



To:	Luis Manzo (KIA); Richard Nesbitt (HESL)
Cc:	Kim Poole (AWR); Anne Gunn; Kim Gilson
From:	Alan Sexton (GeoVector)
Date:	August 22, 2016

Subject: Review of 2016 Draft Nunavut Land Use Plan on behalf of the Kivalliq Inuit Association

Executive Summary

Introduction

At the request of the Kivalliq Inuit Association (KivIA) a technical review of the 2016 Draft Nunavut Land Use Plan (2016 DNLUP) was completed by GeoVector Management Inc. (GeoVector).

The mandate of this review was to identify the KivIA recommendations that are still outstanding in the 2016 DNLUP. The original KivIA recommendations were submitted in June, 2015 after a technical review of the 2014 DNLUP. This mandate was meant to ensure that the scope of the proposed DNLUP was compatible with the KIVIA's mandate and responsibilities to the Inuit beneficiaries of the Kivalliq Region. In particular, in regard to the 2016 DNLUP:

- 1) Limit the creation of extensive new protected areas that will limit economic development, and
- 2) To ensure the Manitoba-Nunavut linear infrastructure corridor is included as part of the 2016 DNLUP going forward.



In its May 2016 submission of the technical review of the 2014 DNLUP to NPC, the Kivalliq Inuit Association (KivIA) offered 15 recommendations regarding management of lands with mineral potential (6 recommendations), existing rights (1 recommendation), transboundary consideration (5 recommendations) and linear infrastructure corridors (3 recommendations). However, since none of these recommendations were accepted, the KivIA has a number of follow-up comments, questions and recommendations.

Mineral Potential

In the late 1980's Inuit negotiators and their advisors (*McPherson, 2003*) established the importance of acquiring mineral rights to land since the Crown had traditionally sub-ordinated the surface holder in the development process. It was known that substantial blocks of mineral rights were going to be granted in the land-selection phase of negotiation, and Inuit became determined to make the best of it by hiring mineral advisors. So these mineral advisors prepared a mineral inventory to help guide these deliberations. The ultimate goal of the Inuit negotiators was to gain the right to manage these mineral resources which would allow for the devolution of Crown resources to the new territory of Nunavut and helping assure the economic viability of this new territory for future generations of Inuit. These negotiations had the Inuit give up 80% of the Nunavut land area to the Crown in order to gain full access and ownership to remaining 20% of the area. The majority of this 20% contained the known mineral endowment known at that time within Nunavut. This created a situation where the Inuit are one of the largest freehold owners of mineral rights in Canada. There was an equitable sharing of how these lands were split between the three regions of Nunavut. Based on the 2016 DNLUP the KivIA will be impacted much more than other regions with the loss of 46% of their IOL's which were negotiated for their mineral rights.

Using only the mainland portion of the Kivalliq Region (422,324 square kilometres) the recommendations of the 2016 DNLUP will eliminate 40% of this area from any form of economic development. These eliminated areas also contain 46% of the Inuit Owned Lands (IOL's) within the Kivalliq Region. This is a significant loss and will have a significant negative impact on future generations of Inuit and also the rest of Canada. The current 2016 DNLUP has created a "no entry system of land



management” related to mineral endowment and mineral potential within Nunavut and Canada.

This approach by the 2016 DNLUP is very limiting given that it has used more geographic data and less so geoscience data.

A suggestion would be to use the terms “Mineral Endowment” and “Mineral Potential”. Based on these definitions the IOL’s should be evaluated based on their mineral endowment instead of their mineral potential. It is recommended that the NPC use these two terms to better understand the impact of expanding protected areas over areas of mineral endowment (ie. IOL’s). Additional comments on definitions are noted in Appendix A:

Mineral Endowment – The aggregate of the known mineral deposits and occurrences in a region based on historic exploration and development. In addition, the diversity of mineral deposit terranes for metals, non-metals and energy are a reflection of the endowment of minerals in the earth’s crust for each region under consideration.

Mineral Potential – is the probability for the occurrence of undiscovered mineral deposits or mineralization in an area that has similar geoscience characteristics as areas that currently host known mineral deposits. The factors affecting economic viability are not considered in this definition because the geoscience data available is still insufficient to determine the sizes and grades of the mineralization required to form an economic mineral deposit. Mineral potential is determined by how well the existing geoscience data fit established mineral deposit models and the existing knowledge about mineralization in a particular area. Also, the amount or level of geoscience, historic or modern, for areas needs to taken into consideration. For example areas with either limited or very dated geoscience information would be considered to have low mineral potential but could end up hosting economic deposits. Undiscovered mineral deposits will remain undiscovered as long as mineral exploration is limited to either/or an inventory of known deposits or the lack of modern geoscience data that can be viewed through the lense of a “mineral exploration.” Examples of new discoveries that used this approach in the Canadian north since the creation of Nunavut are:

1) Diamond discovery in the western Arctic,



- 2) Peregrine Diamonds recent discovery of diamonds on Baffin Island,
- 3) AEM's recent discovery of gold in the Whale Tail/Amaruq area, and
- 4) North Quest's recent discovery of gold west of Whale Cove.

The KivIA concerns are related mainly to the lack of consensus on what uses should be prohibited or restricted within areas of mineral endowment and mineral potential. This reflects the minimal use of existing public domain geoscience data, which limited the areas that were defined as having high mineral endowment and potential. The KivIA proposes that the following options for refinement to the 2016 DNLUP be implemented:

1. The mineral endowment and potential outside areas of existing rights on Crown Lands and all IOL's should have more research to better categorize the location of low to high mineral potential corridors.
2. The 2016 DNLUP should be revised to recognize that IOLs were selected predominantly for their mineral endowment (McPherson, 2003).
3. All IOL parcels should designated "Mixed Use".
4. A clearly defined process that outlines how flexible the 2016 DNLUP will be in changing land use designation boundaries and definitions as new information becomes available going forward.
5. Evaluation of the future mineral potential must be viewed through both the "mineral exploration and mining industry lens." This is best achieved by compiling all the current public geoscience into a single database. Once in place a systematic review of this data using existing mineral deposit and mineral potential models should be completed.
6. The geoscience data in the public domain must be given much more consideration when defining areas of low to high mineral potential.



Existing Rights

Based on the 2016 DNLUP the Kivalliq Region will be impacted much more than other regions with the loss of 46% of their IOL's, which were negotiated for their mineral rights. Using only the mainland portion of the Kivalliq Region (422,324 square kilometres) the recommendations of the 2016 DNLUP will eliminate 40% of this area from any form of economic development. This is a significant loss and will have a significant negative impact on future generations of Inuit and also the rest of Canada.

Given the history of how the Inuit negotiators and their advisors (*McPherson, 2003*) established the importance of acquiring mineral rights to their lands (IOL's). The elimination of 46% of the Inuit Owned Lands (IOL's) within the Kivalliq Region will have a significant negative socio-economic impact on this region. In addition, there is no agreement between the statements in the 2016 DNLUP of "recognizing existing rights" and the land use plan proposed.

Transboundary Considerations

The KivIA concerns relate to the potential negative economic and social impacts of Protected and Special Management Areas that share a common boundary between Nunavut and the adjoining jurisdictions of Manitoba, the NWT and Saskatchewan in areas of high mineral potential corridors on both IOLs and Crown Land.

The current options for refinement in the DNLUP do not appear to address these concerns because there is no clear process as to how "general guidance" or "retaining references to identify priorities" would be done or even what these terms mean.

The KivIA proposes that the following options for refinement to the DNLUP be implemented:

1. More research to better define the potential negative economic and social impacts associated with Protected and Special Management Areas in the adjoining jurisdictions.



2. More research to better determine if *Mixed Use*, *Mineral Endowment* and *High Mineral Potential* designations should be expanded while *Protected* and *Special Management Area* designations are contracted along the common boundaries between Nunavut and the adjoining jurisdictions.
3. More inclusive data from all public sources of geoscientific information.
4. Interpretation and a larger scale view of the geoscience data once it is captured.
5. Consultation with all transboundary jurisdictions on the potential negative economic and social impacts that could arise in these jurisdictions from the 2016 DNLUP.

Linear Infrastructure Corridors

One of NPC's stated goals is to achieve the economic well-being of communities. Transportation and communication services and corridors are a key pillar of economic development for residents of the Kivalliq Region, key to accessing resources and building healthier communities. By extending the spatial extent of Protected Area designations for caribou, especially for the extensive tracts of land west of Arviat, Whale Cove and Rankin Inlet, and stating that linear infrastructure is not permitted in Protected Areas, the 2016 DNLUP appears to have killed the proposed Nunavut (Kivalliq)-Manitoba road and hydro corridor, and could well hamper economic development in the region. However, the sections related to transportation and other linear corridors appear complicated and confusing; the KivIA would appreciate clarification in this regard.

The NLUP should expand the transportation and infrastructure corridors in order to add certainty to future plans for road, rail, power line, telecommunications, hydro developments and shipping links. This would greatly assist with the feasibility of mining projects and local community infrastructure developments. In particular, designated transportation corridors should be included in the 2016 NLUP for the Nunavut to Manitoba powerline corridor should also include a road option.



It is also recommended that infrastructure related to existing, planned and potential development projects should be included on the land use base of the NLUP. The collation and use of Environmental Impact Statements for projects that have gone through the NIRB and NWB processes would be very useful for documenting the locations of this infrastructure.

In addition, the 2016 DNLUP has grouped several scales of development into the category of proposed linear infrastructure corridors. The approach seems to be more of “one size fits all”. For example, a mine servicing road that occurs on the scale of a few to tens of kilometers is included in the same list as highway or pipeline, which occurs on the scale of 100’s to 1,000’s of kilometers.

Overall assessment of 2016 DNLUP

This review of the 2016 DNLUP has highlighted several shortcomings with respect to:

- 1) the negative impacts on mineral, oil and gas potential, and
- 2) negative impacts on linear infrastructure development.

The key conclusion of the review is that the decision-making process for establishing Land Use Designations has not been provided, supporting data are not consistently included or referenced in the 2016 DNLUP and there is no clear requirement for systematic review and update to incorporate new findings into the NLUP. There is not, therefore, sufficient information to determine the appropriateness of the Land Use Designations to meet the various goals for environmental protection and encouragement of development and growth outlined in the NLUP.

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APPENDIX A

Review of Definitions in the 2016 Draft Nunavut Land Use Plan



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New Technical Comments

There are several definitions in the 2016 DNLUP that require modification in order to better describe their topic and therefore, be better understood.

Mineral Exploration & Production (page 9)

These two terms should not be used together. Two separate definitions are required which is outlined in Figure 9 of the 2016 DNLUP. Putting these two terms together when they describe two completely different aspects of the mine development cycle is misleading. As they are now defined there is the suggestion that all mineral exploration projects become mines and produce some form of raw metal(s) for economic benefit. This is not the case as a very low percentage of mineral exploration projects result in an economic mine discovery. The inaccurate use of these terms leads to confusion for anyone not directly associated with the mineral exploration and mining industry.

Mining (page 9)

The first portion of this definition is somewhat sufficient for describing mining. (ie. “means the extraction of minerals, precious metals or mineral specimens for a period of time.”) Although mineral specimens are often collected as part of non-mining related research so a better definition should be considered.



The remainder of the current definition is related to mineral exploration not mining so again the inaccurate use of these terms leads to confusion for anyone not directly associated with the mineral exploration and mining industry.

Non-exploitive Scientific Research (page 10)

There should be consideration given to adding the scientific data collected during all baseline studies as part of this definition.

Quarries (page 11)

Slate is a rock so it should be removed from this definition.

Waste Site (page 12)

An in-active mine site suggests a mine site that is on care and maintenance which would mean it is not a “waste site.” All mine sites since the creation of Nunavut require a security bond for reclamation so they cannot be classified as waste sites. A more accurate term to be used in this definition would be “abandoned”.