide all about? Think about it, regional land use plans, great stuff, wow, that's great stuff. Cumulative effects assessment and management, okay, let me think. So, what do regional land use plans really do to do anything about managing cumulative effects? I mean, how does it work? Where is the little mechanism? Where is the little clockwork that somehow makes that linkage?

Increases distance of disturbances from sensitive features or in time does not allow the disturbance to occur, therefore, decreasing likelihood of an effect occurring. What's the best way to kill a cumulative effect? No, it's not some insect spray. The best way to kill a cumulative effect is to stop the effect cold at the project or human activity. It's gone. There's a bit more to it than that, but that's the important starting point.

Avoidance reduces the degree of human disturbance in zones of higher restraint, i.e. greater concern.

Management - in areas with development, identify geographic areas of concern and associated features within which the development is conditional and certain restrictions and application of certain mitigation.

Now, some of you in the audience, I get this every time and I don't blame you, say, "Wait a minute, restrictions, limits, oh." One of the inevitable implications, if you're serious about dealing with cumulative effects, you'll see there are lots of other options, heck, give what we do out there in the world around us a lot of opportunity to do various things to deal with effects; but in the end, there has to

be an admission of some limit. The easiest thing in the world is to throw this concept of “thresholds” out there. We need thresholds, and then, stand back and “Well, someone else is going to figure that one out. Just let them figure out how to really come up with a threshold and implement it.”

Now, you come out with a threshold, and “Wow, we didn’t mean that.”

“Excuse me, you meant what? You mean a certain amount of activity happens, and you put the can on it, and that’s it? Sounds dangerous.” I understand that.

So, in the end, you back off and say, “What is it you want?” One of the things that regional land use plans do is tell you that. It’s just that in many cases right now they don’t go far enough with providing information and direction that helps for project-specific assessments and to really, I think, make a difference in the end in dealing with this thing called “cumulative effects”.

Focus - provides a regional context to help understand the acceptability of changes to environmental features in human use. It provides a clear geographic area. Isn’t that nice? It packages up the world for us. It says, “H’m, a map, line, blob, pull it out. That area we’ll manage.” Humans like that. We like to compartmentalize, lump, split, organize, categorize; and regional land use plans provide it on a silver platter. “There it is. Plan within that area, please.” It’s not the whole world. It’s not Canada. It’s not North of 60. It’s this, this area. Nice start.

Finally it indicates what’s important, for example, species or their harvesting.

Okay, those are the questions. Then, thresholds, just a few tantalizers before the details come in tomorrow. What I’ve done is I’ve couched the discussion of thresholds in the context of regional land use plans, working with and interacting with this thing called cumulative effects assessment and management.

Quantitative thresholds are rarely provided. If numerical values are provided, typically they are for desired broad conditions. So, for example, in the Athabasca Oil Sands integrated resource plan in Alberta, it will say “Maintain the current winter population of 200 deer.”

You’ll say, “Well, George, there’s a number in there.”

“Yes, that’s right.” But the thing is that number and the way it’s said won’t necessarily help you reach the goal post in regards to figuring out what to do in terms of influencing the pace and nature of change that will affect the deer. Okay, we need something else here, because the reality is that how many government jurisdictions have completed their full five years of wildlife survey in all the selected species? Probably not too many hands come up, and that’s the reality of natural resources and time. That’s the reality of the world. The thing is

we don't have all the information, for example, to answer that. So, why do we put it out as an objective when you can't answer the question? Because in many cases, we're backing off from what we really need. Typically it only provides general guidance. For example, general land use objectives. From the Fort Nelson LRMP in British Columbia - manage to maintain forest attributes suitable for high elevation caribou habitat. Now, on one level that is perfect. It is exactly what's needed. On the other level it's completely useless. I am a screener with a Federal agency or provincial department. I'm a proponent preparing an application for assessment. I am someone with the Ministry of Sustainable Resource Management who has to plan ahead. The question is: What does it mean and what do I do with it? So, it's a good start. We have to go an extra step.

General data needs or land use management strategies are often provided. For example, identify important habitat. Good, I can handle that one.

Minimize development of new access, minimize. There's minimize. What's "minimize"? Make a 50 percent reduction, 10, two; five years from now, 10 years from now? It's like business. How do you run a business? You have a strategy. What's the strategy? It tells you what to do, when. Are regional land use plans any different?

How about this - minimum approach of any activity 100 meters to wetland. You've got a number there. That's good. It's not quite the threshold I'm talking about. It's a setback that physically separates, remember what I had mentioned earlier, it keeps the project away from something that's important with the hope that that's going to reduce the chances of an effect happening and reduce the chance of a cumulative effect happening, as well. So, there's a spatial attribute there. It's distance.

The next one - No activity between May 1st and August 12th. One of the easiest things to forget in management of effects is time. What if you're just not there doing something when that thing out there which is so important ain't there. Heh! That's why we have timing windows. CWS and other provincial departments provide these things all the time; and of course, it's bemoaned and lamented by industry and proponents, because understandably, and again there's always this double-edged sword on this, yes, it does make a difference in regards to how one will in the end plan your project. But to be forewarned is forearmed, and if the rules are known beforehand and whatever discretion which typically is the case is applied to that, then you move ahead.

Now, the current reality is that there are blobs on a map, and they're tagged with words. These are examples of those words. The ideal is those words are translated into something that's more absolute. So, if I say "minimize," it's relative. It doesn't tell me even how much, but it's relative. It says "minimize," which means from this point to this point. But 100 hectares of core winter habitat

lost is absolute, bang. Assuming you believe the data and you have good information and good interpretation, there it is. That's the ideal, the Holy Grail of regional land use planning in terms of having quantitative thresholds. Boy, I tell you, though, to come out with those and implement them, that's a story unto its own.

Now, in the Yukon, there is certainly a lot of interest in caribou in the southeastern part of this Territory and certainly in other jurisdictions and other territories. Northern Alberta and northern British Columbia, NWT, it's the same thing. You can handle thresholds sometimes by looking at very specific things out there in the real world. For example, things called "core habitat, connectivity;" and for the nonbiologists in the room, and I'm not a biologist, what, in the end, in the larger sense, these things allow us to do is to take the world, we map it; yes, we do our characterization of what's something important out there to caribou and it's their habitat. What we do is we say, "We're going to track this. We're going to watch this. Things are okay now we think. We're going to monitor, and we're going to watch." These green patches, they get smaller and smaller. Then all of a sudden, something's going to happen.

Tomorrow you're going to learn about tiered thresholds, which is the practical way of approaching this situation.

Effects management types - on the issue of effects management, on the one hand, "Well, yes, aren't you talking mitigation?"

"Yes, I'm talking mitigation."

"Are you talking something more than mitigation?"

"Very much, effects management in a much larger context." Effects management can be done on a specific project. "I'm a little project. The world's all to myself, and everything I do only has to do with my project." Or joint, and that is "Heh, you over there," grab them by the shirt collar and bring them in and "Now, you're going to be working with me on dealing with management." Regional, by now this is the big stuff, and we're going to be relying on government or it's entirely run by government, because this is just too big for any one proponent to be responsible for.

So, why manage effects. Intuitively we all understand the obvious reason for it, and that's to reduce, minimize and negate effects; but do you know what, in areas which are particularly busy there's one thing you have to remember, and that is if they're busy enough, the best thing you can do is slow down the pace of change. For many you'll think, "Do you know what, if we just manage well enough, cumulative effects, we're going to stop it dead." Good luck in some situations. In many cases where you have enough going on and I'll say it, in space and time, which means everything in the universe out there that happens,

as complex as it is, in the end with the red line, if we have conventional mitigation measures where we push the edge and we add more, what we end up doing is we buy time, and that's what often happens. Effects management buys us time to get this same reduced effect.

What can you do with time? A lot, time buys you a lot. It means that you can plan ahead and look to properly frame the nature of, for example, mitigation and planning that you need to do. There are various effects management levels. At the very top here you have an individual operator, jointly coordinated amongst themselves throughout industry; and then, what you have is full participation by all parties involved. A lot of this stuff we've got already. It's in my tool kit in my pocket, "Yes, I've got this. I've got this. I've got setbacks, timing windows and everything else; but on the other hand I've got all kinds of innovative and evolving techniques that I can add on to that." From top-to-bottom, increasing government role, someone's got to take responsibility for what's going on there, and there is a larger, often mutual, benefit that can happen as a result of these activities, increased effectiveness in managing regional effects.

Here are examples of what you can do, and I'm not going to go through them all in detail. There are some really neat buzzwords in here, which certainly have received a lot of attention as of late. One of the really neat ones is "integrated landscape management, integrated resource management." The point is that it's game over in many situations in regards to everyone on their own doing things completely by themselves in regards to management. We're in this now together. There's just too much going on. The classic situation where at least in Alberta this term evolved is when you've got oil and gas sitting right on top of forestry. There had been an earlier statement that you can't have two projects in the same space. Go to Alberta, you'll see it. It's there. It's happening, and that's why this.

In the far right column, this is getting into some of the big stuff. Protected area strategies, you can't think of a hotter topic in any jurisdiction. You walk into any room anywhere "protected area strategies," whoa, watch what you're saying. Protected area strategies is the fascinating way to deal with cumulative effects. It's what I call "the back door approach" to deal with cumulative effects. Basically you're setting yourself up for providing a difference between source and sink areas, for example, for species. You can say, "Look, this area is important, and we're going to set it aside." Yes, there are lots of right-of-access issues. Notwithstanding that, once you've done that, although for the rest of the area it may not be "Go for broke," it means nonetheless you have implemented the beginning of the concept of regional land use planning, no activity or a certain amount of activity here and a different type of activity over here.

Case studies - I have a few here which I want to go through. Lessons to learn - look at the levels of the zoning classifications and what they do and the definition of "objectives". Let's see what others are up to. In the Muskwa-Kechika

management area in northern British Columbia, there is a very large area which has in the last few years undergone considerable effort in regards to some directed and very focused management where they've had the opportunity, because of the nature of the *Muskwa-Kechika Management Act*, to do things which other areas may not have done. So, what we have -- and this is kitty-corner to you guys. This is northeast British Columbia. Here is the Muskwa-Kechika. Right here there's a little green blob. That is where it's referred to as the "Base of Profit," and they have done what they call a "pretenure plan". "Before you go in, you've got to tell us what's going on." This is how they tell you. "We're going to ask you to give us general management direction."

"Well, we've done that before."

"You're going to have to comply with some general objectives, i.e. what you want and a strategy of how you get it." I lifted this table right from the Base of Profit Plan. On the left, here is an objective in terms of environmental values, in this case for water and sediment control. Minimize or mitigate, there are those words. It's fine. It works for where it's intended right now. On the right side, strategy, how you get it. So, if you want to minimize or mitigate, this is how you do it, bang, bang, bang, pages and pages of this.

Gwitch'in Land Use Plan, which I believe is still in draft, which I must say I see as one of the best examples of a land use plan period. I have been very impressed by the way they work North of 60. If you look at Canada and you look at what else has been happening in the country, I would say North of 60 has been a very impressive record in terms of the sorts of things which have been coming out. There are three zones: general use, special management and protected. The area starts in an area of lesser protection and buries itself deeper into areas of higher protection, three areas. On the subject of how will a regional land use plan, a plan of whatever type, help to deal with cumulative effects, red is protected. Here is the particular area this map represents, and it's referred to as Travaillant Lake, and the red area around it is a protected area. No go. Okay, the buffer, we're going to keep things away from Travaillant Lake, and this is how we're going to do it. In the classic fashion of regional land use planning we are partitioning into little pieces, and then, saying what each piece means. In this way, then, the Gwitch'in or any other area, they're going to have some objective help along the way. In this case, it's sustainability of a way of life. I don't have a problem with that. I wouldn't say as an objective that's vague or fuzzy. There's no problem. When that materializes into something concrete like the map I just showed you, then you have something which now is useful. Now, in the case of Travaillant, to protect fish and heritage resources was the reason for that particular zoning, and it protects or buffers important areas such as the range of caribou herd, which is the case certainly in the Gwitch'in territory and Gwitch'in region.

Further north we go to the Inuvialuit, and they have something called “Community Conservation Plans,” and this is darned good stuff. Whether it technically meets the definition of “regional land use plan,” for the moment, I really couldn’t care; because what it does is provides the same basic concepts. This map here shows the overlay of Categories A-to-E, “E” no development. “A” is largely business as usual, subject to the usual provisions of judicious review or various applications, et cetera, and then, we start cranking up, ratcheting up the criteria as we continue along. So, here we’ve covered a relatively large area. Then they have nested within that something called “special designated areas”. So, in this case, just west of Inuvik in the Mackenzie Delta, what you have are smaller chunks. Each get a number and a letter. The letter is the letter you saw before. “E” means protected in this case. The number is just a unique number that tags that particular area. Then they go into a very detailed description of what is important, et cetera.

Now, what I thought was a wonderful innovative technique that they came out with is you take a blob, an area, let’s say it’s “B”, and someone comes along and says, “I want to build a new project just cookie-cutter out that area,” and this is oversimplification, it’s a basic concept, “and we are going to now redesignate an area of equivalent size to a higher level of protection.”

“Okay, you’ve got your project. We get this.” Now, it’s not an ultimate solution. You can see where this can end up but still slowing down the pace of change.

The key attributes are sustainability of wildlife and wildlife habitat and renewable resource harvesting. It provides general land use guidelines, species conservation summaries, a lot of information, and special designated areas, as I have mentioned.

The LRMPs, the first presentation this morning was about LRMPs. This is the Fort Nelson LRMP. They have four zones, two enhanced, two protected. The LRMPs provide general management direction and something called “category management direction and RMC special direction,” words, terms, et cetera. In the end, what it means is in the issue of spatial scale, a large area, this is what we want. A smaller area, we can now be a bit more specific about what we want here, and we keep working our way in, honing and fine-tuning, the nature of constraints, the information and the level of detail that we have with them.

Frameworks - I’m going to go through a number of frameworks. Frameworks provide a packaging. Now we’re on the downhill slide towards the end of the presentation. The idea of frameworks is finally trying to find that mechanism, the glue, the Velcro or whatever that takes regional land use plans and cumulative effects assessment and management and puts them together. How do you do that?

Well, there's been something called "frameworks" that's come up and a suggestion that maybe this is something to consider in the case of the Yukon. What is a "framework"? Goodness, not one more word, please! "Framework" - any administrative and regulatory structure that pulls together anything that can loosely contribute to assessing and managing cumulative effects - don't stop there -- and makes it clear how those parts work together towards a common goal. So, that's the binder twine that keeps it altogether.

Oil sands, 60 billion dollars worth of investment, no end in sight; and in that area in northeast Alberta, there are a number of key attributes, which they see as the defining criteria which makes this thing work. I'm not going to go through these in detail, but the point is that they have an umbrella called "regional sustainable development strategy," an interesting-sounding term, neat words in it; and it would be the equivalent of providing objectives in a regional land use plan. Then it's the job of SEMA, which by the way is industry-sponsored and industry-led, to sort this all out in regards to the effects of those oil sands projects, and we're not talking small projects by any means.

A bit closer to home, Northwest Territories, cumulative effects assessment and management framework, and it started because of diamond mines. Heh, aren't you guys supposed to have emeralds here now? I heard something about that. Diamond mines; so after the Diavik project was approved, and it's just coming on-line, this whole area is considered. So, there is a blob on the map. I'm going to take this area, cookie-cutter it out and say, "We're going to plan this. We're going to make this work," okay, because we're concerned, heads up, we're concerned about what's going to happen in the future. What they have is all these bits and pieces which make up the framework. The arrow shows "Land use planning, here I am, here I am," and there's all kinds of other stuff, too, going on, a lot of other stuff. Perhaps what is needed is a bit of now putting some direction on this. This is something, I'm sure, which is being worked on.

Now, proposed, still in draft form, not complete, proposed for northeast British Columbia something called a "sustainable resource management plan", and what it has done is fallen back on the two main pillars of management, of management and thresholds, but for project-specific and regionally; and what it's done is it's admitted that how do you deal with cumulative effects? You manage, manage, manage. If we have thresholds, let's use them. We don't have thresholds, you manage, manage, manage, amongst other things.

Remember the NWT, the little balloons circling each other. What in the end people need to get going is, "Look, George, tell me where to start."

"Okay, start here, good, okay."

"Where do I go next?"

“Go here.” That's what people like. I don't blame them; I do. Everyone does. We need to know where to start. We need to know where to end and where do you go, bang, bang, bang in between; and this is what is being proposed. Buried in here is land and resource use planning. You've got your project-specific review, you have your regional studies, you have your regional data base; and it all fits in, just click, click, click. It comes in together, Lego-fashion. You start at a point here, you work your way through, and then, you just keep circulating through, collecting more information, adaptively improving your knowledge and your ability to deal with the assessments.

One of the things we've done is baseline mapping. How interesting that roads, of course, are one of the historically most important precursors to cumulative effects in the world.

This is a map of transportation density in northeast British Columbia. Interesting! It tells us where we're going to probably go next.

Hotspot mapping, here's one for grizzly bear. It was done for a number of species. You take a large area, and you say, “There are enough things that people are doing on top of something which is important to a valuable resource like grizzly bear habitat. Let's see what happens when we combine those two together in our wonderful GIS. The dark orange areas are areas of some concern. Therefore, you want to build there, you want to plan there; you are now forewarned. You'd better just check now at whatever level of detail you need to know if grizzly bear is going to be a problem for you.

Conclusions: Regional land use plans -- and this is straight from the Yukon Land Use Planning Council, and I thought this was an excellent best first point to make in the conclusions. It's straight from what you have. They're intended to be comprehensive guidelines for management decisions. I love that! That's exactly it! Implementation of regional land use plans should precede cumulative effects assessment -- of course, we don't always have that luxury -- after which they continuously feed each other with information in an adaptive way. The major strengths of most current plans in addressing this management monster includes providing geographic areas for focus and information about those areas. The major weaknesses: It's too vague, land and resource management objectives, no quantitative thresholds. Regional land use plans may not yet provide useful thresholds, but they do provide information to assist their development. Thresholds are a recognition that we can't always mitigate our way out of every situation; how we may wish that's the case.

Framework provides process redundancy. If one approach doesn't work or takes too long, there's always another option. Therefore, not a single reliance, for example, on modelling; and there will be some more discussion about that tomorrow, as well.

A GEORGE HEGMANN: Yes, it always does come up and thanks for the question. Free entry, the first thing that happens with free entry is precedent. What were you able to do before, the question.

Then regional land use planning says, "What do we want to do now?" And I do not have an answer to your question except that if one engages themselves in a regional land use planning process, I would suggest that it provides the context for, and this is the bailiwick of access, and that is acknowledging that, Solomon's choice, that if cumulative effects are going to be dealt with, and they are going to believe the information in trends and concerns, then it basically boils down to you don't always get what you want, and you can't get everything. One of the biggest things with regional land use planning, I would suggest, certainly in regards to right of entry, is first of all, what is legal precedent in regard to what that says? You have to work within that.

After dealing with that, then, based on all that other fuzzy or ecological stuff and everything else, what makes sense in regards to in the balance, in the ultimate balance and in the public interest test of looking at the extremely important, never should be forgotten, human element we as creatures on the landscape, as well, in regards to what we do and wish to do along with everything else. To make that choice, it would seem to me that the type of information that we've heard earlier today and that I have suggested would help where in a roomful of people such as this good information and maps and notwithstanding the various political subtleties and other matters of complexity, it wouldn't probably take too long for a relative understanding of, "Well, look, people are out there hunting. They're hunting moose and caribou; fishing, recreating."

Okay, we want that, right? "Yes, yes, we want that, snowmobiling." We want to get in and get some access to subsurface resources, "Yes, we want that, too."

All right, let me think about this for a moment. So, we have to make both work. So, are you really going to get everything? Something is going to have to give; and of course, the long, drawn-out history of these we don't need to go into, but I would suggest that if you do not have the information and the process associated with regional land use planning, you've got a pretty tough slog ahead of you. That's the best answer, Rob, that I can give.

Q RON CRUIKSHANK: Have you seen much in the way of thresholds for economic reasons, rather than for environmental? I guess I'll try to give a Yukon example, we have quite a few outfitters that rely on large areas where there isn't anybody else there, and from a business standpoint, they probably have a threshold of the number of other people,

a hunter, for example, could encounter on a hunt before he would feel he's not hunting in a wilderness environment and not come back there and search elsewhere. In thinking of a Yukon example, this is not really an environmental threshold, but it's really an economic threshold. I wondered if you've seen any of that kind of mapping and that kind of work.

A GEORGE HEGMANN: From what you've described, it doesn't probably warrant being an economic threshold, but it's a perceptual, societal threshold; and it often is used in the context of limits of acceptable change in regards to, for example, the human perception. We are animals, too. We are always very much doing wonderful scientific research on how grizzly bear and moose are alienated as a result of noise and other disturbances. What about people? There's been some work done on that, too. People, animals that we are, are disturbed by things that happen around us when those things are not things that we want to do or to sense.

So, first of all, the idea of social thresholds in regards to the objective of wilderness values, and then, an individual moving in the landscape, sensing things around them and saying, "You know, I'd been hiking for a week, and there was one West Jet flight that flew above me and just ruined my whole wilderness experience," and it goes from there.

Now, economically I'm unaware of that only because of my own ignorance on the matter; and that means I don't know if there would be thresholds in terms of economic equivalencies. I will say, though, that for the last 30 years, certainly in the academic forum, what has been pursued with great gusto has been the matter of economic equivalency to anything in the natural world, and it hasn't gotten very far, because it is darned difficult to do.

Thank you very much.

CHAIR BILL KLASSEN: Thank you, George.

LYN HARTLEY INSTRUCTIONS FOR GROUP DISCUSSION - 20 MINUTES

LYN HARTLEY ADVISES GROUP PLANS FOR SEATING FEBRUARY 11

CHAIR BILL KLASSEN: It has been a full day. We began with Kevin Kriese's inspirational presentation on land use planning in British Columbia, that it can, in fact, work with the collaborative approach that they've perfected there and that we're in the process of importing.

Then Ron Cruikshank and Bonnie Hurlock followed up with the basis for and process of land use planning here in the Yukon.

Then to tie land use planning to the cumulative effects assessment, Rob Walker took us through a consideration of what constitutes cumulative effects assessment, and then, Rose Kushniruk provided us with an excellent set of photographic images of what cumulative effects amounts to from the First Nations' perspective, using Aishihik as the example.

Then Frank Duerden walked us through the principles, concepts and steps of the regional land use planning process.

Then George wrapped it up very nicely with the practical framework for managing cumulative effects through regional land use planning.

So, we'll see you tomorrow morning at 8:30.

The meeting adjourned at 4:48 p.m. to February 11, 2003, at 8:30 a.m.