

**Mining Association of Canada  
Towards Sustainable Mining**

**Draft Summary Report**

**7<sup>th</sup> Meeting of the  
Community of Interest Advisory Panel**

**March 7, 2007  
Toronto, Ontario**

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## TABLE OF CONTENTS

1	INTRODUCTION .....	2
2	SUMMARY OF ITEMS FOR FOLLOW-UP .....	2
3	WELCOME AND APPROVAL OF SEPTEMBER PANEL MEETING REPORT .....	3
3.1	<i>Welcome</i> .....	3
3.2	<i>Approval of September Panel Meeting Report</i> .....	3
4	TSM IMPLEMENTATION .....	3
4.1	<i>TSM Update</i> .....	3
4.2	<i>2006 TSM Report Panel Statement</i> .....	5
4.3	<i>TSM Verification System Implementation</i> .....	7
5	MINING AND BIODIVERSITY PROTECTION .....	11
5.1	<i>Report on Biodiversity Workshop</i> .....	11
5.2	<i>Draft Mining and Biodiversity Protection Framework</i> .....	12
6	MINING AND ABORIGINAL PEOPLES FRAMEWORK .....	13
6.1	<i>Update</i> .....	13
6.2	<i>Approach for Aboriginal Community Workshops</i> .....	14
7	TRADITIONAL KNOWLEDGE IN MINING PROJECTS .....	15
7.1	<i>Naonaiyaotit Traditional Knowledge Project</i> .....	15
7.2	<i>Aboriginal Perspective on Traditional Knowledge</i> .....	15
8	INFORMATION ITEMS .....	16
8.1	<i>Mining Sector Sustainability Table (MSST)</i> .....	16
8.2	<i>Federal Government CSR Roundtables</i> .....	17
8.3	<i>TSM Leadership Award</i> .....	17
8.4	<i>Panel Renewal</i> .....	17
9	FUTURE AGENDA ITEMS .....	18
10	NEXT PANEL MEETING .....	18
	APPENDIX 1: LIST OF PARTICIPANTS .....	19
	APPENDIX 2: CVRD INCO PRESENTATION .....	20
	APPENDIX 3: NAONAIYAOTIT TRADITIONAL KNOWLEDGE SUMMARY .....	21
	APPENDIX 4: ABORIGINAL PERSPECTIVE ON TRADITIONAL KNOWLEDGE .....	23

## 1 Introduction

This report presents a summary of discussions from the March 7<sup>th</sup>, 2007 meeting of the TSM Community of Interest (COI) Advisory Panel (“the Panel”), including decisions on the work of the Panel and recommendations to the Mining Association of Canada (MAC). Any dissenting views have been identified and recorded.

## 2 Summary of Items for Follow-up

The following is a summary of items for follow-up as identified during the meeting:

	ITEMS	RESPONSIBILITY
DECISIONS & RECOMMENDATIONS	<p><b>Panel Statement:</b> The Panel decided to prepare a Panel statement for the 2006 TSM Report.</p> <p><b>Follow-up:</b> Brenda Kelley, Alan Penn, and Ginger Gibson volunteered to draft the 2006 Panel statement. Panel members were asked to submit their comments on what they would like to see in the statement <i>prior</i> to the statement being drafted. Stratos will facilitate this process.</p>	Brenda Kelley Alan Penn Ginger Gibson Stratos
	<p><b>Panel Post-Verification Review:</b> The Panel decided that the purpose of the post-verification review is to lend public credibility to the TSM results by improving TSM (including the verification process), highlighting deficiencies and best practices, bringing cohesiveness in the application of the self-assessment and verification, and driving continued performance improvements.</p> <p><b>Follow-up:</b> Ginger Gibson, Larry Haber, Brenda Kelley, Bill Napier, and Alan Penn volunteered to participate in a working group to define the Panel's post-verification review process and scope for the September 2007 Panel meeting. Stratos will facilitate this process.</p>	Ginger Gibson Larry Haber Brenda Kelley Bill Napier Alan Penn Stratos
	<p><b>Panel Renewal:</b> The Panel decided to establish a small working group to draw up a Panel renewal process for consideration at the next meeting. This process will draw on the results of the two-year Panel review conducted last year.</p> <p><b>Follow-up:</b> Stratos will invite Panel members to participate in this small working group and convene a conference call of interested members.</p>	Stratos
	<p><b>Mining and Aboriginal Peoples Framework:</b> The Panel recommended that MAC develop guidance on Aboriginal consultation in support of the implementation of the Aboriginal Peoples Framework.</p> <p><b>Follow-up:</b> The Panel is invited to submit ideas on Aboriginal communities where MAC can hold workshops to obtain feedback on the Framework to Pierre by email.</p>	MAC  Panel Members
	<p><b>Draft Mining and Biodiversity Protection Framework:</b> The Panel is invited to submit additional comments on the draft <i>Mining and Biodiversity Protection Framework</i> to Pierre by email.</p>	Panel Members
OTHER FOLLOW-UP	<p><b>Traditional Knowledge:</b> Ginger Gibson agreed to share a study she conducted on elders' guidance on reclamation with the five Diavik signatory groups.</p>	Ginger Gibson
	<p><b>Panel Participation in the MSST:</b> Stratos will distribute the terms of reference of the Mining Sector Sustainability Table as well as a link to meeting agendas and reports.</p> <p>Panel members should send their nominations for involvement in the MSST to Pierre by email.</p>	Stratos  Panel Members
	<p><b>Next COI Panel Meeting:</b> The next meeting is scheduled for September 25<sup>th</sup> (evening only) and 26<sup>th</sup> in Vancouver. Details will follow closer to the meeting date.</p>	

### **3 Welcome and Approval of September Panel Meeting Report**

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#### **3.1 Welcome**

The facilitator welcomed Panel members to the 7<sup>th</sup> Panel meeting. The following Panel members sent their regrets:

- Jean-François Arteau, Makivik Corporation (temporary replacement for Soha Kneen)
- Charles Campbell, United Steelworkers of America
- George Hakongak, Nunavut Tunngavik Incorporated (new replacement for Stefan Lopatka)
- Doug Horswill, Teck Cominco and Chair of the MAC Governance Team
- Peter R. Jones, HudBay Mining and Chair of the MAC Board
- Soha Kneen, Inuit Tapiriit Kanatami (on maternity leave)
- Elizabeth May, Green Party of Canada
- Chief Darren Taylor, AFN, Tr'ondek Hwech'in First Nation

Mark Cutifani will be replacing Peter C. Jones as CVRD Inco's representative on the Panel. Bill Napier of CVRD Inco participated in his place for this meeting.

A list of participants is provided in Appendix 1.

#### **3.2 Approval of September Panel Meeting Report**

One Panel member noted that the bullet describing the changes to indicators 3 and 4 of the tailings management protocol is unclear. Pierre Gratton clarified that indicators 3 and 4 were redesigned to ensure that an appropriate senior officer, depending on the company's corporate management structure, ensures effective systems are in place for tailings management and tailings management review. The September report was updated to reflect this clarification. Panel members approved the September 2006 meeting report without further amendments.

### **4 TSM Implementation**

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#### **4.1 TSM Update**

Pierre Gratton provided a TSM update. A number of activities have been undertaken since the last Panel meeting, including:

- A workshop on mining and biodiversity;
- Completion of the Verification Service Provider (VSP) training workshops;
- Commencement of the 2006 TSM reporting process, including external verification; and
- Adoption and release of the TSM Mining and Aboriginal Relations Framework.

**Mining and Biodiversity:** Several Initiative Leaders and COI Panel members, in addition to external participants from NGOs, government representatives, and international experts, participated in a Mining and Biodiversity workshop in October 2006. Participants provided substantive comments on a draft Mining and Biodiversity Framework, which were taken up by MAC Initiative Leaders in improving the draft Framework.

**VSP Training Workshops:** MAC held four training sessions for potential verification service providers. Two panel members, Brenda Kelley and Alan Penn, were able to attend a workshop each as observers. A list of verification service providers that participated in the training workshops has been posted on the MAC website ([www.mining.ca/www/media\\_lib/TSM\\_Documents/Verification/2006\\_VSP\\_List\\_E.pdf](http://www.mining.ca/www/media_lib/TSM_Documents/Verification/2006_VSP_List_E.pdf)).

**2006 TSM Reporting Process and External Verification:** The assessment and reporting process for the 2006 performance year is currently underway. Reporting forms were sent to MAC members in late October/early November 2006. Seventeen companies are reporting 2006 TSM results. Ten of these companies are externally verifying their results. Three of these companies are new reporters and are not required to undergo external verification. Due to special circumstances, four companies will be submitting unverified self-assessment results this year, and have committed to external verification in 2008.

Reporting Companies	Verification Status
Albian Sands Energy	✓
Barrick Gold	Deferred to 2008
BHP Billiton Diamonds Inc.	✓
Breakwater Resources	New reporter
CVRD Inco	✓
Diavik Diamond Mines	✓
Dynatec	Deferred to 2008
HudBay Minerals	✓
Inmet Mining Corporation	✓
Iron Ore Company of Canada	✓
North American Palladium	New reporter
Quebec Cartier Mines	Deferred to 2008
Royal Canadian Mint	New reporter
Suncor	✓
Syncrude	✓
Teck Cominco	✓
Xstrata	Deferred to 2008

Wabush Mines, Tahera Diamond Corporation and Cameco Corporation are new MAC members and are not participating in the current reporting cycle. Cameco Corporation is MAC's first member from the uranium industry. The remaining MAC member companies do not have operating Canadian facilities (closed or exploration/development properties only).

While the external verification process has proceeded smoothly, the addition of this obligation has led MAC to extend the reporting deadline for member companies by one and a half months, until April 20<sup>th</sup>, 2007. As a result, preliminary 2006 TSM performance results were unavailable at the time of this meeting.

**Aboriginal Relations Framework:** The MAC Board approved the draft Aboriginal Relations Framework in November 2006. Since then, MAC has written to all federal and provincial governments and major Aboriginal organizations to share the Framework and obtain feedback. Many governments have written back. Comments have also been received from regional Inuit

organizations and the Inuit Tapiriit Kanatami, while the Métis National Council has requested a presentation to its Environment Committee.

MAC intends to conduct community workshops on the draft framework with two or three Aboriginal communities located near MAC member operations this year. Sites are being identified and the development of these community workshops is underway.

**TSM Communications:** A revised TSM Brochure is being printed in English, French and Spanish. MAC has received an increasing demand for Spanish copies.

One Panel member asked whether increasing MAC membership and participation in TSM is expected to continue. Pierre and Gordon Peeling noted a number of factors that may continue to influence this trend, including:

- The current high price cycle;
- MAC's TSM marketing efforts;
- Peer pressure amongst companies; and
- Leaders broadening the reach of TSM as they move to other companies.

Another Panel member questioned what percentage of Canadian mining companies are MAC members. Gordon Peeling noted that of MAC's 69 members, 20 are producing mines that account for approximately 70% of the total production in Canada. However, another Panel member noted that there are many more non-producing or junior mining companies than producing mining companies in Canada, so the percentage of *total* mining companies that are MAC members is quite small. Many of the junior mining companies are members of the Prospectors and Developers Association of Canada (PDAC).

Another Panel member enquired about the Royal Canadian Mint's expected role as a new MAC member. Pierre explained that the RCM is a metal refiner, and while they would not report on all protocols, they would have similar issues as other smelters and refiners.

## 4.2 2006 TSM Report Panel Statement

Last year, the COI Panel drafted a Panel statement that was published in the 2005 TSM Report. Brenda Kelley, Elizabeth May, and Larry Haber led the drafting of the statement on behalf of the Panel, which was then reviewed and approved by the Panel. The Panel was asked whether it would like to issue another statement for inclusion in the 2006 TSM Report, and, if so, what the statement could address and how it could be developed.

There was a consensus among Panel members that the Panel should produce a statement every year to update the information in the previous statement as well as address new issues. The Panel agreed that the purpose of the statement should be to present a balanced view of what MAC is doing through TSM – including TSM strengths and weaknesses – to lend credibility to the report, and that it is important for the Panel to comment on elements of TSM in which the Panel has been involved to provide an overview of progress and future challenges and expectations for TSM as well as identify emerging issues of importance to communities of interest.

The Panel recommended a number of items related to TSM progress that the statement could address, including:

- Recognizing new MAC members and reporters;
- Commenting on the reporting and verification processes;
- Discussing progress made on Aboriginal relations and biodiversity;
- Conveying the message that TSM is a learning process;
- Addressing public confidence in TSM, as well as outreach and community engagement;

The Panel also identified issues that it may wish to highlight in the statement, including:

- Energy, climate change, and GHG emissions;
- Tailings management;
- Consultation; and
- The mining industry's international performance.

There was some discussion on whether this year's Panel statement could include a discussion of 2006 TSM performance results. Due to verification requirements, MAC extended the TSM reporting deadline for one and a half months, until April 20<sup>th</sup>, 2007. However, a final draft of the Panel statement needs to be submitted to MAC by the end of March, and TSM indicator performance results will not yet be available. As a result, the Panel recognized that this year's statement could not address 2006 TSM performance and would not be an attestation of the quality of the reported information.

The Panel agreed to move forward with writing the statement using best available information. Pierre committed to providing as much information as possible to the Panel to inform the statement (including draft sections of the TSM report, air and water release data, etc.). Next year's Panel statement can include observations based on the Panel's post-verification review of two-three companies' verified TSM results, which is scheduled for September 2007.

Brenda Kelley, Alan Penn, and Ginger Gibson volunteered to draft the 2006 Panel statement. Panel members were asked to submit their comments on what they would like to see in the statement *prior* to the statement being written in order to minimize the number of comments to be incorporated once the statement is completed. Stratos will facilitate this process.

**Follow-up:**

Brenda Kelley, Alan Penn, and Ginger Gibson volunteered to draft the 2006 Panel statement. Panel members were asked to submit their comments on what they would like to see in the statement *prior* to the statement being drafted. Stratos will facilitate this process.



### 4.3 TSM Verification System Implementation

#### 4.3.1 Update and Comments on Verification Implementation

Pierre Gratton provided an update on implementation of the TSM external verification system. As previously mentioned, MAC held four training sessions for potential verification service providers (VSPs). Throughout the workshops, a debate arose regarding the level of assurance required. This reflects a difference of opinion between the financial auditing community and the environmental/engineering auditing community regarding the level of assurance that can be provided through verification processes such as that of TSM.

Given that the financial auditing community considers TSM verification to represent a "review" level of assurance, it is only able to provide a negative assurance statement. A negative assurance statement states that nothing has come to the auditor's attention to suggest that any of the TSM results have been materially misstated. For the financial auditing community to provide a positive assurance statement, they would have to complete a more in-depth audit at a considerably higher cost. On the other hand, the environmental/engineering auditing community is more comfortable issuing a positive assurance statement based on the TSM verification. A positive assurance statement states that the verifier confirms that the reported results fairly state the company's performance. Companies can select their own VSP in either the financial or the environmental/engineering auditing community; thus, the nature of assurance statements may vary across companies.

A number of other issues arose from this debate, including:

- Need for site visits;
- Guidance on appropriate sample size; and
- Rigidity in interpretation of the protocols and specific criteria.

Pierre also noted that some in the financial auditing community feel that independence should apply to companies as opposed to individuals, meaning that if any individual in a company has worked for a TSM reporter within the last two years, the entire company is ineligible to provide verification services. However, the VSP terms of reference, designed by MAC and endorsed by the Panel, states that independence applies only to individuals. MAC and the Panel have accepted that, otherwise, it would be too difficult to find companies to conduct verification, and would decrease the likelihood that the verifier would have some knowledge of the TSM area being verified, which was a critical issue for the Panel.

Pierre noted that the verification process is going smoothly. Most companies have issued RFP's to engage potential verifiers, and companies have deemed the verifiers' approach and understanding of TSM more important than cost. The process has resulted in new questions regarding protocol interpretation, especially on external outreach. These questions have been fielded to MAC, and a Q&A list will be prepared and posted on the MAC website. MAC has committed to hold a post-verification workshop in late summer/early fall 2007 with Initiative Leaders and VSPs to learn from the first year of verification implementation, and Panel members are invited to participate.

#### **4.3.2 Presentation on TSM Verification Lessons of CVRD Inco**

Claire Parkinson and Inge Robinson presented on CVRD Inco's experience with implementing the TSM verification system. CVRD Inco publicly reported TSM self-assessment results for Sudbury, Ontario and Thompson, Manitoba operations in the 2005 TSM Progress Report. 2006 self-assessment results have been conducted for Ontario, Manitoba, and Voisey's Bay, Newfoundland and Labrador, and the results for Ontario and Manitoba have been externally verified by QMI. Since this is the first year for self-assessments at Voisey's Bay, results are not being publicly reported or verified this year.

CVRD Inco's preliminary verification results for three of the four indicator groups are provided in their presentation (see Appendix 2).

The Panel had an extensive discussion on the external outreach component of the verification process. Some Panel members were interested in the kind of evidence the verifier was asking for to evaluate CVRD Inco's external outreach performance and whether the verifier had engaged a sufficient range of communities of interest (COI) in the verification process.

Claire indicated that the verifier asked them for a list of invitees and participants to town hall meetings, and also contacted a few attendees. Claire also noted that while she could find out to whom the verifier spoke as part of the verification process, she did not have an influence over the verifier's selection of individuals or communities with whom to speak.

A Panel member suggested that requirements for the verifier to contact COIs should be incorporated into the verification system. It was noted that the external outreach protocol is designed in such a way that the higher levels require companies to conduct increasingly sophisticated outreach with more COIs, and would subsequently require the verifier to speak with some of these COIs to ensure that the company's stated activities are accurate. Alternatively, if a company is a level "1" or "2", there is no need for the verifier to speak with external stakeholders since the company has already indicated that little formal COI identification or engagement is taking place. One Panel member commented on the need to trust the verifier as a credible individual who will conduct a rigorous and thorough verification, contacting external COIs as deemed necessary.

Some Panel members expressed concern with establishing specific requirements on who the verifier must contact (e.g. if the company is a level "3" the verifier must speak with "X" number of COIs). One Panel member felt that such a standard should not be prescribed in the verification process. There was also some concern that setting a minimum standard would result in companies gravitating to the minimum unless they have their own internal standards for contacting COIs/communities. It would be preferable to state that verifiers must talk to representatives of COIs. The Initiative Leaders' post-verification workshop will illustrate the range of practices regarding external engagement as part of the verification system, and will allow the Panel to determine whether the existing guidance is adequate or if more is needed.

A Panel member questioned whether CVRD Inco found the verification process useful or valuable, what kinds of changes will be implemented as a result of the findings, and how the information will be communicated back through the company and to COIs. Claire indicated that the process was very valuable, and that information provided by the verifier on opportunities and gaps will inform part of an action plan for CVRD Inco to achieve the next level of TSM performance, or firm up a level that they thought they had already achieved but that was rated lower by the verifier. The

process also reconfirmed the importance of physical evidence that must be provided to the verifier. Bill Napier commented that the process identified systemic deficiencies that need to be addressed, specifically in the areas of tailings management and GHG emissions, and that the company wants to address these to improve performance, not just to provide more documentation to improve the TSM rating. A Panel member reiterated the importance of companies communicating improvements back to their COIs, and it was noted that the company highlights section of the TSM report provides an excellent opportunity for companies to explain their TSM results and future plans.

A Panel member asked about CVRD Inco's perspective on the relevance of site visits. Claire and Inge noted that site visits were not requested in the verification process, and that the majority of the assessment requirements in the protocols can be supported by documents and telephone conversations. The decision on whether site visits are necessary rests with the verifier. If a company does not wish to comply with a request for a site visit, they will have to settle for a lower score.

A Panel member asked whether the CVRD Inco management team sets targets for the TSM indicators. It was noted that while targets are not currently set, the need for improvement is a priority and CVRD Inco is committed to fixing the systemic issues in order to improve performance.

#### ***4.3.3 COI Panel Experiences from VSP Workshops***

Alan Penn and Brenda Kelley each participated in one of the VSP workshops, and raised a number of issues based on their experiences:

- It is important to make the information coming out of the TSM verification process as uncomplicated and accessible as possible for local communities and the general public;
- It is a good idea to conduct a post-verification workshop to discuss lessons learned and to further improve the verification process, specifically with regard to external outreach. It is currently unclear whether companies are talking to the right people and whether VSPs can effectively comment on how well companies are addressing external outreach;
- It would be useful to maintain a record of the different training sessions in order to understand regional differences and perspectives on the nature of the verification process; and
- Site, geography, and social setting impact conditions in a particular location, and there are concerns about the extent to which VSP's are aware of that context. This is especially important for outreach.

#### ***4.3.4 Approach for COI Panel Post-Verification Review***

The Panel will be conducting a post-verification review of two or three member companies' TSM performance and verification results at the September 2007 Panel meeting. The Panel discussed the purpose and conduct of the review, the Panel information needs, and what steps to take to prepare for the review.

## **Purpose of the Review**

The Panel agreed that the purpose of the post-verification review is to lend public credibility to the TSM results by improving TSM (including the verification process), highlighting deficiencies and best practices, bringing cohesiveness in the application of the self-assessment and verification, and driving continued performance improvements. Some Panel members felt that it is important to determine whether the member companies are finding the verification process useful. If they are not, the process must be re-evaluated, or else companies may start “dropping the ball”.

Most Panel members indicated that the Panel’s review should not be a “verification of the verification” and that Panel members should trust the verifier’s independence and expertise. As such, the review would focus on whether the first round of verification is working as the Panel expected, identify limitations, allow the Panel to gain understanding and confidence regarding the verification process, and determine how companies are driving improvements in performance based on the verification results. Some Panel members, however, felt that for the review to be effective, disclosure and re-examination of evidence was required.

In designing the post-verification review, Panel members were asked to keep in mind other processes that will be looking at potential improvements to the verification system, such as the post-verification workshop planned with Initiative Leaders and VSPs to learn from the first year of verification implementation. Participation in this workshop, which the Panel can help shape, will allow the Panel to focus its post-verification review on assessing TSM performance. For example, the Panel’s concerns about external outreach/COI involvement as part of the verification process could be a core area for the post-verification workshop to address.

## **Conduct of the Review**

One Panel member proposed that one or two Panel members could conduct the review and then report back to the Panel. Other Panel members thought that the whole Panel should be involved. A Panel member suggested focusing more attention on one key issue for further investigation, such as external outreach. Another commented that the review should be more than just a presentation from the company or the verifier, and should include hard evidence backing up the verifier’s decisions that would instill confidence that TSM is being implemented properly. Regardless of the approach taken, it was determined that the Panel would need to review more than one company’s results before drawing conclusions on the verification process.

One Panel member commented that there is lack of clarity around the consistency of the self-assessment and verification processes across companies, and whether the Panel will be able to adequately review the verification results without a tool or standard against which they can be assessed. The Panel was reminded that the TSM protocols are the basis of the self-assessment process. The protocols were refined based on the first year of TSM reporting experience, and companies also received self-assessment training. Another Panel member noted that there may still be discrepancies in how these protocols are interpreted and applied across companies.

## **The Panel’s Information Needs**

As noted above, Panel members debated the extent of information that they would need to conduct their post-verification review. Some Panel members thought that the Panel should have access to all documentation supporting the self-assessments and verification. Other Panel members questioned the value of companies and verifiers providing the tremendous volume of

evidence that goes into the self-assessment and verification processes as well as the Panel's capability to digest this evidence in a timely and effective manner. It was also suggested that the amount of information provided to the Panel could be left to the company's or verifier's discretion, and the Panel could request additional information if necessary. It was felt by some that it would be possible to find ways of asking companies to provide information without inundating them with requests.

## The Way Forward

The Panel agreed to establish an interim working group to define the post-verification review process and scope for the September 2007 Panel meeting. This group could also participate in the Initiative Leader's learning workshop on verification that is tentatively scheduled for August 2007.

### Follow-up:

Ginger Gibson, Larry Haber, Brenda Kelley, Bill Napier, and Alan Penn volunteered to participate in a working group to define the Panel's post-verification review process and scope for the September 2007 Panel meeting. Stratos will facilitate this process.

## 5 Mining and Biodiversity Protection

### 5.1 Report on Biodiversity Workshop

Pierre Gratton reported back to the Panel on the TSM Biodiversity Workshop that was held in October 2006. The workshop addressed:

- MAC objectives for TSM and biodiversity;
- Mining and biodiversity – from Rio to Gland to Ottawa;
- The business case for biodiversity;
- The ICMM Good Practice Guidance on Mining and Biodiversity;
- Case studies on mining and biodiversity; and
- Building a MAC biodiversity policy framework and strategy for action.

Several Initiative Leaders and COI Panel Members participated in the workshop, in addition to external participants from NGOs, government representatives, and international experts. Participants provided substantive comments on a draft *Mining and Biodiversity Framework*, which were taken up by Initiative Leaders in improving the draft Framework. The updated version of the Framework was presented to the MAC Governance Team on March 8th, 2007, with a view to obtaining Governance Team and Board approval of the final Framework in June 2007 once additional comments have been incorporated. COI Panel members were asked to comment on the framework, and those who attended the workshop were asked to comment on their experience.

All Panel members who participated in the workshop felt that it was well done, and were pleased to see a diversity of participants with a genuine concern for biodiversity and a willingness to work together to help MAC move forward with a formalized approach to mining and biodiversity protection. One Panel member thought that a biodiversity workshop should be held on a regular basis to assess accomplishments and failures in addressing biodiversity in the mining industry.

Another Panel member noted that the workshop highlighted that the term “biodiversity” means different things in practice to different groups, and that the workshop did not help to operationalize this meaning. Other Panel members agreed that the Framework must be very clear about its definition of biodiversity (it currently uses the UNCBD definition) and, more importantly, how this definition and the elements of the Framework can be put into practice. It was suggested that case studies on how mining companies are addressing biodiversity might be helpful in operationalizing the Framework.

Gordon Peeling noted that the Framework characterizes the biodiversity issue for the mining industry, and represents principles on which further guidance will need to be developed, evolving from case studies and best practice reviews to metrics that facilitate performance measurement and reporting. Pierre informed the Panel that MAC has signed a Memorandum of Understanding with IUCN Canada, and one of the objectives of this new relationship is to look at how the Framework can be operationalized. One or two Panel members are invited to attend this meeting, to be held in April 2007.

It was also felt that Canadian mining companies have a responsibility to demonstrate that biodiversity is an equally important issue at Canadian and international operations, and there is a leadership role for MAC in encouraging and supporting their members as both local and global leaders in biodiversity protection.

## **5.2 Draft Mining and Biodiversity Protection Framework**

Panel members discussed the draft *Mining and Biodiversity Protection Framework* and raised a number of issues and questions. One Panel member asked whether MAC would consider adding a comment to the Framework with regard to respecting “no-go zones”. Pierre noted that the concept of “no-go zones” is currently incorporated in two places in the Framework: #2a, which refers to the option of not proceeding with a project when circumstances warrant; and #5, which refers to the commitment that MAC member will undertake not to explore or develop mines in World Heritage sites. Another Panel member commented that timing is the key challenge when dealing with “no-go zones” to avoid a significant amount of time and money being invested by a company in a site before it is declared a “no-go zone”.

One Panel member was concerned that the Framework is too broad and lends responsibility to companies in areas they are not impacting. This Panel member suggested the inclusion of more terms such as “at your operations” and “the impact of your operations” to ensure that the applicability of the Framework is clear.

One member raised a concern regarding the phrase “compensate for...” (#2b), which could have monetary implications. Pierre noted that this terminology keeps more options open in the event that MAC members have to take action to recompense for loss of biodiversity whether by monetary or other means, such as habitat offsets.

Other suggestions included using the term “non-governmental organizations” instead of “conservation organizations” (#4), and including a definition of “Aboriginal” (“Inuit, First Nations, and Métis”).

Pierre noted that the draft Framework is at the principle level, and is not meant to be an operational response to the unique situations faced by mining companies, which is where the

ICMM Good Practice Guidelines can begin to provide support. Pierre invited the Panel to submit additional comments on the draft Framework by email.

**Follow-up:**

The Panel is invited to submit additional comments on the draft *Mining and Biodiversity Protection Framework* to Pierre by email.

## 6 Mining and Aboriginal Peoples Framework

### 6.1 Update

Pierre Gratton provided an update on the *Mining and Aboriginal Peoples Framework*. The draft Framework was adopted by the MAC Board in November 2006, and was released publicly in December 2006. MAC has since written to all federal and provincial governments and major Aboriginal organizations to share copies of the Framework and obtain feedback. Many governments wrote back, and comments have also been received from regional Inuit organizations and the Inuit Tapiriit Kanatami. The Métis National Council has requested a presentation to its Environment Committee. Comments received to date are summarized below:

- The framework addresses issues important to provinces/territories (e.g. respect for treaty and Aboriginal rights and culture; role of Aboriginal and traditional values; improving economic outcomes/benefits; environmental responsibility);
- Need for education and capacity building (particularly in the territories); and
- References to provinces' policies and guidelines on consultations with Aboriginal peoples – recommend a MAC commitment to consult in accordance with guidelines.

MAC will consult on the draft framework this year through two-three workshops with Aboriginal communities near member operations as well as the forthcoming presentation to the Métis National Council, and an offer to meet with the Inuit Tapiriit Kanatami.

One Panel member commented on the need to continue developing the framework to educate mining companies and the government as to their responsibilities with regard to consultation, and to keep in mind the importance of mutually beneficial and healthy relationships. Many Aboriginal communities are at a loss due to the breakdown of traditional economies such as those based on hunting and trapping. It is critical to bridge the Aboriginal and mining communities and to increase the capacity of Aboriginal communities to deal with this new economic stream and its' potential social and environmental impacts. The *Mining and Aboriginal Peoples Framework* represents broad principles for ensuring good relationships with Aboriginal communities, but cannot be too prescriptive since specific interests and desired outcomes will vary across Aboriginal communities.

Another Panel member provided an overview of some of the changes that will be recommended by the Métis National Council. Other Panel members suggested that the Framework could consider additional issues such as gender and equity between aboriginal communities.

One Panel member noted that the Prospectors and Developers Association of Canada (PDAC) has an Aboriginal Affairs Committee that is setting up guidelines for consultation, and noted the importance of MAC and PDAC working together. Patricia Dillon (Teck Cominco Ltd. and PDAC) has

been very active in bridging the activities of MAC, PDAC and the Ontario Mining Association (OMA) with regard to Aboriginal relations.

There was some discussion regarding the industry's desire for certainty with regard to consultation with Aboriginal people. One Panel member noted that a desired outcome of the Framework process could be a protocol that would provide a systematic and consistent approach to consultation. Other Panel members felt that it would be difficult to create such a protocol due to the wide range of circumstances and expectations in Aboriginal communities, and it would be better for MAC to produce general guidelines or a set of principles to help MAC members understand expectations and requirements for Aboriginal consultation. It was acknowledged that some form of guidance on consultation requirements is needed that is informed by the expectations of Aboriginal participants and allows for flexibility while at the same time provides the industry with a sense of certainty. Another Panel member noted that the technical concept of consultation is still evolving through court decisions, and is not one that MAC can settle. The Panel advised MAC to develop guidance on Aboriginal consultation in support of the *Mining and Aboriginal Peoples Framework*.

## 6.2 Approach for Aboriginal Community Workshops

The objectives of the Aboriginal community workshops on the *Mining and Aboriginal Peoples Framework* are to:

1. Obtain comment on the draft Framework – What does it mean to the community? What are community expectations for the company/MAC members acting upon the framework?
2. Share experiences between the community and the MAC member company/facility as a basis for case studies. These case studies may address:
  - a. What are specific conditions of the community that are important in its relationship with mining activities?
  - b. What has worked/has not worked in the community's relationship with the company/facility?
  - c. What can be improved by acting on the *Mining and Aboriginal Peoples Framework*?
  - d. What are the lessons, including good practices, from which others can learn?

Panel members were asked to provide ideas on communities where MAC can hold these workshops, aiming for a representative sample of communities. North American Palladium has already expressed an interest, and Panel members also suggested Attawapiskat (De Beers) and Troilus (Inmet) as possible locations for workshops.

**Follow-up:**

The Panel is invited to submit ideas on Aboriginal communities where MAC can hold workshops to obtain feedback on the Framework to Pierre by email.



## 7 Traditional Knowledge in Mining Projects

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### 7.1 Naonaiyaotit Traditional Knowledge Project

Brent Murphy, BHP Billiton, EKATI Diamond Mine, presented on the Naonaiyaotit Traditional Knowledge Project (NTKP). BHP Billiton (BHPB) began the NTKP in 1995 when it began collecting baseline information for the environmental assessment of the EKATI Diamond Mine. BHPB agreed that the Inuit would design their own study and collect their own information, with BHPB's help. The company engaged in the project both to meet environmental assessment requirements for integrating traditional knowledge and to allow the company to learn from and integrate traditional knowledge into its plans and operations. A summary of the NTKP presentation is provided in Appendix 3.

Following Brent's presentation on the NTKP, the Panel had a brief discussion on the potential conflict caused by obtaining official status for Inuit place names in locations where other Aboriginal groups live and have their own place names. The process of place naming is a way of defining territorial interests, and some groups feel disempowered by other groups' efforts to identify territory using place names, territories in which they may not be the primary users, and there is a need to accommodate all linguistic groups.

A Panel member asked whether the KIA is using the GIS to screen applications and impact decisions. Brent was unsure of the extent to which the GIS is being used, but commented that BHPB is committed to developing the in-house GIS skills and knowledge at the KIA. Another Panel member questioned whether there are plans to ensure the database is enhanced and maintained over time. Brent noted that BHPB provides technical support when requested, but how the database moves forward is up to the KIA.

A Panel member asked about the cost of the NTKP and whether the project would be scalable for smaller operations. Brent indicated that the NTKP cost around \$1 million (not including staff time), and involved considerable effort. However, the process is applicable to other locations and could be done on a smaller scale. Brent noted that one of the key lessons learned through the project is the importance of positive relationships and open communication.

**Follow-up:**

Ginger Gibson offered to share a study she conducted on elders' guidance on reclamation with the five Diavik signatory groups.

### 7.2 Aboriginal Perspective on Traditional Knowledge

Allan Morin provided an Aboriginal perspective on TK. He said that to ensure that Canada, as party to the UN Convention on Biological Diversity, acts progressively toward respecting, preserving and maintaining TK, a MAC position statement on traditional knowledge is required. MAC must ensure that it participates in Canada's commitment concerning the equitable sharing of benefits arising from the utilization of TK. The jurisdiction of Aboriginal Peoples over their culture, heritage, knowledge and political domains must be clearly recognized, and the full consideration and inclusion of Aboriginal TK in considering options for the mining sector in Canada is very

important. Aboriginal Peoples view themselves as part of the land and are therefore impacted directly by mining activities. Allan's note on the Aboriginal perspective on traditional knowledge is provided in Appendix 4.

Following Allan's presentation there was a brief discussion about the role of Aboriginal youth in helping ensure traditional knowledge is not lost. One Panel member suggested that Aboriginal youth, with access to information technologies such as geographic information systems (GIS) could help maintain traditional knowledge. Allan noted that it is important that this emerging gap in traditional knowledge be bridged in order to continue to ensure the upkeep of traditional knowledge.

## 8 Information Items

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### 8.1 Mining Sector Sustainability Table (MSST)

Gordon Peeling informed the Panel that the Government is restarting the Sector Sustainability Table process. The next meeting of the MSST is scheduled for April or May, and a workshop on tailings and mine waste is scheduled for March under the MSST.

#### *8.1.1 Panel participation in the MSST*

Environment Canada has expressed an interest in the crossover between the COI Panel and the MSST. Panel members were asked to consider the possibility of participation by selected COI Panel members as full members of the MSST.

One Panel member asked for more background on the MSST and the kinds of decisions it makes. Pierre noted that the MSST meets twice a year, and could try to coordinate its meetings with those of the Panel to facilitate Panel members' participation. The MSST is government-created, and is supported by a Secretariat at Environment Canada. The MSST conducts high level dialogue around primarily environmental and sustainability issues and is meant to break down the silos that exist in the federal government. The MSST can establish Working Groups to investigate issues identified by the Table or to provide advice and/or recommendations to the MSST.

Aboriginal and community representation on the table is currently lacking, and Panel volunteers could fill these gaps. One Panel member noted that the Panel's participation in the MSST should be contingent on the MSST making progress and giving good information back to the Panel, and requested copies of previous meeting agenda and reports.

Panel members are invited to identify their interest for involvement in the MSST to Pierre via email.

**Follow-up:**

Stratos will distribute the terms of reference of the Mining Sector Sustainability Table as well as a link to meeting agendas and reports.

Panel members are invited to identify their interest for involvement in the MSST to Pierre via email.

## 8.2 Federal Government CSR Roundtables

The Government of Canada, led by the Department of Foreign Affairs and International Trade, held a series of four national roundtables to discuss issues of corporate social responsibility (CSR) in the mining, oil and gas sector and their operations in developing countries. The final roundtable was held in November 2006. The Advisory Group is currently finalizing its recommendations in its final report, and the governmental Steering Committee will be preparing a response to the Advisory Group's report. The Advisory Group report should be released in March or April.

The Panel decided to maintain this item on the agenda for the next Panel meeting. It was suggested that an NGO and/or government representative could be invited to the next Panel meeting to discuss the recommendations.

## 8.3 TSM Leadership Award

Pierre Gratton stated that MAC will be awarding certificates to companies receiving level 3, 4 or 5 for each TSM indicator. Beyond this, MAC would also like to acknowledge members' achievements with a leadership or excellence award for which companies could apply or be nominated. The Initiative Leaders thought the idea would have more credibility if the award was designed and bestowed by the Panel.

Many Panel members supported the idea of an award coming from the Panel, suggesting that it would endorse and encourage positive behaviour and performance improvement by MAC members. Panel members suggested a number of different approaches, including providing an award for extraordinary progress; application of TSM internationally (which Inmet already does); addressing a "COI Challenge" that changes every year; a consistent annual award to which companies can aspire; or performance on a few TSM priority such as Aboriginal relations or biodiversity. One Panel member suggested an award for a community group working effectively with a MAC member. This item will be put on the agenda of the next Panel meeting for further discussion.

## 8.4 Panel Renewal

The Panel agreed to establish a small working group to draw up a Panel renewal process for consideration at the next meeting. This process will draw on the results of the two-year Panel review conducted last year.

**Follow-up:**

Stratos will invite Panel members to participate in this small working group and convene a conference call of interested members.

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## 9 Future Agenda Items

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Possible future agenda items identified during the meeting for consideration by the Panel were:

- Review of the 2006 TSM Report;
- Post-verification review of two-three companies' TSM performance and verification;
- TSM Leadership Award;
- Outcomes of the Federal Government CSR Roundtables;
- Progress on implementing the *Mining and Aboriginal Peoples Framework* and the *Mining and Biodiversity Protection Framework*;
- Process for Panel renewal;
- Keeping track of the MSST; and
- The impacts of TSM on business operations and implications for the bottom line – Is TSM saving money or costing money? Is the innovation driven within the company? Are companies simply complying with or leading the initiative? Gordon Ball and Eira Thomas offered to respond to this question.

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## 10 Next Panel Meeting

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The next meeting is scheduled for September 25<sup>th</sup> (evening only) and 26<sup>th</sup> in Vancouver. Details will follow closer to the meeting date.

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## Appendix 1: List of Participants

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### COI Panel Members

Gordon Ball, Syncrude Canada Ltd.  
Chief Jim Boucher, Fort McKay First Nation  
Richard Briggs, Canadian Auto Workers  
Ginger Gibson  
Larry Haber, Kimberley Community Development Society  
Brenda Kelley, Canadian Environmental Network (Bathurst Sustainable Development)  
Christy Marinig, Timmins Economic Development Corporation  
Allan Morin, Métis National Council  
Bill Napier, Inco Limited (temporary replacement for Peter C. Jones)  
Gordon Peeling, Mining Association Canada  
Alan Penn, Cree Regional Authority  
David Scott, CIBC World Markets  
Eira Thomas, Stornoway Diamond Corporation

### Other Attendees

Craig Ford, INMET Mining Corporation  
Pierre Gratton, Mining Association of Canada  
George Greene, Stratos Inc. (Facilitator)  
Karla Heath, Stratos Inc. (Rapporteur)  
Stephanie Meyer, Stratos Inc.  
Brent Murphy, Ekati Mine, BHP Billiton Diamonds Inc.  
Claire Parkinson, CVRD Inco  
Inge Robinson, CVRD Inco

### Regrets

Jean-François Arteau, Makivik Corporation (temporary replacement for Soha Kneen while she is on maternity leave)  
Charles Campbell, United Steelworkers of America  
George Hakongak, Nunavut Tunngavik Incorporated (in lieu of Stefan Lopatka)  
Doug Horswill, Teck Cominco Limited  
Peter R. Jones, HudBay Mining and Smelting  
Soha Kneen, Inuit Tapiriit Kanatami (on maternity leave)  
Elizabeth May, Sierra Club of Canada  
Chief Darren Taylor, Tr'ondek Hwech'in First Nation

## **Appendix 2: CVRD Inco Presentation**

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Attached under separate cover.

## Appendix 3: Naonaiyaotit Traditional Knowledge Summary

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Presented to: Mining Association of Canada  
By: Brent Murphy  
BHP Billiton Diamonds Inc. – EKATI Mine

In Canada, there are legal requirements to consider traditional knowledge (TK) in environmental assessment and mine management. However, there is still little understanding of how best to do this. Traditional knowledge is not the same in all cultures. It is unique to a people, and has developed over thousands of years to allow people to survive in specific landscapes. However, the project demonstrated that traditional knowledge is not much different from modern science, except that it is able to provide information that spans hundreds of years and covers a much greater area than by doing surveys.

TK studies have considerations over and above those encountered in scientific studies. The intellectual property rights of Indigenous peoples are protected by international treaty, and TK studies must be conducted in a manner that recognizes and respect those rights. Prior to initiating the project, BHPB developed an informed and carefully considered research agreement to protect the rights of the Aboriginal owners. However, due to changes in personnel and understanding, BHPB spent the last two years of the 10-year study negotiating a Transfer Agreement for the handover of the NTKP to the Inuit, which occurred in this past March. This agreement specifies how BHPB and other companies will be allowed to use the data, and differs from the original agreement in that it makes sharing of information more difficult.

A TK study is a partnership, and the success of the project depends on the strength of the partnership. BHPB's original Inuit partners were Kitikmeot Inuit Association (KIA), the Kitikmeot Hunters and Trappers Association (KHTA), and the Kugluktuk Angoniatit Association (KAA). A number of secondary partners helped support the NTKP through small financial contributions or in-kind contributions.

An important consideration in the set-up of the NTKP was the understanding that although industry may fund such a study, industry is not the owner of the information. As the lead partner, BHPB made a substantial investment in the NTKP but the content and information was always defined and shaped by the Inuit. BHPB's vision was that if it assisted Aboriginal people to bring their vast experience and knowledge to the table, it would result in better development that would better protect land, water, air, and wildlife. Also, by conducting this project, BHPB would meet its regulatory requirements of ensuring meaningful consideration of TK.

Inuit culture is traditionally passed down in stories and song, and BHPB had to learn how to extract the knowledge in a non-written form and organize it in a useful manner while still respecting its integrity and context. BHPB applied scientific research methods and computer mapping technology to document Inuit TK. The Kitikmeot Hunters and Trappers Organization (HTO), in conjunction with biologists, designed an interview with 145 specific questions about wildlife, habitat, and land use. Fifty-two Inuit "consultants" – both elders and younger land users – were interviewed and were paid for their time. Interviews were conducted in Inuinaktun by local interviewers and were audio taped. Map information was recorded during the interviews and later digitized. Interviews were transcribed into English, and specialized text-handling software allowed

the inclusion of interview information into an interactive map or Geographic Information System (GIS), so the context or story surrounding the information was not lost or altered.

Three major products have arisen from the NTKP:

- The GIS, which is housed in the KIA Lands office in Kugluktuk (not accessible to outsiders). This tool helps the Inuit 'screen' land-use applications from mining / exploration companies and other developers, and includes map data as well as the contextual information obtained from the interviews
- A report series that documents land use and different wildlife species that was compiled in English for the project sponsors and Inuit organizations to ensure that there would be a lasting document of the traditional knowledge. This is especially important because several of the elders have passed on and TK is not being passed down as effectively today (still awaiting approval to print); and
- A Placenames Atlas was released in 2003 and consists of maps with names and locations. Recently BHPB has been working with Nunavut and the federal government to obtain official status for these Inuit placenames.

In the first real application of the NTKP, BHPB has worked for the past three years with an Inuit Elders Advisory Group to use TK in addressing problems with caribou at the mine site. Caribou are attracted to roads and other gravelly areas to escape heat and biting flies. The EKATI Diamond Mine has created ideal insect relief habitat for caribou, which puts them in the path of trucks and heavy machinery. In the first 'experiment', Inuit elders recommended using traditional hunting methods to divert caribou from areas of active mining. From the NTKP BHPB was able to determine that Inuit would build two converging rows of stone figures, or inukhok, on a path that caribou were known to use. BHPB built these stone piles in three test locations to keep migrating caribou away from pits and the airstrip. BHPB will monitor the caribou's migration through the mine site to determine whether the method will successfully divert the caribou. The Caribou and Roads Project and annual Inuit elders' audit are now part of the wildlife-monitoring program at EKATI, and BHPB plans to expand the use of the NTKP to address issues with fish and other wildlife and mining at EKATI.

The NTKP is a unique and innovative project and an important step toward BHPB's ongoing partnership with the Kitikmeot Inuit. BHPB recognized that accomplishment by awarding the NTKP with the 2005 Award of Excellence for the Environment at the Health, Safety, Environment and Community Awards ceremony held in Australia this past November.



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## Appendix 4: Aboriginal Perspective on Traditional Knowledge

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Presented to: Mining Association of Canada  
By: Allan Morin  
Métis National Council

**Intro:** The United Nations "Convention on Biological Diversity" (CBD), Article 8(J):  
**recognizes the importance of indigenous and local communities to the conservation and sustainable use of biodiversity, calling on Parties to respect, preserve and maintain traditional knowledge, to promote its wider application with the approval and involvement of holders of such knowledge, and to encourage the equitable sharing of benefits arising from its utilization.**

To ensure that Canada, as party to the Convention on Biological Diversity, does act progressively toward the respecting, preserving and maintaining of traditional knowledge, a Mining Association of Canada position statement is required. The Mining Association of Canada must ensure that Canada acts on the CBD, Article 8(J) in an honourable fashion, concerning the equitable sharing of benefits arising from the utilization of traditional knowledge.

In Canada there are three distinct aboriginal peoples recognized under the Canadian Constitution (First Nation, Inuit and Metis). The jurisdiction of Aboriginal Peoples over their culture, heritage, knowledge and political domains must be clearly recognized.

The full consideration and inclusion of Aboriginal Traditional Knowledge in considering options for the mining sector in Canada is very important. We need to look at the traditional ideology of caring for the natural environment, the survival of aboriginal people within a healthy environment, and the impact that mining activities will have upon their lives and the lives of future generations. Aboriginal Peoples view themselves as part of the land and are therefore impacted directly by Mining activities.

The active and dynamic debates such as in this meeting, sparks a flurry of activity amongst those seeking to build a public knowledge base on the subject. In these forums there should be clear reference to the importance of preserving and recognizing the use of Traditional Knowledge

### **Traditional Knowledge:**

Traditional Knowledge has become a major subject of discussion with local, national and international forums. Traditional Knowledge is in high demand by various governments, domestically and internationally, by agencies such as the World Intellectual Property (WIPO), United Nations (UN) and the Convention on Biological Diversity (CBD). There has been a significant amount of literature generated on the topic of TK, providing a variety of insights into understanding what traditional knowledge is and how it exists.

The Traditional Knowledge of aboriginal peoples differ from region to region and is grounded in the particular environment and culture from which it has emerged. Though the knowledge system share some common characteristics, it is critically important to understand that there is no one comprehensive definition or explanation of Traditional Knowledge. Traditional Knowledge is simply a term that has been invented and used to name a set of complex and unique knowledge systems

held by Aboriginal Peoples in Canada. Traditional Knowledge is used broadly with a variety of implicit and explicit definitions, depending upon the particular forum within which it is being used.

From the beginning, the forces of the ecologies in which we live have taught aboriginal peoples a proper kinship order and have taught us how to have nourishing relationships with our ecosystems. The ecologies in which we live are more to us than setting or places. These ecologies do not surround aboriginal people, we are an integral part of them and we inherently belong to them. The ecologies are alive with the enduring process of creation itself. As aboriginal peoples, we invert the ecologies with deep respect and from them we unfold our structure of aboriginal life and teachings.

Aboriginal peoples do not seek understanding, nor convey cultural teaching within the group through objective purposes. Rather knowledge is provided so that the learner must integrate the intangible elements of self within the comprehensive process. One's personal set of kinship, experiences, relationships, knowledge of community practices, spiritually and oral history are all important factors that contribute to knowing. One's action impact upon one's environment, and so there is a tremendous responsibility carried by the individual and the community, that must be considered carefully before carrying out a particular action. This responsibility is not only to the physical world but it is also a responsibility to the spiritual world.

Respect for oneself, respect for one's fellow man, respect for the earth and respect for the spiritual realm are all inherent with the concept of Traditional Knowledge. Teaching and learning the complexities of Traditional Knowledge transcends a lifetime. It is a never ending process of living to achieve different levels and layers of understanding. One requires spiritual and intellectual growth through dynamic interaction with other beings sharing their environment, often by repetitive experience.

When aboriginal people are removed from cultural environments or only have limited access to traditional teaching, the ability to ingrain, experience and internalize Traditional Knowledge teaching is greatly diminished.

#### **Research and Ethics:**

One does not learn about aboriginal perspectives from literature, but rather one must employ a different method of research which involves direct learning from aboriginal elders of each language group taking responsibility for the knowledge that is learned and employing it in one's daily life in order to renew the knowledge. Traditional Knowledge tends to be collectively owned and then takes form of stories, music, songs, folklore, dance, proverbs, cultures values, beliefs, rituals, community laws, local language and practices. Developed from experience found over the centuries and adapted to the local culture and environment, Traditional Knowledge is transmitted orally from generation to generations.

Traditional Knowledge refers to knowledge system, creations, innovations, and cultural expressions, which have generally been transmitted from generation to generation, and generally regarded as pertaining to a particular people or its territory, and are constantly evolving in response to a changing environment.

There tends to be 2 streams of information available on Traditional Knowledge. One stream of information has been generated by non-aboriginal people, the others generated by Aboriginal people themselves. On one hand information generated by non-aboriginal peoples on the subject

of Traditional Knowledge seeks specific definitions, attempts direct comparisons with western style knowledge, the goal of harnessing knowledge for commercial purposes. On the other hand, information on Traditional Knowledge generated by aboriginal people does not seek to provide specific definitions, does not attempt direct comparisons with Western style knowledge and tends to provide as an educational tool for learning how to respect traditional knowledge and interface with Traditional Knowledge holders for the purpose of sustaining life on earth.

One of the biggest challenges at this time in our human history seems to be keeping aboriginal Traditional Knowledge Indigenous.

There are individual writings as "experts" on the subject of Traditional Knowledge who are not indigenous people, not Traditional Knowledge holders and who do not have no authority provide by an indigenous community to speak on their behalf. One must be extremely careful when initializing the work of these writers, as such "expertise" is unqualified and non-represented.

In considering issues of legitimacy, one might come to the conclusion that very few people would be qualified to speak on the subject of Traditional Knowledge. This is not to say that constitutionally protected rights of Freedom of speech should be dismissed, rather, there must be a greater effort to employ procedures and ethical frameworks that will systematically facilitate and advance legitimate discussion on Traditional Knowledge.

Accomplishing broader discussion and research would serve two very important purposes. Firstly, it would provide an avenue with specific nations, for disseminating information and stimulating discussion on current activity concerning Traditional Knowledge. Secondly, it would provide broader endorsements (or rejection) by specific nations of current work on the subject of Traditional Knowledge. Without this process, discussion on Traditional Knowledge will always remain outside of the control of aboriginal peoples/Nations which most would agree, is undesirable and unethical.

Within the aboriginal nations the subject of Traditional Knowledge is not up for debate, deconstruction or exploration. Some aboriginal peoples have put forward an opportunity to share their Traditional Knowledge but expect the both they and the knowledge shared would receive the same respect and treatment in which the knowledge exists. If industries such as the Mining Sectors, their representatives, researches or expert advisors do not have the ability to learn and demonstrate this respect, there is little chance that the Traditional Knowledge shared will be utilized in an appropriate manner.

#### **Aboriginal Science:**

Aboriginal Traditional Knowledge Holders live with the ecological cycle, a part of the complex environment, able to understand interaction between elements in the environment.

Its focus is the web of relationships between humans, animals, plants, natural forces, spiritual, and land forms in a particular locality, as opposed to the discovery of universal laws. It is the original knowledge of Aboriginal peoples. Aboriginal people have accumulated extra-ordinary complex model of species interaction over centuries within very small geographical areas, and they are reluctant to generalize beyond their direct fields of experience.

**Western Science:**

Western Science is based on the analysis of specific variables, isolated and observed in a controlled environment. As a consequences of these different levels of analyses, the aboriginal people who have traditionally lived within particular ecosystems can make better predictions about the consequences of any physical changes or stresses that they have previously experiences then scientist who base their forecasts on generalized models and data or indicators from relatively short – term field observations.

Traditional Knowledge is learned through observation and hands-on experience, it is based on the understanding that the elements of matter have a life force, it does not run human life as superior to other living elements, (all life forms have kinship and are interdependent) it is holistic. Whereas Western Science is analytical it is based on data generated by resource users (which is collected by a specialized group of researchers) who tend to be more selective and deliberate in the accumulation of facts.

**Aboriginal Values and Wisdom:**

The wisdom and value system derived from Traditional Knowledge can be used for planning for the future. This wisdom if applied, may contribute to ensuring that a management approach for use in the mining sector in Canada is sustainable in the long term. Consider the following scenarios:

- **Wisdom of Life** – encapsulates the wisdom of aboriginal women, as the nurturers of life. Encapsulates the roles of the aboriginal family. Practices and value systems.
- **Wisdom of Earth** – encapsulates the wisdom of Traditional Resource Users, offering the complementary wisdom to Western scientific knowledge; touching on the ecological, geological and biological sciences from an aboriginal applied perspective.
- **Wisdom of Community** – Aboriginal community collective wisdom, gathered through dialogue, social interaction, relationships among family and friends, relationships in developments.
- **Wisdom of the Spirit** – encapsulates the Traditions and Culture of the Aboriginal Nations, including adornment, music, dance, visual and performing arts.

**Conclusion:**

The challenge remains for the Mining Sectors to include traditional knowledge in their repertoire. It is encouraging that many committed individuals are engage in efforts to build legitimate dialogue and discussions on Traditional Knowledge in various collaborative forums. Perhaps we will find the answers to our many dilemmas together.

It is unlikely that any aboriginal nation would attempt to define Traditional Knowledge comprehensively. So while we might begin to explore the subject, one must acknowledge the limitations in efforts to learn about literary sources. This is the very dilemma facing Aboriginal Traditional Knowledge holders in taking up the challenge of trying to explain to others what is meant by TK.

I look forward to a time when my own Aboriginal Nation has the capacity to undertake national discussions on the subject of preserving Traditional Knowledge. But for now, we will continue to do our best to interface with others who begun to realize that Traditional Knowledge is valuable and wish to work with us to find solution to our respective needs for mankind.