

Environmental Monitoring Advisory Board (EMAB)

Traditional Knowledge Panel Workshop May 20th, 2011; Yellowknife, NT

Prepared by Crosscurrent Associates Ltd.

Workshop Agenda – see Appendix A.

Workshop Participants -- see Appendix B.

Workshop Summary

Opening Activities

Jonas Sangris of the Yellowknives Dene First Nation (YDFN) led the group in an opening prayer.

Each participant was given a chance to introduce him/herself. Facilitator Peter Redvers then reviewed the agenda and objectives of the workshop.

EMAB Presentation – *Doug Crossley (EMAB Chair)*

Doug explained that the Environmental Monitoring Advisory Board (EMAB) was established through the Environmental Agreement signed 11 years ago between Diavik Diamond Mines Incorporated (DDMI), affected Aboriginal groups, and the federal and territorial governments. EMAB has been working hard with Diavik to implement many of the requirements of the Agreement—including taking care of the environment, monitoring, and hiring of Aboriginal people at the site—however, some of the requirements in the Agreement have not been met.

One of the things EMAB has been working very hard towards over the past several years is the incorporation of Traditional Knowledge (TK), also called Inuit Qaujimagatuqangit (IQ). In 2009, EMAB held a major workshop in Kugluktuk, which was attended by many of those present. With help from Allice Legat and the Wek'eezhii Renewable Resources Board, EMAB developed a proposal to implement a comprehensive TK monitoring program in the vicinity of the Diavik mine site, based on seasonal elder-harvester camps, but this proposal was not implemented because DDMI would not provide the funding required.

EMAB instead decided to support some of the Aboriginal parties with smaller individual initiatives related to the use of traditional knowledge. EMAB has been moving ahead but wants to go further, to see full incorporation of TK in wildlife effects monitoring and to some extent in aquatic effects monitoring.

Within the last six to eight months, EMAB has decided it needs the help of a TK Panel. The Environmental Agreement provides an opportunity for the establishment of such a Panel. It would include a representative from each Aboriginal party, and they would work with DDMI and EMAB to figure out the best ways for DDMI to use local people's knowledge about land, water, air and most importantly, animals, in monitoring activities at the mine site.

This TK workshop has brought together experienced Dene, Métis, and Inuit elders and harvesters as well as resource people with strong backgrounds in traditional knowledge. The workshop does not include the three EMAB members who represent government agencies. The people around the table have lived on the land and depend on its resources—so they know how to use resources wisely—and most have visited the mine site at least once. Amongst everyone there is a fairly good knowledge of the changes that have taken place in the area since it was a pristine environment – when the animals ran freely, without dust and other harmful materials. EMAB hopes to use participants’ expertise to figure out ways to effectively incorporate TK into activities at the mine site. The workshop is only a start; it should be an ongoing process.

DDMI Presentation – *Colleen English (DDMI representative)*
(See Appendix C)

Colleen explained that her presentation was about the ways in which Diavik has already been using TK and where Diavik intends to go in the future with TK.

Colleen began by highlighting the programs where Diavik has been incorporating TK. For example, when the mine was first getting up and running, TK was used to determine what and where to monitor (animals, fish, vegetation, water, etc). Diavik has also asked elders which nearby streams would work well as replacement fish habitat, and where to locate fish shoals inside the dike. Colleen noted that KIA member Bobby Algona played a key role during the design of the wolverine track survey.

Colleen went over a list of DDMI’s expectations for TK/IQ in monitoring. Some of the key points were:

- TK/IQ work should complement existing programs – for example, by focusing on the animals DDMI is already looking at, or helping to assess lake water quality;
- TK/IQ should be repeatable and help to identify trends over time;
- While any Aboriginal organization should be able to participate, conflicts may arise if there are differing views on the proper methodology;
- TK/IQ studies should be relevant to people in communities, and should help to promote discussion and better understanding. Scientific studies may be difficult for local people to understand since these studies look at individual parts of the environment, whereas community people may look at the world in a different way;
- To be most useful for DDMI TK/IQ information must be transformed into recommendations that will inform specific mitigation or other measures at the mine site;
- DDMI wants TK/IQ monitoring to be a two-way process. There should be opportunities for people working with DDMI’s Environment Department and others to learn from TK use.

Colleen highlighted potential opportunities for TK input. She emphasized that the list provided (see Appendix C) was not intended to dictate or limit options; it was just to get ideas flowing. The list included both current monitoring programs (eg. lichen, grizzly bear, caribou, and fish) and post-closure planning (eg. redirecting caribou movement, final landscaping, re-vegetation). Colleen also indicated that DDMI was interested in exploring traditional risk assessment as a way to manage risks to wildlife, water, and people, both during operations and post-closure.

DDMI hired a consultant to do a desktop literature review of existing TK/IQ data from the region, and carry out some interviews with key informants, in order to find examples from the resource sector successfully incorporating TK/IQ into monitoring and closure planning. So far, very few good examples have been found. Those interviewed have stated:

- This is a new field --there is little information out there;
- Too often, and almost always, TK is a subchapter in the environmental assessment;

- There are few examples of mining companies integrating TK into their management plans;
- It would be helpful to put industry people out on the land – where they may be as uncomfortable as community members are in the board room -- to help them understand the community perspective.

The two best examples of mines using TK/IQ are the Red Dog Mine in Alaska (owned by Teck Cominco) and the Argyle Diamond Mine in Australia (owned by Rio Tinto). Several years ago DDMI took many community members from northern Canada over to Australia to see the Argyle Mine.

In terms of next steps:

- DDMI is interested in and supports EMAB initiative to set up a TK Panel;
- DDMI still needs to go over the final results of the literature review;
- DDMI plans to hire a consultant to undertake some TK planning work with the communities;
- DDMI does not have a specific budget to support TK, but that is not meant to be a limiting statement. DDMI is focusing on the development of internal TK programs; however, proposals from communities would be reviewed on a case-by-case basis. DDMI is already in the planning process for its 2012 budget; ideas from the TK workshop could still be incorporated.

Discussion with Snap Lake Environmental Monitoring Agency (SLEMA) TK Panel

Dave White (SLEMA Executive Director) provided an overview of the SLEMA TK Panel:

- The Environmental Agreement with De Beers requires that a TK Panel be set up as part of SLEMA;
- There were originally supposed to be two TK panels (one for wildlife and one for water) but they merged into one, since most of the same people would be sitting on both;
- The TK Panel is made up of two elders from each of the four communities. Many of the panel members are here at the workshop today;
- The SLEMA TK Panel holds two workshops per year and at least one mine site visit per year;
- Last year the TK Panel ran a caribou camp / hunt in cooperation with DeBeers, and at least one member from each of the communities represented on the panel attended the camp.

Following Dave’s presentation, members of the SLEMA TK Panel then shared comments about their experience with the Panel.

Ed Jones (NSMA) emphasized that TK must be respected. TK must be considered to be on the same level and maybe even on a higher level than scientific knowledge. TK should be incorporated into all plans related to the mines.

Albert Boucher (Łuts’elke Dene First Nation) expressed hope that community members and industry would be able to work together better in the future.

- Elders with traditional knowledge would like to help in any way to protect the land, as it is, for future generations. This is their livelihood; they live off the land.
- “The mine is new to us but we have to learn how industry works on our land.”
- DDMI has to learn how to take care of the land as if they lived off the land too. That way, DDMI and communities can work together much better.
- Youth from each community should be included in these meetings. Elders are not going to be around for a long time; the youth are already starting to use the land and they will have to take over.
- At many of these meetings, people keep talking about the same things over and over. It seems like the elders’ words of wisdom are not being documented. If they are, then industry should read

the documents and then ask questions about anything they don't understand. At the next meeting, the industry people should show a better understanding of TK, since elders have been working with them for a long time now.

- Some of the animals and things that are important to the Dene people include: migratory birds, nesting places, caribou camping grounds, water, air, and all the animals including the fish.
- The people of Łuts'elke have been living off the caribou for a very long time; however, the caribou don't come close by the community anymore. This could be because of all the new buildings and roads along their migratory route. More mines are expected to be built in the barren grounds. The caribou will likely face more difficulty.

Eddie Camille (Tłıchǫ Government) highlighted the examples of the Colomac Mine and the Rae Rock Mine.

- Once Eddie and other elders expressed their concerns to various agencies for several years, both sites were finally cleaned up, and fences were put up around the tailings ponds to prevent animals from being poisoned. Now Eddie and Harry (Apples) are the only ones left among those expressing concerns, as many of the other elders have passed on. They feel that they are the only ones left to tell about what happened with past mines.
- Once Eddie went and shot a moose that was found within the tailings pond at Colomac. Testing was done on the animal, but Eddie never heard back about the results. Also, Eddie trapped and sent in samples from furbearing animals, mice and whiskeyjack, but never saw any results and wonders if something is being hidden.
- Eddie expressed his appreciation to Alice Legat for working with the communities on TK.
- Eddie is comfortable with the person working for DeBeers who does the caribou studies and dust monitoring.
- Eddie added that he is committed to reporting back to his Chief and community leaders everything from this workshop.

Mike Francis (YKDFN) noted that some caribou are in poor health; sometimes the lungs are stuck to the ribs. Communities depend on the caribou and it should be well taken care of. Also the water should be carefully monitored and protected since both wildlife and humans depend on water.

Following the SLEMA TK Panel member comments, other workshop participants shared their thoughts.

George Marlowe (Łuts'elke) made the following points about monitoring.

- The Boards are very important, particularly for monitoring the lakes and groundwater affected by the mines. For the new mine, Gacho Kue, a lake will be taken away and put somewhere else. Aylmer Lake eventually drains into Great Slave Lake and then into the Mackenzie River, so this is affecting water all across the NWT. Whether a person is Dene or white or anything else, people have to put their heads together and protect the clean water, to avoid ending up like Fort McMurray.
- There is a different taste to the fish in Lac de Gras since the mines have opened up. There is not necessarily anything wrong with the fish; it just tastes different.
- In Łuts'elke the people used to see caribou come close to town every year, but not anymore. George does not blame the mining company but something has to be done. EMAB should monitor this.
- George has never before in his 72 years seen caribou in the barrenlands during the winter, but for the past four years the caribou have all been in the barrenlands. That is where the community goes to hunt now (140 miles from the community), along with people from Fort Rae, Fort Res, and Smith.

- George appreciates that Colleen from DDMI comes to Łuts'elke to talk with the community.
- Some youth should be on the EMAB Board. There should be two separate boards – one for youth, and one for elders. A few youth from Łuts'elke were speaking at the Thaidene Nene Park presentation this week; they really spoke from their heart.
- EMAB should show everything it is doing (be transparent).

Philip Liske (YKDFN) spoke about the importance of monitoring and restoring caribou populations.

- Caribou numbers are down, and the government is interfering with treaty rights by closing hunting. Philip asked: “How can industry help to prevent disturbance to caribou, and help get the caribou to return to our traditional lands?”
- Every time people go out onto the land, they are monitoring. The government should be doing its own monitoring and trying to get the caribou back.
- People shouldn't wait until after the caribou are disappearing to deal with the issue.
- It is a good idea to take youth out on the land, even if some modern tools are used now.

Sheryl Grieve (NSMA) pointed out the brief time available to ask questions to the SLEMA TK Panel members. Sheryl asked the following questions of the TK Panel, although the questions did not get answered directly:

- Do the SLEMA panel members think we should have a similar EMAB TK Panel? Are they happy with their panel?
- Is their TK work going too fast or slow?
- Is there enough money or too much available to the panel?
- Should SLEMA be involved in TK work that communities do? If so, how?

SLEMA TK Panel member **Harry Apples (Tłıchq Government)** shared his concerns about the land.

- He said that he has shared a lot of the community's concerns with DDMI. “Being a good listener is how you learn.” People at this workshop are talking about a lot of positive things.
- Harry is very concerned about the Diavik mine potentially contaminating the rivers that flow up to the Coppermine, if the water is not put back properly during closure.
- Contamination of sediment in a lake could affect ducks, loons, and fish.
- Once Harry shot a caribou and found once he opened it up that was very sick; there must be a reason.
- Youth should take part in EMAB sessions, and elders should take them out on the land with them.
- Harry took part in a caribou survey. There was a scientist who went out a week ahead, but they only brought the elders out for one day. Harry gave the scientist a piece of his mind since there's not much an elder can do, participating for only one day.

Following the SLEMA presentation and discussion, the facilitator summarized the key messages brought forward so far at the workshop, regarding the establishment of a TK Panel:

- Respect TK/IQ and science equally;
- Work respectfully and cooperatively;
- Document and share TK/IQ information so that elders don't have to repeat themselves on the topics;
- Try to include youth in the work, and perhaps in the Panel itself;
- Address cumulative impacts;
- Encourage inter-panel cooperation so panels don't work in isolation;
- Address closure plans and post-closure monitoring (ie. monitoring is a long-term commitment);
- Ensure use of resource/technical people known to and trusted by elders;
- Focus on wildlife and water, including groundwater;

- Maintain openness and transparency in decision-making;
- Monitoring should be done to inform caribou recovery strategies;
- Monitoring is best done as a way of life;
- TK monitoring must be properly resourced to do what is needed from community perspectives.

Review of EMAB TK Panel Terms of Reference

Given time considerations, it was decided to conduct a final review of the TK Panel terms of reference outside of this workshop. EMAB member organizations were invited to send their comments on the terms of reference directly to John McCullum, who would then finalize the document with the EMAB Board.

Community Caucus Session

Following lunch, the facilitator asked workshop participants to caucus by community/ region. DDMI representative Colleen English stepped out of the meeting for this particular session as DDMI presence was not required. Before getting participants to break out into groups, the facilitator explained what each group should be discussing. The facilitator suggested there may be two main reasons why TK monitoring hasn't moved forward:

- There are different ideological perspectives on what TK monitoring should encompass; and
- There are different opinions on what kind of investment DDMI should make in order for adequate TK monitoring to occur.

The facilitator pointed out that DDMI and the rest of EMAB seem to have very different expectations of what TK monitoring should involve—both in terms of degree and type of work. For DDMI, TK monitoring could just mean elders or harvesters going out and providing ad-hoc advice to the technical and scientific work that the company is already doing. This could be considered a basic, not deep, form of TK monitoring. At the other end of the spectrum, the previous EMAB-initiated TK monitoring proposal understands TK monitoring as building on a way of life: it envisions inter-generational cultural camps out on the land.

The facilitator asked each group to consider two questions:

- 1) What are your expectations with regard to TK monitoring?
- 2) How could these expectations be reconciled with those presented by DDMI – both in terms of the type of approach and the cost? Is there any acceptable middle ground?

Each of the community groups held their own caucus for approximately 45 minutes, then came back and presented their answers to other communities/regions.

Presentation by Yellowknives Dene First Nation (YDFN)—Lawrence Goulet

1) Expectations for TK monitoring:

- Monitoring should be done during each season, not just during the summer, and it should follow the movements of the animals;
- More youth should be involved in TK monitoring, since mines can last over 20 years;
- Aboriginal people should be involved in post-closure work, to make sure:
 - the water is clean and safe for fish and ducks;
 - the rocks are put back in the pits;
 - deflectors/scarecrows/fences are put up so birds and ducks do not land in the tailings pond and caribou are redirected away from the mine site area;

- all of the equipment and infrastructure that was brought in should be brought back out, so a big garbage pile like Giant Mine is not left in the barrenlands; and
- the land is returned to the same healthy state as before the mine was built;
- YKDFN should set up camps to run its own monitoring programs, with assistance from government departments like ENR, DFO, and Environment Canada, as well as EMAB and DDMI;
- While the SLEMA panel did not seem to have a spokesperson, it would be wise for the EMAB panel to have a main spokesperson.

2) Reconciling expectations with those of DDMI:

- DDMI is taking millions of dollars worth of minerals out of the ground, so they should be able to help fund monitoring;

The YDFN had also noted that if EMAB sets up a TK Panel, there may be duplication with the SLEMA Panel in terms of representatives, so there should be a link between the two panels, and representatives from each company might consider sitting in on the other panel.

Presentation by Tłı̨chǫ Government—Alice Legat

1) Expectations for TK monitoring:

- TK approaches will vary between each community -- DDMI should respect the different approaches and allow each community to practise it in their own way;
- TK monitoring involves more than just caribou-- fish, water, plants, and small game too;
- Monitoring should take place at least three times per year at various points on landscape so there can be comparisons – and monitoring should continue for a very long time;
- The people involved in TK monitoring should include elders and harvesters, both men and women, and young people – everyone doing what they do best -- extra funding should be allocated to ensure participation by all of these groups;
- The rocks should be put back after closure, and the land restored;
- TK should not be incorporated as just one more component of technical studies -- scientific studies and TK studies should be done using the best possible methods appropriate for each, and then they should be brought together and considered equally at the decision-making stage.

2) Reconciling expectations with those of DDMI:

- DDMI should sponsor cultural enhancement at least once a month at the mine site – this is different from TK work -- DDMI often confuses community engagement with TK work;
- DDMI has suggested that the Panel would include one person from each Aboriginal party, but the elders want four Tłı̨chǫ representatives on the Panel, one from each Tłı̨chǫ community -- the Tłı̨chǫ people should be able to choose who represents them;
- DDMI says there is no budget for TK this year, but the company is making lots of money from working on these traditional lands -- it is important for DDMI to contribute what is needed so good quality monitoring work can be completed;
- It is not a good idea for DDMI to hire its own consultant to undertake TK work -- each Aboriginal party should be funded to do their own TK research.

The Tłı̨chǫ group created a diagram of how they envision the roles and lines of communication amongst the TK Panel, EMAB, the Aboriginal parties, and DDMI. Aboriginal parties would submit funding proposals for TK work directly to DDMI (not through the Panel, as DDMI has suggested). Aboriginal parties would keep the Panel informed about their TK work, and the Panel would support and advocate

the proposals, to ensure adequate funding is provided by DDMI to carry out top quality research. The Panel would also liaise with EMAB and keep the Board informed.

The Tłı̄chǰ elders would like to talk directly with Diavik decision-makers in order to explain why this TK Panel proposal is so important, and what benefits DDMI would receive from it.

Presentation by Kitikmeot Inuit Association (KIA)—Luigi Torretti

1) Expectations for TK monitoring:

- Monitoring should be ongoing, long-term, and appropriate to each season;
- Consultation about monitoring should be ongoing; there should be open communication. It seems like information is restricted right now, not free-flowing enough;
- A big concern for people in Kugluktuk is possible contamination of the water at Lac de Gras, since this water flows into the Coppermine River which is the people's drinking water;
- Closure planning is very important and Aboriginal parties must participate in the design and implementation of the plan. One example raised was Lupin mine, where the tailings pond is still causing some concern with local people. The company should be forced to look after closure directly, rather than contracting this job out, as they did at Lupin. The contractor did not know the site very well, so it was not cleaned up as well as it could have been. Communities need to be able to hold the company directly accountable for the clean-up job;
- Elders must be involved in the closure planning. The company must do everything in its power to mitigate the effects of the tailings pond. This means diverting animals away from it (markers, fences, etc), water treatment, etc. -- ultimately the water must be drinkable;
- It is important to have some, if not all, of these discussions out on the land -- it is especially important for executives/ decision-makers to be exposed to the land so they can understand the effects of their decisions on the land/people, beyond just money considerations.

2) Reconciling expectations with those of DDMI:

- KIA's expectations match many of DDMI's expectations (as presented by Colleen);
- The "devil is in the design" -- before going ahead with a TK program, DDMI and the communities (through the TK Panel) need to negotiate how exactly TK information is going to be collected and used;
- It seems that DDMI has not accepted the TK proposals presented by EMAB -- the hope is that a TK Panel could open a door for further discussions, since it may be more difficult for DDMI to say 'no' flat-out to a TK Panel (as it does sometimes to EMAB);
- DDMI has certain monitoring responsibilities dictated by regulators, and DDMI wants TK to be incorporated into the things they are already required to monitor -- however, these may be different from the variables that Aboriginal parties want to focus on monitoring.

KIA noted that it is hard to blame DDMI for all that is happening on the land. Many environmental changes are occurring due to global warming, such as more freezing rain, which causes a crust to form on the snow and thus affects the distribution and movement of animals. Other things change from year to year, such as amounts of snow and animal movements.

Presentation by North Slave Métis Alliance (NSMA)—Sheryl Grieve

1) Expectations for TK monitoring:

- Monitoring should have two components:
 - TK monitoring out on the land – this is a family affair and is continuous. Noticing changes on the land require familiarity and practice; it becomes lost if a person is away

for a long time. Different members of the family and community hold different knowledge sets; these have to be passed on to the younger generations through use;

- TK Panel – it should be made up only of Aboriginal parties (plus support staff); there shouldn't be attendance by government or EMAB or industry;
- The Panel could act as a clearinghouse between TK information being provided from those out on the land (including information that was not specifically requested) and EMAB -- communication should be frequent;
- The Panel could advise on how TK should be used, and ensure respect and support for proposals that parties would give directly to DDMI;
- The Panel should avoid the use of acronyms as they are hard to interpret and understand;
- There should be respect for and recognition of intellectual property rights; and
- TK might be considered more valuable than science in certain circumstances.

2) Reconciling expectations with those of DDMI:

- The main issue is money and time investment -- which represents how much respect and value is given to TK;
- The TK Panel could look for funding from other places besides DDMI, such as other mines, academia (potential research collaboration), government agencies with the mandate to support TK/culture/language (eg. GNWT-ENR, Prince of Wales Northern Heritage Centre), even international sources;
- Areas of TK study should be decided by TK holders -- this won't necessarily be the same as DDMI's study priorities, which focus on only a few indicators and a few species. TK teaches us to pay attention to details on a wide range of topics, so the study area could be quite large;
- It would be good if TK could help to inform and be incorporated into DDMI's existing programs -- the TK Panel could advise DDMI on these programs when they have problems;
- There is a need to follow up on the possibility of DDMI funding training for youth in TK monitoring;
- Communities do not want DDMI, or their consultants, to try to do their TK for them.

Presentation by Łuts'etke Dene First Nation —Kelsey Jansen

1) Expectations for TK monitoring:

- Communication needs to be improved -- currently it is often not very effective, because elders don't understand enough about activities at the mine site. For example,
 - When a spill happened, community members didn't hear about it until several days later; they want to hear about spills right away;
 - Workers must sign confidentiality agreements (cannot talk about what they see at the mine site) -- this creates distrust;
 - The DDMI liaison should spend more time in the community;
- Members from Aboriginal communities should be working on-site with environmental monitors;
- When scientific research is being done, results must be communicated to the community and management decisions should be made together with the community;
- More community members, especially youth, need to be involved in workshops inside and outside the community;
- The community has concerns about post-closure reclamation plans that are similar to other groups – the community has ideas about how fencing should be set up to direct caribou far away from the mine site.

2) Reconciling expectations with those of DDMI:

- An info booklet could be developed about TK and cultural awareness for scientists working in the area and resource industry representatives;
- A community member who reads and writes English can help to document TK -- this information can be given to industry representatives and scientists working on the land;
- With a fourth mine coming online soon, there should be better communication between the mines on incorporating TK into monitoring, so the same community members don't have to go to four different meetings to explain the same thing to different company representatives.

Discussion with DDMI

Once the DDMI representative had rejoined the group, the facilitator provided a summary of the key points that came out of the caucus session and also made the following points in relation to the questions raised and DDMI's earlier presentation (see Appendix C).

- With regard to DDMI's first expectation—that TK work should complement existing studies:
 - While there may not be a perfect fit between what DDMI needs to monitor and what communities want monitored, there is likely a reasonable overlap;
 - The main difference may be in the approach -- with the holistic approach preferred by communities (ie. a seasonal land-based camp tied to natural animal movement patterns), the detailed information that DDMI needs will still emerge, just not immediately;
- Re: DDMI's second expectation, that studies should be repeatable, communities want studies to be tied to natural seasonal patterns – using this approach, studies would be repeatable as long as long-term programs are set up to monitor changes/shifts over many seasons;
- Re: DDMI's third expectation, that participants be respected TK/IQ holders, this expectation is shared by communities, with the additional understanding that communities emphasize the need to include both male and female informants and stress the critical importance of incorporating youth involvement and a mentoring component to studies;
- Re: DDMI's next major points—regarding which organizations participate, communication, decision-making, and developing local understanding—communities appear to be proposing a model/structure for the TK Panel to address these points:
 - Individual Aboriginal parties would submit TK research/monitoring proposals directly to Diavik, reflecting their particular land use area and cultural perspective;
 - DDMI would not initiate its own TK/IQ work – this work should be designed and directed by communities and be community based.
- Re: DDMI's seventh point—TK should provide recommendations to Diavik for consideration in environmental management decisions—communities agree. They emphasize the need for a long-term perspective, and the critical role of TK in closure and post-closure planning;
- Re: DDMI's eighth and ninth points—both community consent and the minimization of impacts to wildlife are a given;
- Re: DDMI's last point—assisting DDMI in understanding TK/IQ—communities feel that the best approach is to ensure that senior DDMI personnel gain experience on the land and have contact with elders to develop an awareness tied to direct experiences. (eg. participation of personnel in monitoring camps);
- Communities would be willing to design TK monitoring programs that fulfill DDMI's list of expectations, and could demonstrate this in their proposals to provide DDMI with greater comfort;
- Although not referenced in DDMI's listed expectations:
 - Better overall communication is needed – elders are quite interested in science, and would like scientific studies to be shared with them so they can reflect and provide input as technical data is fed into decision making;

- With regard to composition of the TK Panel—it was suggested that one representative per Aboriginal party is not enough; also, the Panel should have a spokesperson;
- It would be useful to forge linkages between the TK Panels of the various mines (eg. SLEMA), so there would be opportunities for cross-information and joint activities. Mines might also pool funds and agree upon common approaches to TK monitoring;
- DDMI and the communities currently have different understandings of what kind of resources are required for TK monitoring -- to provide certainty, DDMI should allocate a specific amount of money annually in its budget.

The facilitator then invited community representatives to provide any clarification or additions.

Doug Crossley (KIA) clarified that --- with regard to developing cultural awareness and TK appreciation amongst DDMI senior staff -- Diavik’s existing TK monitoring camp would provide a good location for these important interactions to take place.

Alice Legat (Tłı̄chǫ Government) commented that it would be better to hold a camp closer to some of the communities. DDMI personnel would be welcome to come to either Whati or Gameti to visit the recently established TK offices, meet the staff and talk with community members.

Colleen English (DDMI) first clarified that when she talks about DDMI doing in-house TK work, she means DDMI hiring an independent TK consultant to work with communities on DDMI’s behalf. Natasha Thorpe would be the consultant leading the project. DDMI chose this route because it was not getting proposals directly from communities.

Colleen provided an example of an idea from Natasha on how to possibly incorporate TK into a grizzly bear monitoring study. TK could be used to better identify grizzly bear habitat and diet, which would help determine where scientists put the posts (for collecting hair samples) and what kinds of lures are used.

Colleen inquired whether the Parties are open to this kind of approach.

Philip Liske (YKDFN) commented that communities are much more concerned about caribou than grizzly bears. DDMI should help First Nations study caribou, since the government says they have been studying caribou for over 40 years, yet they still do not seem to know much about them.

Pierre Beaverho (Tłı̄chǫ) made the following remarks:

- Monitoring requires living on the land for many years in order to see the changes in wildlife, land and water -- back when Pierre was younger, the meat was tastier and the animals were healthier; today, many deformities in caribou and fish are being seen;
- No matter which country a person comes from, in the north everyone needs wildlife and clean water to survive -- everyone has a responsibility to make sure the water is not contaminated.

Pierre Beaverho noted that involving youth takes money—they have to be paid to participate.

Alice Legat (Tłı̄chǫ Government) added that Pierre is right to say youth must be part of TK research; many youth can contribute good reading and writing skills. Taking youth out on the land is a good way to teach them. Everything takes funding, and it is very important for youth to learn traditional methods of monitoring from their elders.

Charlie Catholique (Łuts'elke) made the following points:

- The process of working together, sharing and communicating honestly is very important; it is the way things are done in the north, to try to avoid the mining disasters seen in the south—to protect the animals and plants needed for food and medicine, and the water needed for drinking;
- More money is required to hold these types of workshops and discussions;
- Communication and understanding needs to be improved:
 - Community members don't understand why the caribou are declining; people don't like ENR taking over and telling people not to hunt in certain areas;
 - When problems happen, communities don't hear about it right away;
 - It is confusing to deal with so many scientists from different agencies. Community members have to repeat themselves so many times;
- Young generations need to take over; one day these elders are no longer going to be around.

George Marlowe (Łuts'elke) noted that the issue of wolves had not yet been discussed at the workshop. This past winter George went hunting many times; he had never seen so many wolves in his life as he saw recently. Wolves are a concern since they eat caribou. Another issue that is being discussed at the caribou monitoring group is water quality. Łuts'elke representatives have been invited to attend a conference on water in Lac Brochet, Manitoba this August, and it would be nice if all the communities could attend.

August Enzoë (Łuts'elke) echoed the importance of monitoring caribou. He noted that people have been surveying and monitoring caribou since 1999, but they must not have written down their data since no one is talking about it.

Luigi Torretti (KIA) made the following points:

- Caribou is not the only thing that should be monitored – a holistic approach is needed. Grizzlies and other predators are important too, as well as fish and water. Grizzlies eat caribou and will sometimes kill lots of caribou calves. Hunters are harvesting wolves since they are becoming too abundant. Disease in caribou is also a big concern for KIA elders;

Bobby Algona (KIA) agreed that all the animals need to be studied, including bugs and worms.

- There are many new insects showing up in the barren lands due to global warming, and some have a big detrimental effect on caribou;
- Aboriginal parties must have input into the design of studies so they can make sure community concerns are addressed;
- Part of the problem is that meetings like this happen only once a year or less frequently, so everything needs to be reviewed at each meeting and people end up repeating themselves a lot -- the TK Panel should meet more frequently so that discussions can begin to progress to solutions.

Ed Jones (NSMA) suggested that the group move to create a TK Panel with one member from each of the Aboriginal communities plus one member of EMAB. Furthermore,

- If DDMI rejects any of the community proposals for funding for TK monitoring, DDMI should have to give valid reasons;
- Caribou is a main concern -- widespread development seems to have affected caribou movement but people are afraid to talk about this for fear of losing funding from the mines;
- If DDMI will not fund the TK Panel, the Panel should find another way to raise funds.

Facilitator Wrap-up

In closing this portion of the workshop, the facilitator reminded participants that the terms of reference did not get discussed yet. Those Parties with issues or comments on the TK Panel terms of reference should send them directly to John McCullum.

The facilitator summarized the day by noting that good discussion took place about potential membership in the EMAB TK Panel, the flow of proposals, the role of a TK Panel and who it would advise, and the importance of community-based work as the primary source of TK input. There was a problem with the process when DDMI presented new information about its plan to hire an independent consultant to conduct TK research with communities. There are clearly shared interests between DDMI and communities, but differing perspectives on how to go about TK research. The group is starting to achieve some clarity on a mutually agreeable framework for TK monitoring, but this needs to be further discussed and negotiated so that a clearer framework for TK monitoring can be established to guide all parties.

EMAB Closing Remarks – Doug Crossley (EMAB Chair)

The terms of reference are still on the table and are not going anywhere—EMAB will move ahead with that. In this workshop the participants demonstrated a passionate sincerity about traditional knowledge, and a willingness to share the knowledge to address issues at the Diavik site. All five parties had good ideas.

It was quite positive to hear DDMI's willingness to cooperate and make a commitment to incorporating TK. DDMI is interested in engaging someone like Natasha Thorpe who has expertise in this area and has already worked with some of the communities. This opens up opportunities.

EMAB will be meeting next in Tłıchǫ territory; it is appropriate to be spending three days out on the land at Rabesca's camp talking about TK as a priority item on the agenda.

EMAB will look at the facilitator's final report and address how to establish a TK Panel; as it seems like it is going to become a reality. EMAB will get together as a smaller group and keep the full group informed of the progress that is made.

Closing prayer by **Louie Zoe (Tłıchǫ elder)**.

Facilitator Comments and Recommendations

The workshop facilitator has added these observations and recommendations to this workshop summary in an effort to focus further EMAB and community deliberations. These observations and conclusions reflect the perspective of the facilitator, based on his own direct involvement in a wider range of TK research and monitoring initiatives as well as a review of the Environmental Agreement and other background documents provided by EMAB. They are offered in good faith as a means to find reconciliation between the expectations of communities/regions and DDMI in relation to TK/IQ monitoring in relation to the mine's operations and impact on the environment.

Observations

As noted during the workshop, there appears to be differing views between DDMI and the EMAB Aboriginal Party participants regarding the nature and extent of TK/IQ monitoring required under the Environmental Agreement. In sorting these expectations out, it is important to first reflect on the Environmental Agreement for the Diavik Diamond Mine.

This Environmental Agreement provides formal direction regarding the application of TK/IQ in environmental monitoring programs. Key points in this Agreement are as follows:

- The overriding purpose of the Agreement is ‘To ensure that the mitigation measures outlined in the DDMI’s commitments and in the Responsible Authorities’ conclusions as documented in the [Comprehensive Study Report] are appropriately implemented” (p. 3);
- Environmental monitoring in general must “facilitate the use of holistic and ecosystem-based approaches for the monitoring, management and regulating of the Project” (p. 3);
- Environmental monitoring in general must “respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples” (p. 3);
- The Agreement must incorporate the principles of “capacity building for the Aboriginal peoples respecting Project-related environmental matters” and give “full consideration and use of both traditional knowledge and other scientific information where appropriate” (p. 4);
- EMAB is mandated to “make recommendations concerning the need for and design of traditional knowledge and other studies, and, where appropriate, facilitate the management and implementation of these studies” (p. 11);
- EMAB may establish a TK panel of experts “to assist in the application and consideration of traditional knowledge” (p. 16);
- In order to address intellectual property rights “the agreement of the Aboriginal Peoples providing the traditional knowledge shall be necessary before the information is made public.” (p. 16);
- In order to promote effective incorporation of TK into environmental planning, the Agreement states that “DDMI shall undertake or fund such traditional knowledge studies as a Party can reasonably demonstrate are necessary and relevant, do not duplicate existing studies, and can be carried out at reasonable cost” (p. 19);
- Environmental Monitoring Programs shall include activities designed to “provide opportunities for the involvement or active participation of each of the Aboriginal Peoples [Parties] in the implementation of the monitoring programs” (p. 21); and
- Monitoring program and design shall “provide for the involvement of members of each of the Aboriginal Peoples” (p. 23).

However, the Agreement also states that Environmental Monitoring Programs shall include activities designed to only “*consider* traditional knowledge” (p. 21) and further states that DDMI “*may* provide additional funding to the Advisory Board for research and monitoring activities... based on proposals submitted to DDMI by the Advisory Board for which funding is not available in the budget” (p. 15).

A reasonable interpretation of the terms of this Agreement, despite some contradictory wording and taking into account subsequent statements by the Parties, would suggest that:

- There appears to be two ‘streams’ of TK monitoring activities suggested in the Agreement: those activities carried out as a component of DDMI core monitoring and research objectives and those activities proposed by EMAB and/or the Aboriginal parties to address supplemental environmental concerns associated with the “life and well-being of the Aboriginal people”;
- With respect to the first stream:
 - DDMI has an obligation to incorporate the use of TK/IQ in its core environmental monitoring programs and studies, where appropriate (as determined through joint review) and with the advice of EMAB, the TK Panel, and/or the Aboriginal Parties (the respective roles of these groups need to be clarified);
 - The inclusion of TK/IQ in core environmental monitoring programs and studies would be funded internally by DDMI as a component of its monitoring/study obligations;
 - The design of these core monitoring programs and studies must reflect a holistic and ecosystem based approach to environmental monitoring and management (which the inclusion of TK/IQ approaches may address);
 - The design of the TK/IQ component of monitoring programs and studies can reasonably incorporate TK as either an overlapping or as a separate research process, with information being gathered concurrently with technical research or independently of technical research, as long as the information ultimately helps inform the desired decision-making outcomes;
 - The design and implementation of these core environmental monitoring programs must provide opportunities for involvement by the Aboriginal Parties, though this involvement may be coordinated through EMAB;
- With respect to the second stream:
 - The Aboriginal Parties and/or EMAB (or the TK Panel) can propose to manage and carry out supplementary TK/IQ or other research or monitoring studies, including monitoring that is intended to address environmental issues of particular concern to the Aboriginal Parties, and DDMI must provide reasonable justification to EMAB, the Parties, and, if requested, the Minister, if it decides not to fund that work;
 - The respective roles of EMAB, the TK Panel, and the Aboriginal Parties in initiating and/or implementing supplementary research and monitoring studies/activities with DDMI needs to be clarified for all Parties, and should also be reasonably coordinated so that communities are not competing among themselves for potential funding, so that monitoring activities are not duplicated, and to ensure effective communication and information sharing.

It is important to note that the Agreement does appear to establish an ongoing facilitation role for EMAB with respect to both of these streams. There also appears to be the expectation from the Aboriginal Parties that these Parties can establish direct and independent TK monitoring relationships with DDMI. Again, there needs to be greater clarity on the respective roles of EMAB, the TK Panel, and the individual Aboriginal Parties with respect to the design and implementation of both core and supplementary TK monitoring activities. Under any arrangement, some form of facilitation role for EMAB likely needs to be maintained.

If EMAB and the TK Panel are to play any type of advisement role with respect to both core and supplementary monitoring activities, the make-up of the Panel may need to include both TK holders and TK researchers in varying degrees, to fully address cultural and methodological considerations as they apply to monitoring requirements.

From the Agreement, it appears that DDMI must ensure that any TK/IQ activities it initiates as a component of its core research and/or monitoring obligations should be reviewed by EMAB (and its TK Panel and Aboriginal Parties according to defined roles) to ensure that these activities are consistent with the purpose, principles, and terms of the Agreement. Decisions regarding the nature and extent of TK incorporation (or non-incorporation) in the full range of environmental research and monitoring activities associated with mine operations should not be made unilaterally by DDMI. However, there is nothing preventing DDMI from retaining its own TK consultant to facilitate DDMI engagement with EMAB, the TK Panel, or the Aboriginal Parties with respect to monitoring program design. This approach may, in fact, give greater voice to TK within program design.

In terms of monitoring topics, it is clear that, while the Aboriginal Parties appear most concerned about utilizing TK/IQ in monitoring associated with water quality, barren ground caribou recovery, mine site reclamation, and the health of animal populations generally (including fish), monitoring activities focused on these topics need to incorporate a broader, eco-system based perspective such that a wider array of information is being observed and assessed as a component of all monitoring activities. For example, while monitoring caribou movements as a primary activity, harvesters and elders can observe and document the landscape as a whole from a cultural and TK perspective (new insects, changes in vegetation, unusual animal/weather patterns, etc.). Allowance for a broader spatial and topic perspective (in effect, a context-driven perspective) can be designed into all required and additional monitoring activities.

In terms of monitoring processes or methodologies, EMAB and its TK Panel could establish guidelines for TK monitoring activities that are consistent with the views expressed at this and previous workshops. These guidelines would reasonably address matters such as:

- The involvement of male and female TK holders;
- The mentoring of youth as a capacity-building component of monitoring activities, from both technical and TK perspectives;
- Monitoring as a function of ongoing traditional land use activities, rather than as a discrete activity;
- The gathering of information consistent with seasonal variations and patterns;
- The application of gathered information to adaptive management, reporting, and other regulatory decision-making requirements;
- Balance between ensuring protection of confidential information while also ensuring appropriate sharing of information to avoid duplication (of information and elders' time);
- Opportunities for DDMI personnel, particularly senior personnel, to participate for cultural awareness and sensitivity training purposes;
- Where complementary technical research is being carried out, the opportunity for TK holders to review and gain awareness of that work; and
- The level of funding being applied to TK research/monitoring as a component of an overall monitoring budget.

Recommendations

Based on the discussions during this workshop and on a review of literature associated with EMAB's TK monitoring initiatives, the facilitator is offering the following recommendations to help guide follow-up actions relating to the workshop.

- EMAB, the Aboriginal Parties, and DDMI should formally and consensually clarify the role of each Party in the identification, initiation, design, and/or implementation of both core and supplemental TK monitoring activities -- bearing in mind the need for EMAB to play some form of ongoing facilitation role, bearing in mind the potential guiding role of the TK Panel, and bearing in mind the function that a DDMI-retained TK consultant could play in facilitating direct community engagement in core monitoring program design and implementation.

All Parties must first accept and be willing to work within this framework of 'core' and 'supplementary' monitoring programs.

- Once the respective roles are formally defined and agreed upon, EMAB should finalize the terms of reference for the TK Panel and then convene a joint meeting of the Panel and EMAB Board to review the terms of reference and prepare a Panel work plan.

The terms of reference should address the potential need for a Panel chairperson or spokesperson who can provide liaison services between meetings, including possible liaison with other TK Panels.

The terms of reference should take into account the defined role of the TK Panel in the identification, initiation, design, and/or implementation of TK monitoring activities so that the appropriate mix of TK holder and TK researchers are represented on the Panel.

- DDMI should refrain from initiating its own TK/IQ-related research, including the use of TK as a component of technical or scientific research, until that research has been vetted by EMAB, the TK Panel, and/or the Aboriginal Parties (once these roles are more clearly defined).
- The TK Panel should meet with DDMI to discuss the specific research and monitoring activities being carried out within the core environmental monitoring programs, clarify the nature and scope of current TK/IQ engagement in those activities, and identify, as warranted, appropriate approaches to the application of TK/IQ to achieve program objectives.
- The TK Panel should play a role in helping to identify gaps in the current monitoring programs -- from a community perspective and consistent with the requirement in the Environmental Agreement to "respect and protect air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based economy that are essential to the way of life and well-being of the Aboriginal Peoples" (p. 3).
- EMAB and DDMI should negotiate the establishment of a reasonable annual, supplemental working budget for the implementation of TK/IQ monitoring activities that address gaps in current environmental monitoring programming. This budget would reflect DDMI's commitment to fulfilling its obligations under the Environmental Agreement while also providing a funding framework for the development of supplementary TK/IQ monitoring proposals.

- If not already in place, EMAB and DDMI should establish a TK/IQ implementation assessment and reporting protocol so that the application of TK/IQ in environmental monitoring programs and initiatives can be formally tracked, assessed, and reported on to all Parties.
- If not already in place, EMAB and DDMI should establish a protocol to guide the acquisition, storage, sharing, use, and protection of TK/IQ utilized for environmental monitoring purposes.

Appendix A: Workshop Agenda

Agenda – EMAB TK Panel workshop - May 20, 2011 Champagne Room (was Our Place Restaurant) – upstairs at Franklin and 50th

Note: the agenda is flexible and participants may caucus from time to time

9am – facilitator (Peter Redvers) opens meeting

- Opening prayer;
- introduction of participants;
- purpose and objectives of meeting.

9:15 – EMAB opening remarks (Doug Crossley)

- EMAB's intent regarding use of TK in monitoring;
- history of EMAB work to date - EMAB proposal and community initiatives;
- role of EMAB TK Panel in moving TK monitoring forward.

9:30 – DDMI presentation (Colleen English)

- use of TK in existing monitoring;
- overview of DDMI expectations for TK monitoring
- preliminary results of literature review;
- plans for next steps.

10:00 – Discussion with SLEMA TK Panel

- mandate;
- activities / work done to date;
- strengths and weaknesses of approach.

10:30 - coffee

10:45 – continue discussion with SLEMA TK Panel

11:30 – Review of draft terms of reference for EMAB TK Panel

12 – lunch

1:30 – Summary of TK Monitoring needs at Diavik (Aboriginal Parties caucus)

- What are Aboriginal Parties' expectations regarding TK Knowledge monitoring?
- What steps can be taken to reconcile these expectations with the DDMI expectations?

3:00 – coffee

3:15 – Next steps and recommendations

- Discussion on reconciling Aboriginal Party and DDMI expectations

4:00 - adjourn meeting and closing prayer

Appendix B: Workshop Participants

EMAB

- Aboriginal Party Members
 - Doug Crossley – Kitikmeot Inuit Association and Chair
 - Ted Blondin – Tłı̨chǫ Government and Vice-Chair
 - Charlie Catholique – Łuts'elke Dene First Nation
 - Lawrence Goulet – Yellowknives Dene First Nation
 - Sheryl Grieve -- North Slave Métis Alliance
- Staff
 - John McCullum – Executive Director

Diavik Diamond Mine Incorporated (DDMI)

- Colleen English – Superintendent, Environment and Sustainable Development

Workshop Participants

- Tłı̨chǫ Government: Pierre Beaverho, Louis Zoe, Allice Legat, Rita Wetrade, Camilla Nitsiza, Mary Rose Blackduck (interpreter), Jonas Lafferty (interpreter)
- Łuts'elke Dene First Nation: George Marlowe, August Enzoe, Kelsey Jansen, Bertha Catholique (interpreter), Sara Basil (interpreter)
- Yellowknives Dene First Nation: Jonas Sangris, Philip Liske, Randy Freeman
- Kitikmeot Inuit Association: John Ivarluk, Bobby Algona, Luigi Torretti
- North Slave Métis Alliance: Lawrence Mercredi, Hugh McSwain

Snap Lake Environmental Monitoring Agency TK Panel (SLEMA):

- Dave White, SLEMA Executive Director
- Tłı̨chǫ Government: Eddie Camille, Harry Apples
- Łuts'elke Dene First Nation: Albert Boucher, Madeline Drybones
- Yellowknives Dene First Nation: Mike Francis
- North Slave Métis Alliance: Wayne Langenham, Ed Jones.

Crosscurrent Associates Ltd.

- Peter Redvers – Workshop Facilitator

Shauna Morgan – Workshop Note-taker

Appendix C: Text of DDMI TK Presentation

Where has TK been used at Diavik?

- What and where to monitor – which animals and fish (VEC's), location for water quality samples based on lake currents, which vegetation
- Which streams would be good for fish passage improvements and where to locate fish shoals inside the dike (habitat compensation)
- Fish palatability monitoring in Lac de Gras
- Caribou fencing program at PKC
- Caribou movement monitoring during construction
- Wolverine track survey design & work
- Support of WKSS over a 5 year period to conduct baseline TK work in the Lac de Gras region

Overview of DDMI for TK/QI in Monitoring

- TK/IQ work should complement existing programs/studies
- Study should be repeatable (show trends over time) & recommend frequency at which to conduct the work
- Participants would be respected TK/IQ holders
- Any Aboriginal organization be able to participate in the programs
- Information should be relevant to people in communities, provide for discussions among locals and allow for decision-making
- Allow local communities a better understanding of changes to the area of the mine, using TK/IQ to illustrate any differences that may be noticeable from past to present
- Results provide additional information and recommendations to Diavik for consideration in environmental management decisions
- Verification phase with communities involved with consent to use information gathered
- Minimize direct impacts to wildlife or fish
- Assist Diavik in understanding TK/IQ use in management of the environment, as well as learning TK/IQ about the region

Opportunities for TK/IQ Input

- Follow-up/verification with lichen monitoring program
- Input on grizzly bear monitoring program design – habitat selection
- Caribou behavioural observations
- Fish health – monitoring and post-closure
- Water quality (whole lake) and movement
- Fish habitat use & shoal design
- Wildlife movement/routes post-closure
- Final land use/landscape of mine area after closure
- Re-vegetation
- Managing risks to wildlife, aquatic life, people

Preliminary Results of Desk-top Study

- Baseline TK/IQ monitoring/research data from LDG region
- TK/IQ monitoring that has been successfully carried out to monitor potential effects from resource sector
- TK/IQ informing or incorporated in closure planning
- 14 TEK Practitioners & 8 mining/resource individuals who interact with TK/IQ work were interviewed
- All agreed that there were very few examples of TK/IQ being integrated in to mining or resource sector programs
- 9 documents that are considered ‘critical references’ that review TK/IQ methods, approach and challenges to integration – other documents in relation to TK/IQ baseline, other studies/papers
- 2 mines that are considered best examples for integration of TK/IQ: Argyle Diamond Mine (Australia) and Red Dog Mine (Alaska)
- Interested in the development of a TK/IQ Panel that reviews proposals and results, and provides recommendations on how to incorporate results in to monitoring and/or management programs at the mine
- Interested to hear results and recommendations from today’s workshop
- DDMI will review results of the desktop study in detail to determine if there are existing programs that could work for Diavik
- DDMI plans to undertake some TK/IQ work with a consultant in 2011
- DDMI does not have a specific budget to support TK/IQ proposals from communities in 2011; proposals submitted would only be reviewed on a case-by-case basis

Next Steps

- Interested in the development of a TK/IQ Panel that reviews proposals and results, and provides recommendations on how to incorporate results in to monitoring and/or management programs at the mine
- Interested to hear results and recommendations from today’s workshop
- DDMI will review results of the desktop study in detail to determine if there are existing programs that could work for Diavik
- DDMI plans to undertake some TK/IQ work with a consultant in 2011
- DDMO does not have a specific budget to support TK/IQ proposals from communities in 2011; proposals submitted would only be reviewed on a case by case basis.