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FINAL THESIS

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VIEWS OF THE INUVIALUIT ON SUSTAINABLE DEVELOPMENT IN  
THE MACKENZIE GAS PROJECT IN THE INUVIALUIT SETTLEMENT  
REGION, NORTHWEST TERRITORIES, CANADA

Supervisor  
Commissioned by

May 2005

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Salokangas, Raila Views of the Inuvialuit on Sustainable Development in the Mackenzie Gas Project in the Inuvialuit Settlement Region, Northwest Territories, Canada

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## ABSTRACT

The Mackenzie Gas Project proposes to develop three natural gas fields in the Inuvialuit Settlement Area, Northwest Territories, Canada, and to transport the gas through a pipeline to southern markets. Most of the people that live in the Inuvialuit Settlement Region are Inuvialuit. This triangulated study examined Inuvialuit adults' views in the communities of Inuvik, Tuktoyaktuk and Holman on sustainable development in the project. The study was conducted with the help of a survey (n=193) and semi-directed interviews (n=13). The results of this study were compared to Inuvialuit views on the sustainability of the project during the Mackenzie Valley Pipeline Inquiry in the 1970s – the first time the project was proposed.

This study shows that the Inuvialuit opinion about the project had changed from strong opposition to support in 30 years. The main reasons for this were the settlement of the Inuvialuit land claim; the possibility for the Inuvialuit to influence decision making in the project; the restored trust between the Inuvialuit and the governments and the Inuvialuit and oil and gas companies; the Inuvialuit were less dependent on wildlife for subsistence economy in 2004 than 30 years ago; and the project proposal has changed. In 2004, the main hope that the Inuvialuit had was that the Mackenzie Gas Project would bring employment, education and training possibilities for their people in the area. The Inuvialuit still had concerns related to the projects possible negative cultural, environmental and socio-economic impacts. The main concerns identified by the Inuvialuit were an increase in substance abuse and violence; an increase on the cost of living; the loss of traditional lifestyle and culture; and negative effects on wildlife and the subsistence economy.

Salokangas, Raila	Inuvialuit-kansan mielipiteitä kestävästä kehityksestä Mackenzie-kaasuprojektissa Inuvialuit itsehallintoalueella, Luoteis-territorioissa, Kanadassa
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## TIIVISTELMÄ

Mackenzie Gas Project suunnittelee kolmen maakaasukentän tuotantoa Inuvialuit-itsehallintoalueella Kanadan Luoteis-territorioissa. Projektissa ehdotetaan maakaasun kuljettamista kaasuputkea pitkin etelän markkinoille. Tutkimuksessa selvitettiin Inuvialuit-aikuisten näkemyksiä kaasuprojektista ja tutkittiin, miten projekti voitaisiin paremmin toteuttaa kestävä kehityksen periaatteiden mukaisesti. Tutkimus tehtiin kolmessa Inuvialuit-kylässä: Inuvikissa, Tuktoyaktukissa ja Holmanissa. Tutkimusmenetelmänä käytettiin triangulaatiota: kyselylomaketta (n=193) ja teemahaastatteluja (n=13). Tutkimuksen tuloksia verrattiin vuonna 1976 tehtyyn Mackenzie Valley Pipeline Inquiry -kuulemistilaisuuteen ja siinä esitettyihin inuvialuit-kansan mielipiteisiin. Tällöin kaasuhanke ehdotettiin ensimmäisen kerran.

Tutkimuksessa kävi ilmi, että inuvialuit-kansan mielipide hanketta kohtaan on muuttunut jyrkästä vastustuksesta kannatukseen 30 vuodessa. Pääsyyt kannatukseen olivat: inuvialuitien itsehallintosopimus, kansan lisääntynyt mahdollisuus vaikuttaa projektia koskeviin päätöksiin, lisääntynyt luottamus valtioon sekä öljy- ja kaasuyhtiöihin. Lisäksi inuvialuit-kansan toimeentulo on vähemmän sidoksissa luontoon kuin 30 vuotta sitten, ja hankkeen suunnitelma on muuttunut 1970-luvun suunnitelmaan verrattuna. Vuonna 2004 inuvialuit-kansan suurin toive oli, että projekti lisäisi kansalaisten työllisyys- ja koulutusmahdollisuuksia. He olivat yhä huolissaan hankkeen mahdollisista kielteisistä kulttuuri-, ympäristö- ja sosioekonomisista vaikutuksista. Suurimmat inuvialuit-kansan määrittelemät huolet olivat lisääntyvä huumausaineiden käyttö ja väkivalta, asumiskustannusten nousu, perinteisen elämäntavan ja kulttuurin häviäminen ja haitalliset vaikutukset luontoon ja toimeentuloon.

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## Acronyms

APG	Aboriginal Pipeline Group
CAPP	Canadian Association of Petroleum Producers
CEAA	Canadian Environmental Assessment Act
COPE	Committee for Original Peoples' Entitlement
DIAND	Department of Indian Affairs and Northern Development
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIRB	Environmental Impact Review Board
EISC	Inuvialuit Environmental Impact Screening Committee
GC	Government of Canada
GNWT	Government of Northwest Territories
IDC	Inuvialuit Development Corporation
ILA	Inuvialuit Land Administration
INAC	Indian and Northern Affairs Canada
IFA	Inuvialuit Final Agreement
IRC	Inuvialuit Regional Corporation
ISR	Inuvialuit Settlement Region
JRP	Joint Review Panel
MGP	Mackenzie Gas Project
MVEIRB	Mackenzie Valley Environmental Impact Review Board
MVLWB	Mackenzie Valley Land and Water Board
NEB	National Energy Board
NWT	Northwest Territories
NTWB	Northwest Territories Water Board
NGPS	Northern Gas Project Secretariat
SEIA	Socio-Economic Impact Assessment
SIA	Social Impact Assessment
RWED	Government of the Northwest Territories Resource, Wildlife and Economic Development



## 1. INTRODUCTION

In the early 1970s, gas fields were discovered in the now called Inuvialuit Settlement Region (map 1.), Northwest Territories, Canada. Plans were made to carry the gas from three gas fields; Niglintgak, Taglu and Parsons Lake (map 2.), through a pipeline corridor (map 3.) to southern markets. It was recognized that the development of these three gas fields, building a pipeline, and development of oil and gas fields along the pipeline route could produce significant changes in the foundation of many of the communities that bordered the proposed pipeline routes. An inquiry was done on how a pipeline would affect the ecology and the people living in the area. The Report of the Mackenzie Valley Pipeline Inquiry (Berger, 1977a, b) recommended a 10-year moratorium on building a pipeline through the Mackenzie Valley. The main reasons for the moratorium were unsettled land claims in the Mackenzie Valley and possible negative environmental and social impacts that the project might have on the lives of the local people.

In 1984, the Inuvialuit and the Canadian Government signed a comprehensive aboriginal land claim with the Inuvialuit - Inuit of the Western Arctic. This land claim, the Inuvialuit Final Agreement (DIAND, 1984), encompasses approximately 1,000,000 km<sup>2</sup> and is called the Inuvialuit Settlement Region (ISR).

In 2005, the Mackenzie Gas Project (in this study also referred to as the MGP or the project) proposes to develop these three natural gas fields in the Inuvialuit Settlement Region (ISR) and deliver the natural gas to southern markets through a pipeline system built along the Mackenzie Valley (map 4.). The MGP is a joint proposal by four major oil and gas companies and a group representing the aboriginal peoples of Canada's Northwest Territories. The project would include natural gas development in the Mackenzie River Delta in the Northwest Territories, gathering lines, processing facilities, and a pipeline to transport gas south through the Mackenzie Valley to northern Alberta. The pipeline would be about 1,220 kilometres in length.

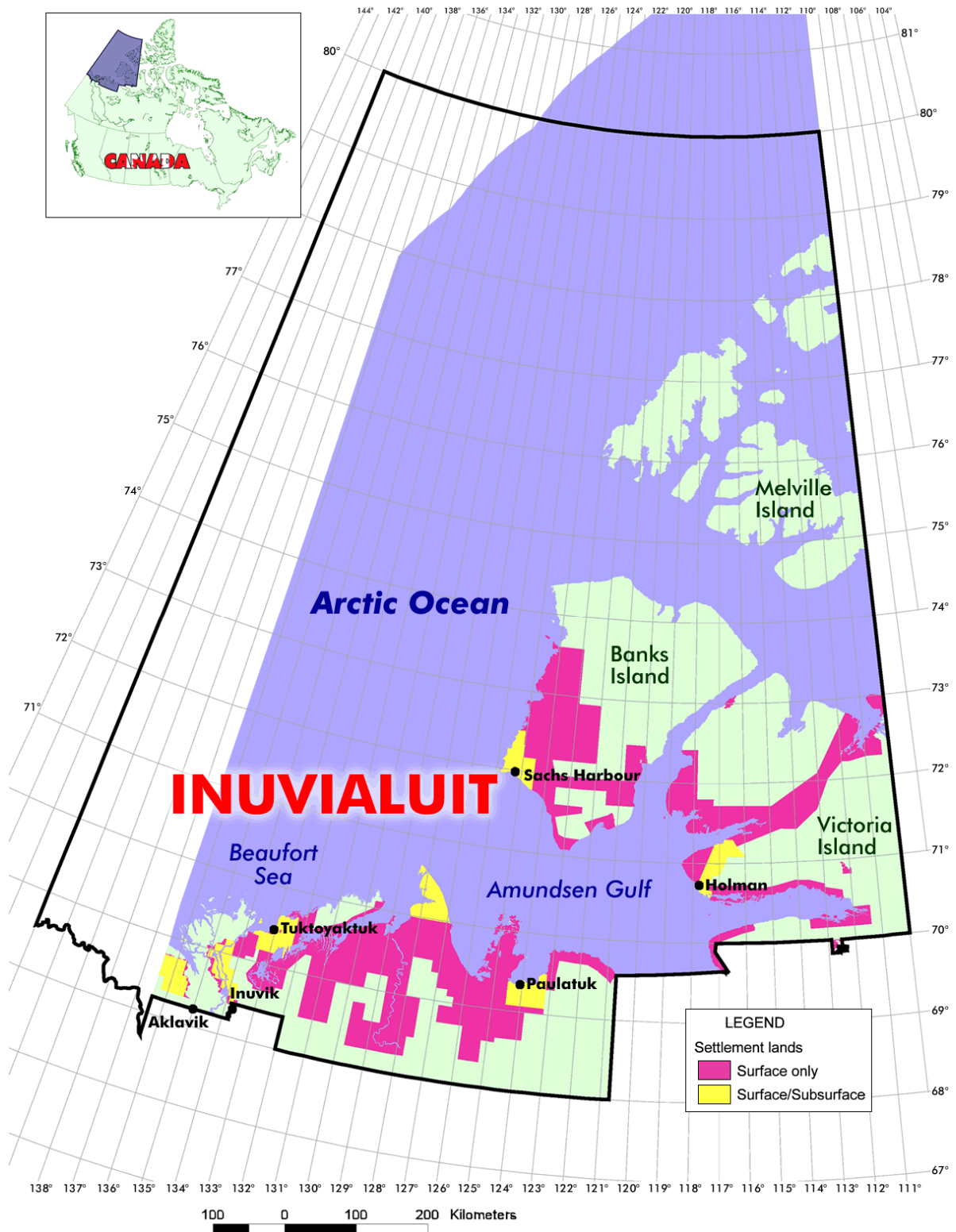
In the beginning of the 21<sup>st</sup> century, many native groups are in favour of the project. Since the 1970s, land claims have been settled nearly throughout the Mackenzie Valley and local native groups are in charge of the developments that take place on their lands. Technology

has gone further to assure that the negative environmental effects of the MGP would be kept to the minimum. However, the Arctic and sub-Arctic Mackenzie Delta remain ecologically fragile, and in mega projects there are always uncertainties and variables that can not be prepared for. The permanent residents of the Mackenzie Delta are still dependent on the land which influences a major part of their traditional culture and provides some of them with subsistence economy. The level of education in the area is low and the mix of future labour demand suggests that the economic outlook for the ISR is not bright (Vodden, 2001: p.62-63, 79-80).

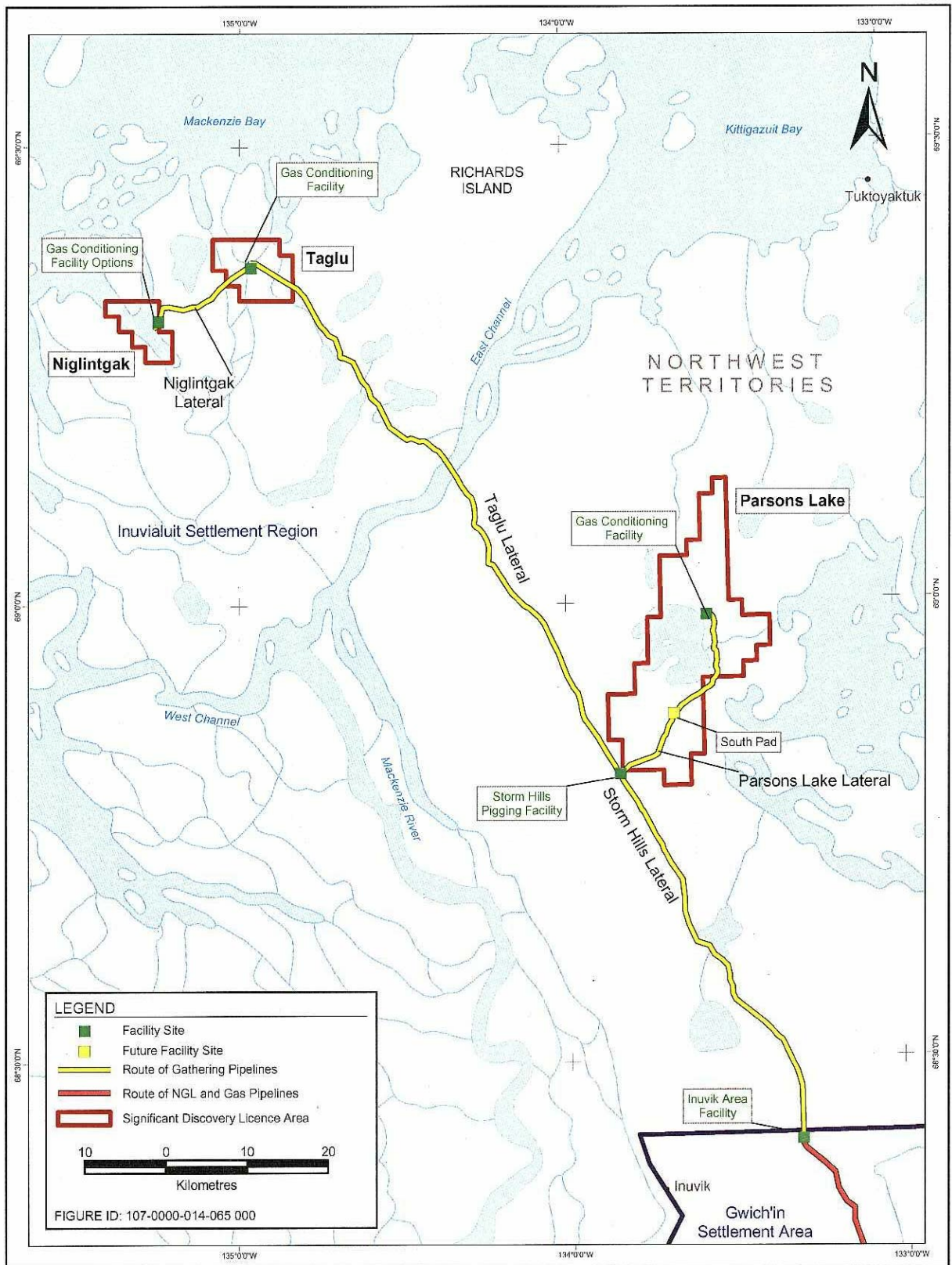
Thirty years after the Berger Inquiry took place, similar hearings are planned to take place to assess how the Mackenzie Gas Project would affect the regions peoples and ecology. If the new hearings take place, they will be conducted by the Joint Review Panel - the Berger Inquiry of the 21<sup>st</sup> century.

This final thesis focuses on Inuvialuit opinions on the possible impacts the proposed Mackenzie Gas Project might have on the Inuvialuit and possibilities of sustainable development in the project. The study concentrates on Inuvialuit hopes and concerns related to the project's potential socio-economic and environmental impacts. This thesis reports the results of a survey conducted and interviews held in Inuvik, Tuktoyaktuk and Holman during March – August 2004. The study was also influenced by discussions shared, meetings attended and observations made during March 2004 – May 2005. In this thesis, the results are compared to public hearings held in the ISR related to the project during the 1970s (Mackenzie Valley Pipeline Inquiry, 1976a, b, c, d, e, f, g, h, i).

The thesis is structured so that the introduction will be followed by literature review and introductions to the MGP and the Inuvialuit. This will be followed by methods used and the results. In the discussion chapter, the results of this study will be compared to the Inuvialuit views of the project stated in the public hearings during the Berger Inquiry. The summary and conclusion are followed by recommendations.



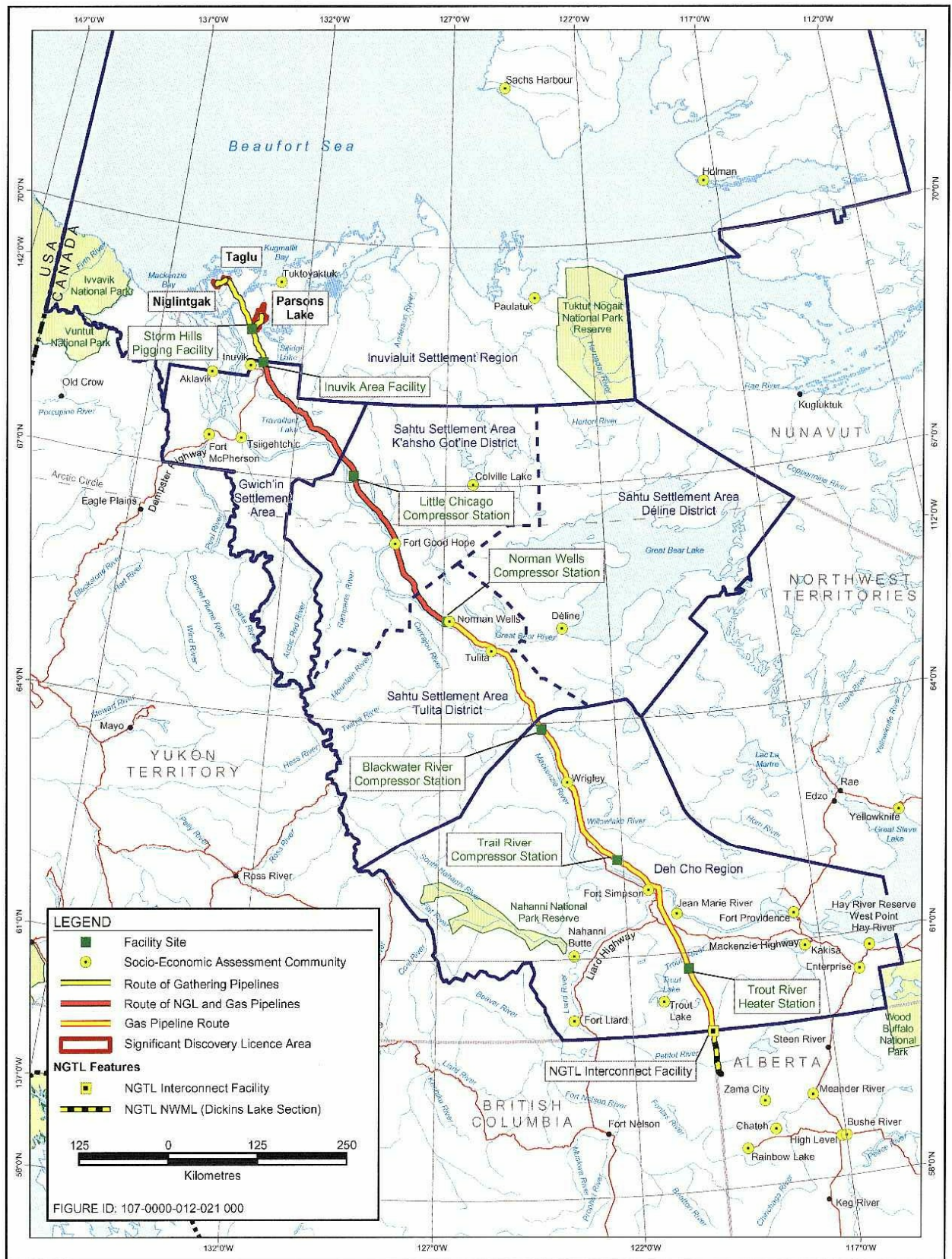
Map 1 Inuvialuit Settlement Region (ISR). (Aurora Research Institute, Aurora College, 2002)



**Map 2** The natural gas fields of the Mackenzie Gas Project. (Mackenzie Gas Project, 2004b: p. 4) The map has been reprinted with the permission by the Mackenzie Gas Project.



Map 3 The proposed pipeline corridor routes in the 1970s. (Berger, 1977a)



**Map 4** The proposed pipeline route in the beginning of the 21<sup>st</sup> century. (Mackenzie Gas Project, 2004e, p. 1-3) The map has been reprinted with the permission by the Mackenzie Gas Project.

## 2. SUSTAINABLE DEVELOPMENT

The term sustainable development became widespread after the publication of *Our Common Future*, the report of the World Commission on Environment and Development (World Commission on Environment and Development, 1987). In it, sustainable development is described as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. There are many more descriptions of the meaning of sustainable development. Renn, Goble and Kastenholz proposed in 1998 that “sustainable development denotes a process by which the capital assets of natural, social and cultural resources are preserved to the extent that the quality of life available to the future generations will not be inferior to the quality of life of the present generation” (Renn in Wilderer, Schroeder and Kopp, 2005: p. 33). Both of the definitions presented earlier stress the utilization of resources of human societies for the long-term, but Renn, Goble and Kastenholz go further in the definition. They suggest that sustainable development is a matter of ensuring continuity in the supply of both natural and societal resources. Sustainability implies an integration of economic efficiency, essential resource preservation and the continuation of social and cultural identity (*ibid.*, 2005: p. 34).

The Earth Summits in 1992 and 2002 brought sustainable development firmly into the public arena and established it as a widely accepted goal for policy makers. In the beginning of 21<sup>st</sup> century, the concept of sustainable development influences governance, business and economic activity at different levels, and affects individual and society lifestyle choices. At a policy level, a greater attention has been paid to integrating the four conventionally separate domains of cultural, economic, environmental and social policy.

Public participation in decision making has also become an important aspect of sustainable development. Von Hauff and Kundu (2005: p. 168) conclude in their paper that local culture could have a greater impact in promoting sustainable development than the current programs being launched by the governments or the process driven by the policies driven by globalization.

In a climate change summit report, Sulyandziga and Vlassova (2001: p. 200-207) argue that the best way to increase the adaptability and decrease the sensitivity of the indigenous peoples of the Russian North to changes, is to address the issues with the means of sustainable development through traditional lifestyle. Sulyandziga and Vlassova indicate sustainable development of traditional lifestyle in five different spheres of human activity: spiritual-cultural sphere (values); mental sphere (decision making, legal and management); social sphere; economic and financial sphere; nature protection; and nature reproduction sphere.

Sustainable Development Strategy 2004-2006 for Northern Canada (Indian and Northern Affairs Canada, 2004) stated that the main objective of Indian and Northern Affairs Canada (INAC) is to assist First Nations, Inuit and northern communities in their journey toward achieving social, economic, environmental, cultural and political sustainability. Consultations were carried out with a variety of communities to better address specific aspects of community sustainability. Some examples of how the strategy would confront issues brought up in community consultation were “consultation fatigue” would be addressed by making consultation and joint decision making work by federal departments collaborating more often and in more formalized ways; regional energy management strategies for four INAC regions would be developed; and mechanisms for integrating the perspectives of aboriginal women into economic development policies and programs would be increased. The strategy also identified that the sustainability of any community relies on its ability to envision its long-term future, chart its own course and then have the capacity to manage and direct resources.

A workshop on sustainable development for Natural Resources Canada and Industry Canada which consulted northern stakeholders (Anielski, 2004) identified how difficult it is to define a sustainable community even in northern Canada because the communities vary in ethnicity, size, traditions and values. This makes it difficult to generalize what is a sustainable community, thus communities should define a sustainable community or sustainability of a community according to the values of each community.



The Inuvialuit Final Agreement (IFA) (DIAND, 1984) was based on sustainable development and therefore sets the baseline for sustainable development in the ISR. The basic goals of the IFA are to preserve Inuvialuit cultural identity and values within a changing northern society, enable Inuvialuit to be equal and meaningful participants in the northern and national economy and society, and protect and preserve the Arctic wildlife, environment and biological productivity.

In this study, sustainable development is approached solely from the view point of Inuvialuit living in Inuvik, Tuktoyaktuk and Holman. The study tries to answer how the Inuvialuit in those three communities believe that the MGP would affect their quality of life. Do the people think they will benefit from the project? What kind of socio-economic and cultural impacts could the project have? How worried are the people for the possible environmental impacts that the project might have? Has the public consulting and information availability been sufficient related to the project? And most importantly, what do the Inuvialuit in Inuvik, Tuktoyaktuk and Holman think should and could be done to increase the sustainability of the proposed MGP from the view point of the Inuvialuit living in the ISR?

## **2.1. Overview of scientific studies on sustainable development related to the Mackenzie Gas Project and the Inuvialuit**

### **2.1.1. Berger Inquiry**

In the 1970s, similar plans as to the MGP were made to carry gas from the three anchor fields through a pipeline to southern markets. There was a plan to build a pipeline that had two different corridors routes under consideration (map 3.); Northern Yukon and Mackenzie Valley (for more details see chapter 4.1. History of the Mackenzie Gas Project).

An inquiry was done to determine the possible impacts that a pipeline and an energy corridor would have on the North's people, economy and environment. The principle recommendation of the Report of the Mackenzie Valley Pipeline Inquiry (Berger, 1977a, b) was that no pipeline should be built across the Northern Yukon because of environmental reasons, and a Mackenzie Valley pipeline should be postponed for ten years so that the

native claims would have sufficient time to be settled and new programs and institutions would be established.

Berger recommended that because of environmental reasons – adverse effects on the Porcupine caribou herd, large populations of migratory waterfowl, and sea birds – no pipeline was to be built and no energy corridor be established across the Northern Yukon. In addition, Berger recommended that no energy corridor be built in the Mackenzie Delta region. The Report of the Mackenzie Valley Pipeline Inquiry concluded that it is feasible from an environmental point of view to build a pipeline and to establish an energy corridor along the Mackenzie Valley, running south from the Mackenzie Delta to the Alberta border. Berger suggested that a number of sanctuaries and protected areas should be created throughout the Yukon and Northwest Territories to protect threatened species. (Berger, 1977a: p. xii-xvii)

The Report of the Mackenzie Valley Pipeline Inquiry (Berger, 1977a, b) found that there are critical gaps in the information available about the northern environment, environmental impacts, and engineering design; construction on permafrost terrain and under arctic conditions. Berger believed the pipeline project would not have only a positive effect on the northern economy. Large-scale projects based on non-renewable resources rarely provide long-term employment, and those locals that would find work during construction would fill low and un-skilled positions. The report added that pipeline development would erode and undermine the local economies based on hunting, fishing and trapping, and a pipeline could actually increase economic hardship in the area. The report stated that the alarming rise in incidences of alcoholism, crime, violence and welfare dependence in the North in the 1960s and 1970s was closely bound up with the rapid expansion of the industrial system and with its intrusion into every part of native people's lives. According to Berger if the pipeline would have been built in the 1970s the social impacts would have been devastating. Finally, Berger recommended that no pipeline should be built before the native land claims would be settled, and the new institutions and new programs that the settlements entail are in place. (ibid., 1977a: p. xvii-xxv)

Berger also reminded that the non-renewable resources need not necessarily be the sole basis of the northern economy in the future. And that the development of renewable resources, including strengthening the native economy, would enable the native people to enter the industrial system without becoming completely dependent on it.

### **2.1.2. Inuvialuit views on oil and gas development in 2000**

Hoyt (2001) interviewed Inuvialuit from the communities of Inuvik and Tuktoyaktuk for their attitudes toward development and subsistence land use in the Husky Lakes area, ISR, during 2000-2001. Though Hoyt's study concentrated on the Husky Lake area and did not relate directly to the MGP, it does represent the general prevailing atmosphere that the Inuvialuit had toward the oil and gas industry in year 2000. Hoyt concludes that the majority of interviewees felt that there should be oil and gas development in the Western Arctic, but not at Husky Lakes. The Inuvialuit that were in favor of development believed it would bring more businesses and employment opportunities for local people. Concerns related to the development included negative effects on animals and concerns that local people should benefit more from the development e.g. the needs for better schools, nursing stations and transportation links.

The interviewees identified that the positive impacts and benefits of the oil and gas industry would be job creation; increase of money in the community; royalties to Inuvialuit governing bodies (IRC); development of infrastructure; training of local people; and increased self-sufficiency. The primary concerns were that industrial development would scare or disturb wildlife and impact hunting. Interviewees felt that the industry is unpredictable – people were afraid that the oil and gas companies would leave suddenly and cause local economies to collapse. The social problems related to oil and gas development that the interviewees identified included increased alcoholism and drug use; money mismanagement problems; neglect of children due to both parents working; and loss of traditional lifestyle as adults are engaged in wage economy. (Hoyt, 2001: p. 72-76)

### **2.1.3. Environmental impact assessment in the Mackenzie Gas Project**

Environmental impact assessment (EIA), social impact assessment (SIA) and socio-economic impact assessment (SEIA) – impact assessments (IA), are used to identify and evaluate the likely consequences of a proposed project. As Sánchez and Hackling explain, they have the potential to reduce negative environmental and social impacts and ensure that opportunities are not overlooked (Barrow, 2005). They can also be used to enhance sustainable development.

The results of the EIA and the SEIA conducted for the Mackenzie Gas Project (MGP) were submitted as the Environmental Impact Statement (EIS) for the project (Mackenzie Gas Project, 2004a) in October 2004. The EIS submission was prepared on behalf of the anchor field operators (the producers group; Imperial Oil, ConocoPhillips, Shell Canada and Exxon Mobile), the owners of the gathering system (the producers group) and owners of the gas pipeline (the proponents; the producers group and the Aboriginal Pipeline Group). The EIS presented an overview of the project, a description of biophysical and socio-economic baseline conditions, an assessment of potential impacts, a description of mitigation measures to reduce adverse biophysical and socio-economic impacts, and a summary of environmental management plans designed to reduce or manage adverse biophysical project affects, while enhancing beneficial effects to the communities of the Northwest Territories.

The EIS assessed that the environmental impacts throughout the process were predicted to have no significant effects on the environment. The EIS declared also that the project would not contribute to significant cumulative effects or significant overall cumulative effects. (Mackenzie Gas Project, 2004b: p. 22-29)

The Biophysical Impact Assessment (Biophysical IA) of the EIS states that there would be low and moderate long term adverse local impacts on air quality due to the three gas fields and the Inuvik production facility, but that those impacts would not be significant. (Mackenzie Gas Project, 2004g: p. 2-83 – 2-87) The green house gas emissions' impacts from the project components would have moderate long term adverse national impacts, but

those were also estimated not to be significant. (Mackenzie Gas Project, 2004g: p. 2-104 – 2-107) The noise effects of the production area, the gatherings systems or the corridor system would have low or moderate adverse effects, but were not estimated to have significant impacts. (ibid., 2004g: p. 3-65)

All effects on groundwater of project-related activities were expected to be of local extent. Most effects would be initiated by construction activities and would result in changes that would persist throughout, or occur during, the remainder of the project. All residual effects were expected to cause small adverse change in groundwater, but because all effects were estimated as having a low magnitude the effects were determined to be not significant. (Mackenzie Gas Project., 2004h: p. 4-2 – 4-3) The effects on hydrology were estimated not to have significant impacts, though at Niglintgak and Taglu land subsistence could have low to moderate effects on water levels and moderate to high effects could occur at a few pipeline watercourse crossings, moderate to high effects of sediment concentration could occur in short term along the gathering pipelines and pipeline corridor during watercourse construction, low to moderate effects on local sediment concentrations could occur for short duration during potential dredging, and land subsistence at Niglintgak was expected to have low effects and at Taglu moderate effects on the morphology of the Delta channel network near these two anchor fields. (Mackenzie Gas Project., 2004h: p. 5-2 – 5-3, 5-98, 5-159 – 5-161) The individual and combined effects on water quality were also estimated not to be significant. (ibid., 2004h: p. 6-3) The project was not expected to have significant effects on landforms, soil quality or vegetation at Niglintgak, Taglu, Parsons Lake or along the gathering pipelines and at associated facilities. (ibid., 2004i: p. 8-73 – 8-74, 8-142 – 8-143, 9-114 – 9-117, 9-169 – 9-171)

No significant effects on fish habitat, fish health or fish abundance and distribution were expected. (Mackenzie Gas Project., 2004b: p. 26) The Biophysical Impact Assessment for effects on wildlife in the ISR states that in the near shore areas barge activity could affect beluga whales and other marine mammals, marine mammal habitat availability could be affected from shallow dredging at Kugmallit Bay and Kittigazuit Bay, and potential dredging, barge transport and facility transport could have minor adverse effects on marine mammal movements. Habitat availability for barren ground caribou could change, noise

during construction (particularly at Parsons Lake and surrounding wintering areas) could disturb caribou, barriers on land could cause changes in caribou migration routes, and increase to access to certain areas could lead to more hunting and predatory. Grizzly bears would most likely encounter changes in habitat availability during construction, denning areas and seasonal food sources might be lost, and increased access to bears could lead to increased hunting of bears and more human and bear interaction. Greater white-fronted geese would most likely be affected on the outer Mackenzie Delta, disturbance and direct habitat loss for snow geese, tundra swan and other bird species were also expected (Mackenzie Gas Project, 2004j: p. 10-356 – 10-360)

The EIS concludes about climate change that it would be unlikely that the effects of climate change over the life of the project would change baseline conditions to such an extent that the assessment of the potential effects of the project would change. (ibid., 2004k: p. 11-1)

The SEIA part of the EIA predicted that about 114,000 direct and spinoff jobs would be generated in Canada because of the project construction or about 28,400 jobs annually. More than half of those jobs would be expected in Alberta. The estimation for operation and ongoing operations would be about 500 jobs in the NWT (along the pipeline route) during the years 2009-2030. The project's economic effects were expected to be positive and high magnitude in most regions in the NWT during construction, but during operation the economic effects were estimated to be low in magnitude in all other regions, except the Gwich'in Settlement Area (GSA). This would also be the case with procurement, employment and regional economic effects (Mackenzie Gas Project, 2004b: p. 30) Total employment in the ISR, including direct as well as spin-off indirect and induced employment, would range from 56 to 236 jobs annually, and average 127 jobs from 2009 to 2030 (ibid., 2004d: p. 3-46). The Government revenues were expected to be significant only for the Federal Government and not for the Government of Northwest Territories. (ibid., 2004b: p. 31)

The Socio-economic baseline of the EIA (Mackenzie Gas Project, 2004e) identifies that the Inuvialuit communities have higher suicide rates, cases of sexual transmitted infections, births to teenagers, spousal assault rates, and children taken into care rates than other

communities in the NWT. (Mackenzie Gas Project, 2004e: p.4-5 – 4-12, 4-22 -27) It also identifies that there is a strong correlation between substance abuse and other social problems which is seen for example in Aklavik, that drug use has increased considerably in Sachs Harbour, Holman and Paulatuk, and that domestic violence in Holman has increased because of work related issues, increased incomes and alcohol consumption. The hospitalization for alcohol-related illnesses is higher in Inuvik compared to rest of the NWT or ISR communities (ibid., 2004e: p. 4-9 – 4-10, 4-25)

The SEIA identifies that the rates of spousal violence, violence in the home and children taken into care are the most potent available indicators of impaired wellness and that the adverse effects of wellness were likely to be more severe in communities (for example the communities of the ISR), where those rates were already high. (Mackenzie Gas Project, 2004f: p. 5-14) But still, the EIA expects there to be hardly any significant socio-economic effects due to the project. In regards to the ISR the EIA states that the effects of population movement (people moving to Inuvik) could be both adverse and positive, and of high magnitude. But, the EIA continues to assess that “they will be short term, and therefore, not significant” (ibid., 2004b: p. 31). The project effects on housing in Tuktoyaktuk and Aklavik were also expected to be adverse, but again the SEIA estimates that the duration would be short term and therefore the impacts would not be significant. (ibid., 2004d: p.4-38) The well-being conditions and delivery of social services were estimated to have adverse high magnitude impacts in Inuvik for a short term and therefore were not considered as significant. (ibid., 2004f: p. 5-27 – 5-28) Also, the EIA expects the effects on individual, family and community wellness and net residual project effects on health conditions during construction to be adverse, but not significant. Transportation effects, energy and utilities adverse affects, and effects on recreation resources and governance were all estimated not to be significant. The project was not expected to induce health risks for humans, animals or plants. The education attainment and services were not expected to have significant changes. Non-traditional land use and resource use, or protected areas were not expected to have adverse effects. Only the effects on public safety during operation were expected to be neutral or adverse, low magnitude and long-term, also moderate or low magnitude adverse effects on traditional harvesting, traditional language and culture retention were expected. (Mackenzie Gas Project., 2004b: p. 31-37) To

conclude the SEIA for the MGP states that there would be only a few moderate or high local socio-economic impacts due to the project.

The Joint Review Panel (JRP) for the Mackenzie Gas Project may request information from any party at any time during the proceeding by way of a written Information Request (Joint Review Panel, 2004: p. 5). JRP, the National Energy Board Panel and interveners submitted the first set of Information Requests on the EIS of the MGP to the proponents in January 2005 and the second set in May 2005 (for more information see chapter 4.2 The Mackenzie Gas Project in the Beginning of the 21<sup>st</sup> Century). The JRP found that there were areas in the EIS where basic information was missing or inadequate. The JRP asked for sufficient descriptions e.g. about: baseline conditions, activities proposed by the proponent that will affect those baseline conditions, the impacts of those activities on the baseline conditions, the methodology used to predict those impacts and to assess their significance and the measures to mitigate the negative ones and to enhance the positive ones. (Hornal, 2005) Various interveners (e.g. Environment Canada, Government of the Northwest Territories, Health Canada, Indian and Northern Affairs Canada, Joint Secretariat – Inuvialuit Renewable Resource Committees, and Status of Women Council of the NWT) have also asked for additional information (for detailed information see Joint Review Panel, 2005)

#### **2.1.4. Economic evaluation**

Vodden (2001: p. 63) estimated that since 1999 the ISR has benefited from increased oil and gas exploration. The ISR was better able to retain the benefit of economic growth in 2001 compared to the 1984 – time before the land claim settlement. This was part due to investments by the Inuvialuit Development Corporation (IDC) that had brought substantial returns during the high activity years. However, Vodden feared that the low rate of education attainment combined with diminishing requirements for less-skilled labor within the mix of future labor demand suggested that the economic outlook for the ISR was not bright. Vodden stated that major changes would be needed to improve the returns to the Inuvialuit when “high activity years” turn to “low activity years”.



According to Vodden, the income rate in the ISR was low in comparison to most areas in the North, social assistance rates and the amount of income for social assistance were high and getting worse, and unemployment was high. The evaluation report assessed that perhaps the single most disturbing indicator related to the state of the ISR was the high school graduation rate that was extremely low and getting worse relative to other areas in the North. Vodden identified structural barriers related to employment that should be overcome so that economic measures could be achieved. The barriers included low levels of education; lack of technological skills; and high prices for houses. These barriers impacted the Inuvialuit in employment in the public and in the private sector economy. (Vodden, 2001: p. 65-67)

Interview statements by the Inuvialuit identified that the Inuvialuit were better off according to community wellness indicator (combining education, home and community environment, opportunities, longevity and health etc.) in the beginning of the 21<sup>st</sup> century than in 1984. But certain things like family violence and murders had gone up more than by population growth. The interviewees also recognized that development in the communities of the ISR had been uneven. Sachs Harbour was greatly subsidized and Aklavik, Tuktoyaktuk and Paulatuk were shrinking. More people were moving to Inuvik because there was better chance of upgrading with Aurora College and oil and gas activity. Many of those, who had achieved higher education levels and job qualifications, were said to leave to work and live outside of the ISR. (Vodden, 2001: p. 59-64)

### **3. THE INUVIALUIT – PHYSICAL, CULTURAL AND SOCIO-ECONOMIC LANDSCAPE**

#### **3.1 Inuvialuit Settlement Region physical landscape**

Inuvialuit Settlement Region (map 1.), Western Arctic, Canada, covers approximately 1,000,000 km<sup>2</sup> from which 236,600 km<sup>2</sup> is land (Green and Binder, 1995: p. 343; Alunik, Kolausok and Morrison, 2003: p. 182). The region encompasses five ecozones: Taiga Plains Ecozone; Southern Arctic Ecozone; Northern Arctic Ecozone; Arctic Archipelago Ecozone; and Arctic Basin Ecozone. (Western Arctic Handbook Committee, 2002: p. 247-251). The great Delta of the Mackenzie River, Canada's longest river centers the Inuvialuit homeland.

The Taiga Plains Ecozone and the Southern Arctic Ecozone are flat, gently rolling landscapes dominated by water; the Mackenzie River basin, small lakes, wetlands and rivers. Seven months of the year the land is covered by snow and ice. The average temperature in January is -28°C and the average July temperature is 11°C. The landscape of the polar desert – the Northern Arctic Ecozone is harsh tundra with little or no vegetation. The winter temperatures average -33°C and summer temperature is 8°C. (Western Arctic Handbook Committee, 2002: p. 249-250).

A large number of plant species occur in the mainland Western Arctic portion of the ISR. The flora of the area includes approximately 523 species of vascular plants, at least 100 mosses, 121 lichen, 6 species of liverwort and 11 species of fern. (ICCP, 2000: p. 133) Typical vegetation in Taiga Plains Ecozone and the Southern Arctic Ecozone consists of stunted black spruce, dwarf birch, Labrador tea, blueberry and mosses.

A total of 36 species of mammals occur in the Western Arctic (ICCP, 2000: p. 100). These include bearded seal, beaver, beluga whale, bowhead whale, black bear, grizzly bear, polar bear, caribou, muskrat, moose, muskoxen, snowshoe hare, red fox, arctic fox, lynx, wolf, mink and red squirrel. At least 125 species of birds may visit and nest in the mainland Western Arctic portions of the ISR (ibid., 2000: p. 113). Some may only rarely occur and do not routinely breed in the area. Many of these species migrate to wintering areas outside

of the ISR. The summer migration to the Arctic Archipelago Ecozone includes swan, geese, brants, ducks, loons, shorebirds, gulls and seabirds. Raven and willow ptarmigan are year-round inhabitants of the region.

Shrimp are in the beginning of the food chain in the Arctic Archipelago and Arctic Basin Ecozones. Many species of fish occur within the freshwater and marine environments of the mainland Western Arctic. Most lakes and rivers support fish populations. It is recognized that these species may be important components of the food chain on which other species (e.g. Arctic char, seals, polar bear) depend on. (ICCP, 2000: p. 150)

### **3.2. The Inuvialuit – cultural and socio-economic landscape**

The Inuvialuit are Inuit, biologically, culturally and linguistically related to other Inuit that live across the North American continent from Bering Strait to east Greenland. For a thousand years the Inuvialuit – meaning “the real people” have occupied the Western Arctic of Canada. (see for example Northwest Territories Education, 1991: p. 1; Western Arctic Handbook Committee, 2002: p. 223; Alunik, Kolausok and Morrison, 2003: p. 1)

Throughout the history the Inuvialuit have been hunters and fishermen, depending for their livelihood on the rich fish and animal resources of the land. For hundreds of years the Inuvialuit traded with their neighbors – the Inupiat, Inuit and Gwich'in. About 200 hundred years ago, the first meeting between the Inuvialuit and the “Tan'ngit” (foreigners) occurred. (Western Arctic Handbook Committee, 2002: p. 224; Alunik, Kolausok and Morrison, 2003: p. 1)

#### **3.2.1. Origins of the Inuvialuit**

All Inuit share a recent common origin in a culture which archaeologists call "Thule" which arose in northwestern Alaska about 1100 years ago. Thule lived following the migratory patterns of land and sea mammals. The culture had skills and technology to harvest large whales, seals, caribou, musk ox, fish and birds, depending on the season and location. Before the Thule occupied the Arctic Canada, most of it and Greenland was the home of an eastern "Palaeoeskimo" people known to archaeologists as Dorset, but it is not known for

sure if the Inuvialuit are descendants to Dorset. (McGhee, 1978: p. 83-85, 103; Alunik, Kolausok and Morrison, 2003: p. 10, Inuit Kanatami, 2003: p. 4) The Thule culture declined due to the “Little Ice Age” (~1650 -1850 AD). Following the decline of the Thule culture the Inuit emerged approximately 1700 AD. Segments of this new Inuit culture, the Mackenzie Delta Inuit and the Copper Inuit developed in the area now called the Inuvialuit Settlement Region. (McGhee, 1974: p. xi, 5-6; McGhee, 1978: p. 103-107; Crowe, 1991: p. 56-58; Western Arctic Handbook Committee, 2002: p. 224; Parks Canada, 2004: p. 3)

At the time of European contact in the early 19th century, the Inuvialuit were divided into half a dozen distinct territorial groups or nations. Whalers traded trinkets, tools and some food supplies with the Inuit in exchange for guidance to the most promising whaling areas and help with butchering the mammals afterwards. During the time of the whaling industry in the late 1800s and 1900s, epidemic diseases swept through the Mackenzie Delta Inuit. The western whaling lasted 50 years in the region and was able to change the life of the Mackenzie Delta Inuit beyond recall – 30 million dollars worth of whale products left the Delta region, 130 Mackenzie Delta Inuit were left out of a population that had once numbered 2500, and much of the animals of the sea and land had been driven away or killed of. At the same time the Alaskan Inuit, majority of them Inupiat – the Nunatarmiut (they came to be called Uummarmiuit) emigrated to the Mackenzie Delta. With the fur trade the ISR experienced another migration wave from Alaska. Eventually the newcomers and the Inuvialuit merged into single people, the modern Inuvialuit of the Western Arctic, numbering just four to five hundred people. (McGhee, 1974: p. xi, 5-6; Crowe, 1991: p. 109; Alunik, Kolausok and Morrison, 2003: p. 91, 110; Inuit Kanatami, 2003: p. 10; Parks Canada, 2004: p. 92) Also a number of whalers stayed and started families in the ISR. By the first decade of the 20<sup>th</sup> century, a new Inuvialuit people was born, with local roots and genetic ties to the four corners of the globe. Many modern Inuvialuit have ancestors from Arctic Alaska and the Mackenzie region, but also from Siberia, Polynesia, the Cape Verde Islands, the United States and Europe. (Alunik, Kolausok and Morrison, 2003: p. 110)

### 3.2.2. Move to the communities

Old territorial divisions disappeared, ancient villages were abandoned when people moved into communities and Christianity was adopted. Christian doctrine presented a new world view to Inuvialuit and a lot of these views clashed with traditional beliefs and values. The old subsistence economy was disappearing, and replaced by cash economy based on fur trapping, sealing and trading. (Alunik, Kolausok and Morrison, 2003: p. 110; Inuit Kanatami, 2003: p. 12)

In 1918 H. Liebes and Company established a post in Aklavik (Aklarvik, “place where one gets grizzly bear”), soon other posts (Hudson’s Bay Company and Northern Trades Ltd.) re-located from nearby and the settlement of Aklavik was established. Aklavik was a multiethnic town, home to Inuvialuit, non-natives, Metis and a few Gwich’in. Until the 1950s, all depended on fur trade and particularly muskrat trapping in the Mackenzie Delta. Tuktoyaktuk (Tuktuuyaqtuuq, “place where there is something that looks like a caribou”) was a traditional Inuvialuit settlement occupied in 19<sup>th</sup> century or earlier, but unlike Aklavik, Tuktoyaktuk experienced a slow growth. In the late 1950s, Tuktoyaktuk was home to about 340 people – most of them Inuvialuit. Inuvialuit families started settling close to the Paulatuk (Paulatuq, “place of soot”) area in the hope of good hunting and trapping grounds in the beginning of 1920s. In about 1935, the modern-day Paulatuk was established. (Alunik, Kolausok and Morrison, 2003: p. 117-128)

Before the 20<sup>th</sup> century Banks Island had been essentially unoccupied. In the 1930s, more and more Inuvialuit from Aklavik and Tuktoyaktuk started spending the winter seasons in Banks Island for the winter’s trapping. Some people stayed at the old base camp of the Canadian Arctic Exhibition at Sachs Harbour (Ikahuk, “place where one crosses over”) By 1936 forty percent of all Inuvialuit trappers in the Western Arctic had trapped on the island for at least one season. Some of the Bankslanders started trading into Walker Bay in Victoria Island and over-wintering in this area, trapping foxes. The community of Holman (Ulusaktuq, “place where one finds material to make ulus”) eventually grew from these trappers. (ibid., 2003: p. 121-127)

In the 1940s the people of the Western Arctic were still highly dependent on the fur trade, but when the fur prices collapsed in 1948-49, Inuvialuit were in economic hardship. The family allowances established by the Government a few years earlier helped people survive for a short term mixture of trapping and social assistance. DEW (distant early warning) Line sites during the mid 1950s brought a source of wage employment, as did the construction of Inuvik (Inuvik, “place of man”) a few years later. The trapping industry never really recovered in most areas of the Western Arctic. But still, as late as the early 1950s, most Inuvialuit were living on the land. Main economic activities were hunting, fishing and trapping. The Government policy that all Native children must attend school enforced the Inuvialuit to move to communities and adopt to wage economy. (Alunik, Kolausok and Morrison, 2003: p. 128-165)

During the mid 1950s Aklavik, which had become the centre of the Western Arctic, was subject to flooding, erosion, and space was limited. The Government of Canada felt there was a need for an administrative centre, thus Inuvik was founded in 1958. During the early days the community grew rapidly as Inuvialuit, Dene and Metis from the Delta / Coast region and people from southern Canada moved to Inuvik, creating a three culture community.

### **3.3. Inuvialuit today**

In recent decades the Inuvialuit Settlement Region has seen rapid economic and social change, with the collapse of fur markets (1945-49), the rise and fall of oil and gas development (1970-1977, 1980-1986) and the extension of the Dempster Highway to Inuvik (1979).

Green and Binder (1995: p. 343-344) describe that in the early years of oil and gas exploration (1968 to 1984) the Federal Government issued all the permits and licenses required by the companies to operate in the ISR. Government officials consulted with the local people through letters to the elected community officials, but Inuvialuit felt that this consultation was not adequate. The Inuvialuit desired more control over development activities within their traditional hunting territory because they believed these activities threatened the wildlife upon which they depended. It took The Report of the Mackenzie

Valley Pipeline Inquiry (Berger, 1977a, b) to make the idea of regional land use planning popular and to include it into the political agenda (Fenge, 1987: p. 26-27). Following the Berger Inquiry, virtually all northern native peoples' associations started advocating regional land use planning through land claims negotiations as one means of protecting their livelihood based on renewable resource sector.

In 1984 the Inuvialuit and the Canadian Government signed a comprehensive aboriginal land claim with the Inuvialuit, the Inuvialuit Final Agreement (DIAND, 1984). The agreement provided \$170 million in cash, title to 91,000 sq. km of lands of which 13,000 sq km of 7(1)(a) Lands include surface and subsurface rights to all minerals and 78,000 sq km of 7(1)(b) Lands include surface rights and rights to all granular resources (The ARA Consulting Group Inc., 1995; Burnett, 2004). The Inuvialuit Final Agreement was designed to achieve the protection of Arctic wildlife, environment and biological productivity; the preservation of Inuvialuit cultural identity and values; and the equal and meaningful involvement of Inuvialuit in the northern and national economy. The Inuvialuit are involved in on-going evolution of local Self-Government negotiations.

In the beginning of the 21<sup>st</sup> century there were 5200 people living in the ISR, 2975 (57%) of the residents of the ISR were Inuvialuit. (NWT Bureau of Statistics, 2001b) The ISR includes 6 communities Holman, Paulatuk, Sachs Harbour and Tuktoyaktuk that are inhabited primarily by the Inuvialuit; Aklavik, inhabited by the Inuvialuit and the Gwich'in; and Inuvik, the government center and largest community that is inhabited by Inuvialuit, Gwich'in, and non-natives.

## **4. MACKENZIE GAS PROJECT**

### **4.1. History of the Mackenzie Gas Project**

In the 1960's, large oil fields were found in Prudhoe Bay, Alaska. After these discoveries most of the onshore areas within the Inuvialuit Settlement Region (map 1.) and the Southern Beaufort Sea were subject to intensive oil and gas exploration (Green and Binder, 1995: p. 343). In early 1970s, three gas fields; Niglintgak, Taglu and Parsons Lake (map 2.), were discovered in the now called Inuvialuit Settlement Region. Plans were made to carry the gas from the fields through a pipeline to southern markets. The pipeline had two different corridors routes under consideration: Canadian Arctic Gas Pipeline, Ltd. proposed a route from Alaska's Prudhoe Bay across Northern Yukon to the Mackenzie Delta and Foothills Pipeline consortium proposed a corridor from the Mackenzie Delta running along the river valley leading to Alberta (map 3.). (Berger, 1977a: p. ix) Canadian Arctic was a consortium of large oil companies including Shell, Exxon, and TransCanada Pipelines.

An inquiry (Berger, 1977a, b) was done on the corridor concepts' impacts and cumulative impacts on the ecology and people living in the area. Public hearings were held in towns throughout both of the corridor routes. In the 1970s, Justice Berger emphasized if a gas pipeline was to be built an oil pipeline would probably follow, and oil and gas exploration in the Delta and in the Beaufort Sea would expand. (see for example Mackenzie Valley Pipeline Inquiry, 1976e: p. 3893; *ibid.*, 1976f: p. 4019; *ibid.*, 1976g: p. 4157; *ibid.*, 1976i: p. 4420-4421; Berger, 1977a: p. viii, xii, 9) The Report of the Mackenzie Valley Pipeline Inquiry (Berger, 1977a, b) recommended a 10-year moratorium on the building of the pipeline. The main socio-economic concerns were limited economic benefits, devastating social impacts and unsettled land claims in the Mackenzie Valley. Also concern for the environment and possible negative impacts that the pipeline might have on the environment were considered.

### **4.2. The Mackenzie Gas Project in the beginning of the 21<sup>st</sup> century**

The Mackenzie Gas Project in the beginning of the 21<sup>st</sup> century is a joint proposal by the proponents, Imperial Oil Resources Ventures Limited, Shell Canada Limited,



ConocoPhillips Canada (North) Limited, ExxonMobil, and the Aboriginal Pipeline Group. The project would be anchored by developing about 172 Gm<sup>3</sup> of sweet natural gas from three anchor fields, Niglintgak, Parsons Lake and Taglu, in the Inuvialuit Settlement Region. (Map 2.) The natural gas would be delivered to the southern markets through a pipeline system (map 4.) built along the Mackenzie Valley to Alberta. The pipeline would go through the Inuvialuit Settlement Region, Gwich'in Settlement Area, Sahtu Settlement Area, Deh Cho Region and part of the Dene Tha' First Nation to connect with the existing delivery systems in northwestern Alberta. The pipeline would be about 1,220 kilometres in length. Also the Mackenzie Explorer Group (Anadarko Canada Corporation, Apache Canada Ltd., BP Canada Energy Company, Burlington Resources Canada Ltd., Chevron Canada Resources, Devon Canada Corporation, EnCana Corporation, Nytis Exploration Company Inc., and Petro-Canada Oil and Gas) has a significant interest in the Mackenzie Gas Project. The nine companies that form the Mackenzie Explorer group are interested in oil and gas exploration and development along the proposed pipeline route and in the Beaufort Sea, and in transporting their products via the proposed pipeline system to southern markets.

The project proposal consists of five major parts (see map 4.): three natural gas field production facilities; a gathering pipeline system; a gas processing facility near Inuvik; a natural gas liquids pipeline from the Inuvik area facility to Norman Wells; and a natural gas pipeline (the Mackenzie Valley Pipeline) from Inuvik area to northwestern Alberta. (Mackenzie Gas Project, 2003a: p. 1-7, 4-1) The gas fields and the gathering pipeline system would be located in the ISR. The pipeline from the Inuvik area to Norman Wells would be about 475 km long and the pipeline from Norman Wells to northwestern Alberta 745 km long (ibid., 2004c: p. 2-5). Preconstruction and construction activities are expected to begin in 2006 and end in 2009. Operations are expected to begin in 2009. (ibid., 2004b: p. 3-6).

The proponents filed a Preliminary Information Package (PIP) in 2003 (Mackenzie Gas Project, 2003a, b). This signalled their intent to go ahead with the project. The PIP outlined the proposed development plans, including environmental data, a proposed route, pipeline size and information about communication with communities. This document triggered an

environmental assessment process. Due to the process the Environmental Impact Statement (EIS) for the project (Mackenzie Gas Project, 2004a) was submitted in October 2004.

In April 2005 the regulatory boards and agencies were using the information presented in the EIS to help make their decisions concerning development. As stated in the Environmental Impact Statement Terms of Reference for the Mackenzie Gas Project, the project is subject to three environmental impact assessment (EIA) jurisdictions: the Canadian Environmental Assessment Act, the Mackenzie Valley Resource Management Act, and the Western Arctic (Inuvialuit) Claims Settlement Act – Inuvialuit Final Agreement (DIAND, 1984).

The Agreement for an Environmental Impact Review of the Mackenzie Gas Project (MVEIRB, IGC and Minister of the Environment, 2004) describes that a Joint Review Panel (JRP) would conduct the EIA for the MGP. JRP was contemplated for the EIA of the Mackenzie Gas Project in August 2004 to meet the needs of all three Acts. Also the Memorandum of Understanding (Minister of Environment and Inuvialuit, 2002) gave the JRP the responsibility to address certain provisions of the IFA. The project is also subject to other regulatory requirements of other authorities with mandatory public hearing requirements, including the National Energy Board (NEB), the Mackenzie Valley Land and Water Board (MVLWB) and the Northwest Territories Water Board (NTWB), and other regulators. (IGC, MVEIRB, Minister of Environment, 2004)

In May 2005, the Information Request (IR) process related to the review of the EIS for the Mackenzie Gas Project was on its way. The IR process is a way for the Joint Review Panel, the National Energy Board Panel and the interveners (intervener status provides an individual or an organization and other interveners the opportunity to participate in the IR process) to ask questions from the proponents in order to obtain more information related to documents that have been filed. Also, the general public has had the opportunity to present their organization's views or their own views by submitting a letter of comment to the Joint Review Panel. Final public hearings would be held by the National Energy Board. If the project is approved, regulators will issue the necessary permits and licenses and may include certain conditions. As well, the National Energy Board will issue a Certificate of

Public Convenience and Necessity that will also outline certain conditions that must be met.

On the contrary to the Berger Inquiry in the 1970s, 30 years later it has been emphasised to the public that the MGP is only interested in building a gas pipeline (not an oil pipeline) and that the MGP would transport Canadian onshore gas. (see for example Mackenzie Gas Project, 2004c: p. 1-8, 1-23) The pipeline has been designed with a summer delivery capacity into Alberta of about  $34\text{Mm}^3/\text{d}$  ( $1.2\text{Bcf}/\text{d}$ ) and it is expandable to about  $49\text{Mm}^3/\text{d}$  ( $1.72\text{Bcf}/\text{d}$ ), by adding compressor stations at the intermediate block valve site. It is estimated that peak winter capacity could be even  $60\text{Mm}^3/\text{d}$  ( $2.1\text{Bcf}/\text{d}$ ). The anchor field owners have contracted in aggregate for capacity of only  $23.5\text{Mm}^3/\text{d}$  ( $0.83\text{Bcf}/\text{d}$ ). This indicates that the remaining one third or half ( $10.5 - 25.5\text{Mm}^3/\text{d}$ ) of the capacity is uncommitted and is available for contracting.

So though the Mackenzie Gas Project and the EIS for the MGP only take into account the five major parts of the project it has already been identified that major delivery requirements also from other fields are required and the Mackenzie Explorer Group is interested in delivering those requirements. Potential volumes have been identified from the Mackenzie Delta, Mackenzie Valley, the Yukon (Mackenzie Gas Project, 2004c: p. 1-13) and the Beaufort Sea (Barnes, 2004). Further more, the Producers of Canadian Petroleum Producers inform in their presentations (e.g. Barnes, 2004) that activity in the north is expected to progress at a pace of a few wells per year, seismic and drilling is expected to continue in the Mackenzie Delta area, and that offshore drilling in the Northwest Territories will be done by Devon Canada, which expects to drill one well per year over next four years. Devon Energy President John Richels emphasized that the MGP should be moved forward because Devon needs assurance that they will get the gas to the market. (Park, 2005) Richels also explained how gas is vital to keep billions of dollars of new oil sands projects alive. According to Richels the oil sands sector will need as much as 1 billion cubic feet per day – almost matching the planned initial volumes of  $34\text{Mm}^3/\text{d}$  ( $1.2\text{Bcf}/\text{d}$ ) from the Mackenzie, to generate the steam needed to melt oil sands deposits, forcing the raw bitumen to the surface. Taking this into account, it does seem clear that also in the 21<sup>st</sup> the intention of expanding exploration in the NWT plays a major part especially

in the feasibility of the project. And who is to say that in the future oil could not just as well be transported in proposed gas pipeline?

## **5. AIMS AND SCOPE OF THE STUDY**

The main aims of this study were: 1) to provide statistical and in-depth current information to the local communities of Inuvik, Tuktoyaktuk and Holman on their peoples' views on the socio-economic and environmental impacts that might occur in the ISR due to the Mackenzie Gas Project; 2) to explore how sustainable development is taken into account in the Mackenzie Gas Project in the early 21<sup>st</sup> century; 3) to compare Inuvialuit adults' opinions about the project to what they are now to what they were 30 years ago.

The geographical scope of the study was the Inuvialuit Settlement Region. Survey participants and interviewees were mostly the residents of Inuvik, Tuktoyaktuk and Holman. Some participants were residents of Aklavik, Paulatuk, Yellowknife, Fort McPherson and Fort Good Hope, one interviewee lived at the time when the study was conducted in Yellowknife. The fieldwork was conducted during March – August 2004 in Inuvik, Tuktoyaktuk and Holman and continued in April 2005 in Inuvik. The socio-economic, socio-cultural and political scope of the study focused on the communities of Holman, Inuvik and Tuktoyaktuk, but considered the context of larger Inuvialuit Settlement Region and Canadian interest.

## **6. METHODS**

### **6.1. General**

The study had features of methodological triangulation – also referred to as linkage study, use of multiple studies, use of multiple methods, combination of methodologies or mixed methods (as described in Denzin, 1970: p. 298-310, 469-475; Denzin, 1974: p. 472; Hakim, 1986: p. 32, 144; Phillips, 1976: p. 236-237; Creswell, 2003: p. 15, 18-21) meaning that various research methods were used. The mixed method used in this study can be called concurrent triangulation strategy. In concurrent triangulation (Creswell, 2003: p. 217), the researcher uses the two different methods in an attempt to confirm, cross-validate, or corroborate findings within a single study. This model generally uses separate quantitative and qualitative methods as a means to off-set the weaknesses inherent within one method with the strengths of the other method. The priority of the qualitative and quantitative methods is ideally equal, but in practical application the priority may be given to either the qualitative or quantitative approach. This strategy usually integrates the results of the two methods during the interpretation phase. In this study, the integration of the data was done during data analysis.

This research was a descriptive study in which qualitative and quantitative methods were linked together. The hope was to gain statistical information and an in-depth understanding of the people's views and concerns. The study examined Inuvialuit views in the communities of Inuvik, Tuktoyaktuk and Holman on the socio-economic and environmental impacts that might occur in the ISR due to the MGP. The study included a survey done with a help of a questionnaire and qualitative semi-directed interviews with open-ended questions. The study also included participation and participant observation – interaction with people, getting to know the communities, sharing discussions, taking part in community events and giving the people a chance to get to know the researcher and the research. The results of the questionnaire survey form the basis of the results. The semi-directed interviews explain, deepen and broaden the results, and the participation and participant observation helped in determining the validity of the results. The results of this study were compared to Inuvialuit views of the project in the 1970s (Mackenzie Valley Pipeline Inquiry, 1976a, b, c, d, e, f, g, h, i).

The survey and the semi-directed interviews were done with non-random selection; handpick sampling, snowball sampling and volunteer sampling (O'Leary, 2004: p. 110; explained in more detail in chapters 6.4.1. Questionnaire survey and 6.4.3. Semi-directed interviews). Because two methods were used in data collection, a survey and semi-directed interviews, in this study the people that participated in the survey are referred to as participants and those that took part in the recorded semi-directed interviews are referred to as interviewees. It has to be noted that in many cases when a questionnaire was filled out with a participant extra notes were made and the situations often turned more into a semi-directed interview, but these cases are also referred as participants (explained more in chapter 6.4.1. Questionnaire survey and 6.4.3. Semi-directed interviews).

## **6.2. Finding the right methods**

In the end of year 2003, this study was planned to be a qualitative case study including about ten semi-directed interviews and aimed at young Inuvialuit adults (aged 20-44). The idea was to involve young adults because it was believed that elders are already being consulted by the MGP and by various other projects. Also the elders are usually compensated for their time and knowledge and it had been decided that the interviewees in this study would not be compensated.

It was hoped that local organizations and individuals suggestions would be able to influence the study as much as possible so when the Inuvialuit Game Council suggested in March 2004 that a survey would be conducted the study method and focus changed from ten in-depth semi-directed interviews to a survey aimed at the broad Inuvialuit public and some semi-directed interviews. It was apparent that the Inuvialuit leaders knew the hopes and concerns that their people had in relation to sustainable development in the MGP, but there was the concern of hearing only the views of the people that do attend meetings and sit on the boards. With the help of a survey, which would be aimed at the broad Inuvialuit public, it was hoped that the Inuvialuit decision makers would get reassurance for their decisions from the opinions of the broad public. So an effort was made to survey people that did not attend public meetings and sit on boards, though those people also took part in the survey.

When the study got more resources it was decided that the qualitative interviews would be made as planned and a survey would also be tried out. A posted questionnaire survey was not seen as an option in the ISR because it was believed that people would not return the questionnaires. So a door to door method – where the interviewers (research assistant Rebecca Pokiak and researcher Raila Salokangas) knocked on people's doors and asked if they were interested to talk to them, was applied.

It was decided that the study focus would be broadened from concentrating only on Inuvialuit adults' views (aged 20-44) to Inuvialuit adults' views above the age 16. Reasons for this were that it felt rude, waist of opinions, and age discriminating if we would not have included all Inuvialuit that we happened to meet, and who wanted to participate in the study. The reason that people under the age 16 were not approached was that permission from the parents would have been needed and always the parent's were not present. It was also realised that a survey might not be a good way to approach elders. In Inuvik, where first surveys were made, this notion was proved right. The elders that were met did not feel comfortable taking part in the survey.

A list of Inuvialuit households would have been needed to conduct a random selection of the participants for the study that way we could have approached the residents of e.g. every 10<sup>th</sup> Inuvialuit household. But, to our knowledge such a list was not available. There was a list of the P.O. Box numbers for the Inuvialuit, but as explained before, it was considered that people would not respond to a mailed questionnaire. To do a random selection we could have used a list with all Inuvialuit residents above the age 16 of a town (taking into account that this list would have been provided to us) and selected to approach e.g. every 20<sup>th</sup> person, but it was believed that "tracking" a certain person to participate in the questionnaire survey would have taken too much time. It was also noticed that participants preferred that no fixed time was set for the survey, but rather that the interviewers would come and see if the person had time to participate. In Inuvik, where the survey was first tried out, 37% of the population are Inuvialuit. So it would have helped to have a list of the Inuvialuit households that way we would not have had to knock on all the non-Inuvialuit doors and the study could have been done as a random selection study, but for reasons explained earlier we ended up doing a non-random selection survey.



The original plan had been that the interviews would have been conducted in Inuvik and Tuktoyaktuk, because it was believed that those communities would be directly affected by the MGP. In June 2004, the study got more funding and since there was still time and the survey had gone well in Inuvik and Tuktoyaktuk it was decided that the survey would be done also in Holman. Aklavik could have been a more obvious choice in the sense that the people of Aklavik are likely to be more affected by the MGP than Holman, Sachs Harbour or Paulatuk. At the time when the survey was conducted in Holman (23-27 June 2004) a lot of people from Aklavik were at whaling camps outside of town, so it was thought that the timing was not ideal to do the survey in Aklavik. It was also considered that if the third community surveyed would be a community that might not be directly affected by the project the results of the study might find some interesting differences between the opinions from the three communities. The reason that Holman was chosen instead of Sachs Harbour or Paulatuk was that the researcher had visited Holman a year before and it was believed that it might be easier for her to conduct the survey there because she was already familiar with the town and some people there.

### **6.3. Preparation and planning for the study**

The four phases to the research were preparation and planning, fieldwork, data analysis and writing, and verification. The preparation phase started in the summer 2003 in Inuvik. During this time some contacts were made and research on documents related to the Mackenzie Gas Project began. In the end of the year 2003, a research plan was made for the study and applications for funding were made. The study became cooperation between the Aurora Research Institute, Inuvik, Canada and Tampere Polytechnic, Tampere, Finland.

March – August 2004 was spent in Inuvik. The six month stay in Inuvik began by writing proposals, applying research permits and funding. Research licence for the study was received in May 2004 and an amendment to expand the study to include the community of Holman in July 2004.

Before the research licence was issued meetings were held with agencies involved in the project, public meetings concerning the MGP were attended and possible interviewee candidates were approached. Also the history and the present situation of the project were

researched, and sustainable development related to the project was reviewed from the view point of the Inuvialuit.

In the beginning of the fieldwork the research method and focus changed (as explained in 6.2. Finding the right methods), so the research plan was also altered. Applications for a research assistant and more funding were filled out.

#### **6.4. Fieldwork**

During the fieldwork season community events were attended. People were told openly about the study and asked for their opinions on the MGP. People's suggestions on the study and who to interview were taken into account as much as possible. Though participant observation was an important part of the study, giving reassurance for the accuracy of the information and giving a deeper understanding of the results gained through the survey and interviews, this study concentrates on representing the results from the survey and interviews.

Several meetings were attended concerning the MGP. These meetings were held by the MGP, Inuvialuit Joint Secretariat and individual gas companies. Attending the meetings was an important way to keep informed on what was going on with the project and different organizations involved in the project. It was also a way to feel the atmosphere, how interested people were in the project, what topics people brought up, what concerns the public had and what kind of a relationships the public had with the different organizations. The public meetings gave also more ideas on what to ask the interviewees and the participants. This study will not report the proceedings of the meetings.

##### **6.4.1. Questionnaire survey**

A sample survey is a systematic collection of data from a large number of people – a part of a population, through the use of a sample in order to make inferences about the whole population. (Manheim, 1977: p. 181; Creswell, 2003: p. 153) A quantitative survey was made using a sample (hereafter referred to as participants) to find out their views on sustainable development related to the project.

In 2004, the general atmosphere in the ISR was that people, including the leaders of the communities, were in favour of the MGP (for more information see chapter 8.2.1. Differences between the compared data). Some people that criticized the project or had concerns related to the project did not want their names revealed that is why it was decided that all the participants would remain anonymous.

The Proceedings from the First and Second Regional Inuvialuit Settlement Region and Gwich'in Settlement Area EIS Technical Workshop (AMEC Earth & Environmental, 2003; *ibid.*, 2004) done for the Mackenzie Gas Project helped to identify some of the concerns that the Inuvialuit had in relation to sustainable development in the MGP. Many of the alternative questions were developed using the topics and alternatives identified during the two workshops. Also the staff from the Aurora Research Institute and the Inuvialuit Joint Secretariat, a member from the Inuvialuit Game Council, Brenda Parlee from the University of Calgary and Raimo Salokangas from the University of Turku helped to prepare the questionnaire.

The questionnaire (app. 1.) was formed so that most of the questions would be fixed, which has the advantage of permitting relatively easy tabulation of the responses from many participants. This made it easier to find out the differences between the three communities, gender and age groups. However, the disadvantage is that the fixed questions do not permit the participant to give his / her own replies, and there is no assurance that the predetermined responses will include the one he / she believes to be correct. (Manheim, 1977: p. 212) This is why the option of "other, specify", (see for example app. 1. – questionnaire; question 18 a), question 19 b) and 20 b)) where the participant was able to write his / her own replies, was added. Also the option "I do not know" was added to the alternatives whenever it was seen appropriate (see for example app. 1. – questionnaire; question 17 a) and question 18 a)), also extra notes were often made to give insight to participants answers.

The questionnaire was designed to find out participants opinions on the proposed Mackenzie Gas Project. Were participants interested in the project? Did the participants

think that the project will go through? Did they want the project to go through? How the participants thought the MGP would affect their life, their children's life, and the life of the Inuvialuit? Was their community ready for the MGP? Would the project have cultural, socio-economic, and environmental impacts? What kind of socio-economic impacts did the participants think that the project might have, and how concerned were the participants about specific environmental impacts? Participants were also asked how familiar they were with the EIA and the SEIA of the MGP, whether they were getting information on them, and how satisfied they were in the amount of public consulting related to the project.

The survey was conducted in two and a half months between June and August 2004. 10 pilot interviews were done with the questionnaire before it was approved. The survey was done using snowball sampling and volunteer sampling. Snowball sampling involves building a sample by referrals and volunteer sampling involves building a sample by asking for volunteers (O'Leary, 2004: p. 110). The interviewers went randomly to people's homes in Inuvik, Tuktoyaktuk and Holman, explained the study and asked whether the people were Inuvialuit and willing to talk to us. If the person was interested in participating in the study, the interviewer would usually explain more about the study (who is it for, who is funding it, who will be getting the information) and what was happening with the MGP at that time. People were also interested why the researcher – a Finnish girl from far away, was conducting the study and what Finland is like. The participants were given a pamphlet about the study which had a short description about the study, who is it for and where can people get a hold of the study (when ready), when is it ready, which organizations have sponsored the study and information on how to reach the interviewees for further information. We also used maps e.g. the Preliminary Information Package map (Mackenzie Gas Project, 2003b) to show the participants where the gas fields are and what was the planned pipeline route.

In most cases the questionnaire was filled out by the participant or by the interviewer according to the responses by the participant. In some cases if the participant only spoke Inuvialuktun (as was in one case in Holman) a relative of the participant would fill out the questionnaire for them. Usually only the participant and the interviewer were present during the survey, but there were situations when the whole family or family, relatives and

friends filled out the survey at the same time. Also there was a possibility for the participant to fill out the questionnaire later when they had more time and return the filled questionnaire to us when appropriate. Filling the questionnaire took anywhere from 30 minutes to two hours.

Though the point of the questionnaire was to get statistical information on the participants views, hopes and concerns related to sustainable development in the MGP, it was noticed that sometimes the seven page questionnaire scared people away. If the participant preferred not to answer the survey, but rather have a discussion about the MGP, then only notes were taken of the conversation. When some participants were more interested talking about e.g. social concerns, extra notes were taken, that way the participants' responses often gave also qualitative insight to the topics. According to the researcher's personal experience, when she was writing down the participants answers, it was often easier for the participant to talk freely (not being restricted by the questionnaire). The participants were able to explain, why they answered the certain way and that way it was possible to get reasoning for the participants' answers. This approach also brought up relevant points that were not asked about in the questionnaire.

#### **6.4.2. Criteria for the participant**

There were two criteria for the participant. The first criterion was that the participant was Inuvialuit beneficiary. Exceptions were made when the participant's other parent was Inuvialuit, but the participant themselves had taken the status of e.g. Gwich'in beneficiary. The other criterion was that the person was above the age 16 so that permission to participate in the study from the parents would not have been needed.

The aim was to involve participants from different working backgrounds; students, people working on a wage, land-based people, unemployed and people working for a family business. There was intent to involve close to as many female as male participants. Also the original plan to involve young adults was kept in mind. As explained before also an effort to include people who did not attend public meetings concerning the project was made.

### **6.4.3. Semi-directed interviews**

Qualitative interviews were chosen so that they would bring rich detail about people's hopes and concerns related to the sustainability of the MGP. The semi-directed interviews allowed the interviewee to lead the discussion and to identify topics of interest or importance. (as explained in Huntington, 1998: p. 237-242; Huntington 2000: p. 1271; Nakashima and Murray, 1988: p.112). The interview began by identifying broad topics of interest and continued without a fixed format.

Some of the interviewees the researcher had become acquainted with already in June-August 2003 when she stayed in Inuvik and worked on a different project. Interviewees were also identified by handpick sampling and snowball sampling method (O'Leary, 2004: p. 110). Handpick sampling involves a selection with a particular purpose in mind. Because this study concentrates on sustainable development in the MGP; possible social, economic, environmental and cultural impacts, it was decided that interviewees would consist of experts in those four fields. Snowball sampling occurred, when people identified who would be good people to interview.

A pilot interview was conducted a few weeks before the actual interviews started. The pilot interview helped to get a feel in which direction the interviews could take. It helped to come up with more questions that the study could find answers to. After the pilot interview the interviewee gave feedback on how the interview had gone and on ways the interview could be improved in the future. The interviewee thought that it was good that the questions were not too detailed so that the interviewee was able to bring more of his / her thought, concerns, hopes and ideas forward during the interview. The pilot interviewee also gave valuable tips in how the interviewer should behave during the interview. The interviewee noted that the interviewer should look the person interviewed in the eyes, which the interviewer thought she had done, but had not. The interviewee also told the interviewer how she had been nervous in the beginning of the interview, something that she was very aware of.

The interviews were tape recorded, also notes were made during the interview. There was no preset limit on the time for discussions. An interview usually took a half an hour to an hour. Most of the interviewees were met a few days before the interview to discuss the MGP and the proceedings of the interview. Some of the interviewees had more experience from an interview situation than the interviewer and felt that they did not need to go through the details of the interview beforehand. The interviewees that were hunters used maps e.g. the Preliminary Information Package map (Mackenzie Gas Project, 2003b) to explain where they usually hunt and how close are the gas fields, processing stations or the pipeline to their hunting grounds. The interviews were conducted during 4 months between May and August 2004.

The interviewees had the option of anonymity. All the interviewees signed a consent form (app. 2.) in which the interviewee either agreed to have their name or organization identified or wished to remain anonymous. But, it was noticed later on when writing the thesis that it would be better if all the interviewees remained anonymous. Reasons for this were that as most of the quotations presented (in the chapter 7. Results) were from participants' comments, and since all the participants were anonymous, the interviewees that had agreed to have their name identified would have been overemphasized with their names. The interviewees that had agreed to have their names identified were approached to see if they agreed with remaining anonymous and all accepted.

## **6.5. Data analysis and writing**

The data analysis started already during the fieldwork. Most recorded interviews were transcribed by the research assistants. The data from the questionnaires was put on a Microsoft Excel sheet and a draft report of some of the questionnaire results were presented at the Inuvik Community Corporation meeting in August 2004. The draft report was also distributed at the Inuvialuit Joint Secretariat.

The data analysis continued in Finland from September 2004 to March 2005. A second draft report with more detailed information on participants' comments in Inuvik was sent to the Inuvik Community Corporation in September 2004. The rest of the recorded interviews were transcribed and the survey data's accuracy was double-checked and transformed to a

SPSS file. The survey data was analyzed during October 2004 – January 2005 by using a statistical program SPSS 11.5 for Windows.

Writing of the thesis had also started during the fieldwork period in March – August 2004. Questions for the participants and interviewees that had not been thought of before came into mind while writing the thesis. So, writing the study during fieldwork helped to focus the conversations with the participants and the interviewees to the directions that seemed relevant when writing the thesis. The rest of the thesis was written after analyzing the data in February – April 2005.

### **6.5.1. Statistical analyses**

The statistical analyses were conducted by using a statistical program SPSS 11.5 for Windows. Differences between distributions of variables were tested with Chi-square tests (chi-square) and the differences between means were tested with Analysis of Variance (ANOVA). Associations between variables were analyzed by calculating correlations. Pearson's correlation coefficients ( $r$ ) were calculated when the variables were scale and Spearman's correlation coefficients ( $r_s$ ) when the variables were ordinal. The correlation coefficient values  $|r/r_s| < 0.3$  were estimated having a slight association between the variables, values between  $0.3 \leq |r/r_s| < 0.7$  were estimated to have moderate association and values  $0.7 \leq |r/r_s|$  were estimated to have high association. Contingency coefficients ( $C$ ) were calculated between nominal variables. The Contingency coefficient value  $|C| < 0.3$  was estimated having a slight association between the variables, value between  $0.3 \leq |C| < 0.6$  was estimated to have moderate association and value  $0.6 \leq |C|$  was estimated to have high association. The statistical significance of the result is determined by the p-value. p-values below 0.05 (2-sided) were considered statistically significant.

### **6.5.2. Validity and generalization of the results**

As mentioned before, due to the non-random selection, the results can not be statistically assessed for representativeness, though the study was done with the goal of representativeness in mind. When taking into account that 69 (9%) Inuvialuit in Inuvik, 85



(15%) Inuvialuit in Tuktoyaktuk and 28 (11%) Inuvialuit in Holman in the age range (16-88) took part in the survey, the response rate was 75%, and participants' background meet the requirements set in the altered research plan, it is valid to say that the results do represent the general opinions of the Inuvialuit in those three communities. It does have to be noted that 75% of the people that took part in the survey were under the age 45.

The amount of the participants in Holman was lower than in the two other communities. Due to this it is possible that the results for Holman can not be generalized with the same confidence as for Inuvik and Tuktoyaktuk. Bearing in mind that 11% of the Inuvialuit in Holman took part in the survey, it can be estimated that also the data for Holman represent the general opinions of the residents of Holman.

## **6.6. Verification**

During March – May 2005 verification of the information was conducted with most of the interviewees, 8 out of 13. The interviewees checked how their comments were used in the study. Some of the interviewees were met face-to-face and some interviewees verified the information by e-mail correspondence. Telephone conversations were also shared. The interviewees had a chance to add, remove and correct their own comments. The corrections made by the interviewees were minor and did not change the contents of the quotes used.

Presentations of the results were given in April 2005 at the Inuvialuit Game Council (IGC) and Inuvik Community Corporation meetings in Inuvik. The feedback from the IGC members emphasized that the results of this study can not be generalized for the whole Inuvialuit population in the ISR because only three communities out of six took part in the study. This was a relevant and important notion. Some of the IGC members also stressed that the study should still be done in the three communities that it was not done in. The reason that the study was not done in all the communities during summer 2004 was because of limited resources. The study could still be done in the three communities that were left out from the first survey sample, but then the fact that the survey would be done a year or two later would have to be taken into account. The Inuvik Community Corporation found the results useful and the members were looking forward to the release of the thesis.

## 7. RESULTS

The main objective of the study was to provide statistical and in-depth current information to the local communities of Inuvik, Tuktoyaktuk and Holman on their peoples' views on the socio-economic and environmental impacts that might occur in the ISR due to the Mackenzie Gas Project. The reason that the study was not conducted in all six communities in the ISR was that there was not enough time and resources to do so.

In the survey, 193 individual responses were received, also 13 semi-structured interviews were successfully conducted.

### 7.1. How to read the results

The results of this study are presented so that the analyzed survey data, which the participants took part in, form the basis of the results. The extra comments that were gathered during the survey and the data recorded with the help of semi-directed open-ended questions are used to bring a deeper understanding of the views and opinions and are selected so that they enlighten some of the reasons for the answers.

The results of the survey are presented in four stages. First, total distributions of each question are presented. Second, findings of three communities where the survey was conducted are compared between each other. Also the results are presented according to gender and age differences between the answers.

Because there were more questionnaire participants in Tuktoyaktuk than in Inuvik and Holman the results were handled as percents. This way the opinions of the participants in Tuktoyaktuk do not dominate the results.

Interviewee and participant quotations are printed in *italic*, and at the end of the quote the participant's number /p/ or interviewee's number /i/, gender, age and living place are shown. An example of a participant's quotation: "*I want the MGP to go through now so that there will be more jobs.*" (/p177/ - male, age 38, Holman). An example of an interviewee's quotation: "*I think through education as a main backbone you'd be pretty*

*stable. People should be educated either through the school system or through the traditional lifestyle; go through an elder, or mentor, or a camp attendance – on the land camp, trap or hunt.” (/i1/ - female, age 34, Inuvik)*

## **7.2. Participants and refusals in different communities**

In the beginning of the 21<sup>st</sup> century, there were 5200 people living in the ISR, 2975 (57%), of the residents of the ISR were Inuvialuit. There were 2040 Inuvialuit living in the ISR in the age range (16-88), in which the survey was conducted. (NWT Bureau of Statistics, 2001a & ibid., 2001b) The survey was conducted with 186 (9%) of the Inuvialuit population in the age range (16-88) in the ISR. Total number of participants was 193, four participants lived in other communities in the NWT (Yellowknife, Fort McPherson and Fort Good Hope) and three participants did not answer where they were from. Because the number of participants who were not at the time of the survey residents of the ISR, or who did not respond where they lived was so small, also these participants' answers were taken into account in the total. Of the survey participants, 97% were Inuvialuit beneficiaries and 94% had lived more than half of their life in the ISR.

The total number of Inuvialuit asked to participate in the survey was 256, from them 193 (75%) participated, 63 (25%) people refused to participate in the study. In Inuvik, 69 (9%) Inuvialuit out of 778 took part in the survey. For men, the corresponding figure was 7% and for women 11%. In Inuvik, 42 people refused to participate in the survey. The response rate in Inuvik was 62%. In Tuktoyaktuk, 85 (15%) Inuvialuit out of 573 took part in the survey. For men, the corresponding figure was 16% and for women 13%. In Tuktoyaktuk, there were 11 that refused to participate in the survey. The response rate in Tuktoyaktuk was 89%. In Holman, 28 (11%) Inuvialuit out of 252 took part in the survey. For men, the corresponding figure was 12% and for women 11%. In Holman, there were 10 that refused to participate in the survey. The response rate in Holman was 74%.

From the survey participants, 69 (36%) were Inuvik residents, 86 (45%) Tuktoyaktuk residents and 28 (15%) Holman residents. Also 8 (4%) participants from other communities (Aklavik, Paulatuk, Yellowknife, Fort McPherson and Fort Good Hope) took part in the survey. Interviews were conducted in Inuvik, Tuktoyaktuk and Holman. From the

interviewees, 6 (46%) were Inuvik residents, 5 (38%) Tuktoyaktuk residents, 1 (8%) Holman resident and 1 (8%) Yellowknife resident, who used to live in Holman during the time of the Berger Inquiry.

Reasons that people gave for not participating in the survey were too busy working at home, too busy looking after children, having dinner, just going out, going to check the nets, going out on the land, having guests, not interested in the study, bad timing or intoxicated. Some people felt that they did not know enough about the MGP to take part in the study. If a person said that they did not know enough about the study to take part in it, it was clarified that participating in the study did not mean that one had to be an expert on it. It was also emphasized that the interviewer would try to answer all the questions that the participant might have related to the MGP, but still some people felt that their knowledge was not enough to participate. Some of the people that were busy for some reason or another were met at a more appropriate time. Also some people did not want to fill out the questionnaire, but were happy to talk about the project, at those occasions no notes were made. This happened with a few of the elders. Some people refused also, because they felt that they had to use too much of their time in meetings related to the oil and gas development, and they had stated their opinion often enough.

There may have been several reasons why the people in Tuktoyaktuk were more eager to participate in the survey than the people in Holman and Inuvik. The first research assistant, Rebecca Pokiak, is from Tuktoyaktuk, so it is likely that people welcomed us better in Tuktoyaktuk because they knew Rebecca. Other reasons could have been that there was more unemployment in Tuktoyaktuk (as also in other communities in the ISR) than in Inuvik (NWT Bureau of Statistics, 2004), so people might have had more time to participate in the study. It was also noticed that the people in Tuktoyaktuk felt that their community should be benefiting more from oil and gas development e.g. by getting an all weather road. So maybe people in Tuktoyaktuk felt that taking part in the study might have a positive effect for the community.

### 7.3. Interviewees

Altogether 13 Inuvialuit were interviewed by using the semi-structured open-ended method. The total number of Inuvialuit asked to be interviewed was 22, from them 13 (59%) agreed to be interviewed. 4 people did not show up for the arranged interviews and were counted in with the 5 people who refused to be interviewed, so the amount of refusals was 9 (41%). From the interviews, 11 were recorded and 2 included only notes. All interviewees were Inuvialuit beneficiaries. From the questionnaire participants, 94% had lived more than half of their life in the ISR, while all of the interviewees had lived most of their life in the ISR.

### 7.4. Background of participants and interviewees

#### 7.4.1. Gender

From the questionnaire participants, 49% were male and 51% were female (table 1), which is a good result when comparing the results by gender. In three cases gender remained unknown. There was no significant gender difference between living places (Chi-square=6.356, df=3, p=0.096). From the interviewees, 69% were male and 31% female. (Table 1)

**Table 1** Gender and living place of the questionnaire participants and interviewees.

	Questionnaire participants						Interviewees					
	Male		Female		Total		Male		Female		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Inuvik	28	41 %	41	59 %	69	100 %	4	60 %	2	40 %	6	100 %
Holman	14	50 %	14	50 %	28	100 %	1	50 %	-	-	1	100 %
Tuktoyaktuk	49	58%	36	42%	85	100%	4	80%	1	20%	5	100%
Other	2	25%	6	75%	8	100%	-	-	1	100%	1	100%
Total	93	49%	97	51%	190	100%	9	69%	4	31%	13	100%

### 7.4.2. Age

The age range of the questionnaire participants' was from 16 to 88. The reason why people under the age 16 were not approached was that permission from the children's parents would have been needed. Most of the participants were in their 20's to 40's, and the majority or 73% were under the age 45 (table 2), so the results mostly represent the opinions of young adults and adults, not children or elderly people of the communities. The reason why people over the age 60 were not interviewed more was that it was believed that the elders are already consulted and some of the elders do not speak English that well. It was also thought that a questionnaire with fixed questions might not be an appropriate way to approach elders with.

The mean age of the participants' in Inuvik and Tuktoyaktuk was 36 and in Holman it was 34. (Table 2) There was no significant age difference between living places.

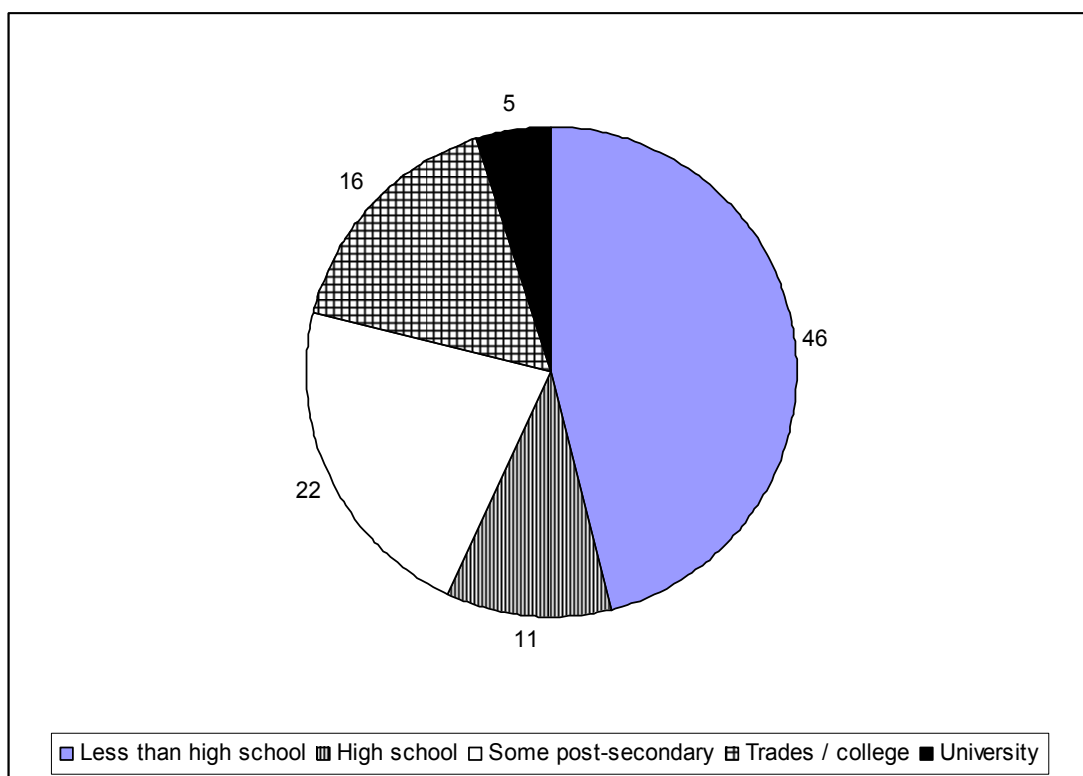
**Table 2** Age of the questionnaire participants in categories (%).

		Living place					Total n=193
		Inuvik n=69	Tuktoyaktuk n=86	Holman n=28	Other n=8	Unknown n=2	
Age	16-24	19	22	25	25	0	21
	25-34	28	33	25	13	0	29
	35-44	26	13	36	50	50	23
	45-over	23	29	14	13	50	24
	Unknown	4	4	0	0	0	3
Total		100	100	100	100	100	100
Mean Age (SD)		36 (12.3)	36 (12.7)	34 (14.3)	36 (13.1)	51 (16.3)	36 (12.8)

The age range of the interviewees was 23 to over 60. The age of the two elders interviewed in Holman was not asked for. Seven of the interviewees were under the age 30, three were under the age 40 and three under the age 70.

### 7.4.3. Education

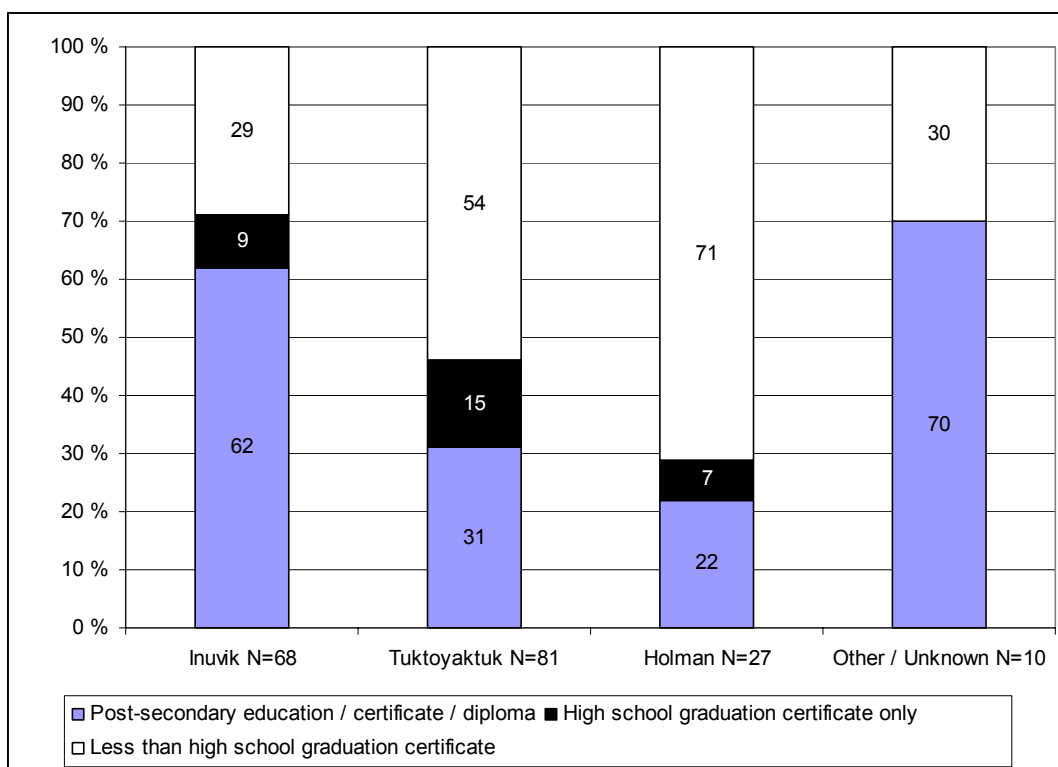
Less than 50 % of the participants had less than high school education, about one tenth had high school education only, one fifth had some post-secondary education and another fifth trades, college or university certificate or diploma. (Fig. 1) Participants with some post-secondary education had taken a course or courses at e.g. a college, but did not have a certificate or a diploma from that course or courses. The questionnaire participants had a low education level compared to the rest of Canada, but they represented well the education level of the ISR.



**Figure 1** Participants level of education (%).

There was a significant difference in education between living places (Chi-square= 21.475, df=4, p=0.000). Participants in Inuvik and other places had the highest education level and Holman and Tuktoyaktuk the lowest level of education. (Fig. 2) “*IRC and gas companies could work together so that local people could have something e.g. a library for the school, new computers, swimming pool, baseball leagues, more colleges and universities close to*

*home. We need a bus for the kids to go to school, anything to help our kids succeed. Kids drop out too much, get suspended and start selling joints. IRC is not doing anything for the education. At the same time they complain we're not living off the land and we're not getting our education, how can you do both? No college or university in Tuk.”* (/p83/ - female, age 51, Tuktoyaktuk) *“We need more education, also for adults. The adults that don't have education are often left out, not only in this project, but other projects too.”* (/p186/ - female, age 42, Holman)



**Figure 2** Participants level of education (%) according to living place.

Though the level of education was better in Inuvik compared to Tuktoyaktuk and Holman the people in Inuvik were also unsatisfied. *“Lots of kids skip school. Most of the kids are just too lazy to go. There are not enough options at the school, no music classes, no good arts classes, no night school, nothing.”* (/p76/ - male, age 17, Inuvik) *“There should be more training and education.”* (/p70/ - male, age 40, Inuvik)

When comparing the participants' level of education to the overall level of education in Inuvik, Tuktoyaktuk and Holman, Inuvik and Tuktoyaktuk represented well the overall



education level of the regions. Participants from Holman had a lower level of education than the general public of the community of Holman. (Mackenzie Gas Project, 2004e: p. 2-7, 2-17)

Some participants felt that the level of education had improved in the past years, but many felt that it was still insufficient and they also had a clear answer on how to deal with it. *“More money should be put into education; for career training. More money put into youth and high schools. More student exchange, so they can see the rest of the world and understand that there is more than this area.”* (/p193/ - female, age 24, Inuvik). Also traditional lifestyle was seen as a good way of education. *“I think through education as a main backbone you’d be pretty stable. People should be educated either through the school system or through the traditional lifestyle; go through an elder or mentor or a camp attendance – on the land camp, trap or hunt.”* (/i1/ - female, age 34, Inuvik)

There was no significant difference between gender and education (ANOVA  $p=0.870$ ) or age and the level of education ( $r=0.071$ ,  $p=0.340$ ). Educational background of the interviewees was not asked for.

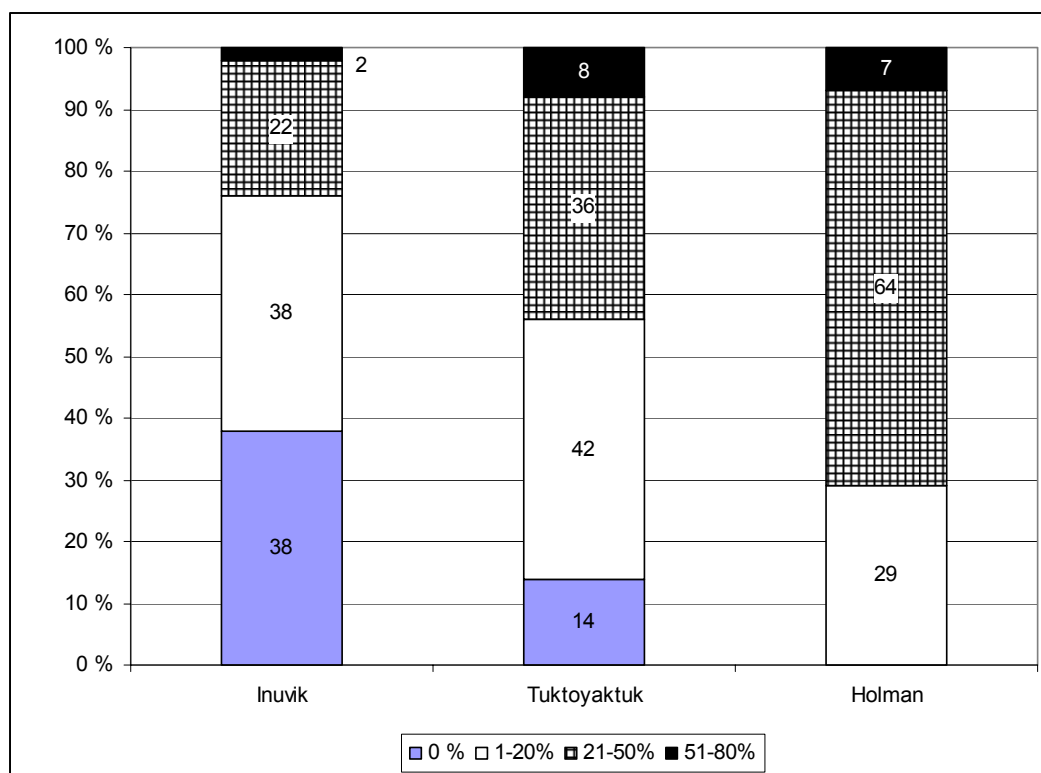
### **7.5. How do people make a living**

Before working on the Dew-line (Distant Early Warning Line) before 1955 the Inuvialuit had been their own bosses, hunting and trapping at their own pace and liking. (Mackenzie Valley Pipeline Inquiry, 1976g: p. 4179-4180) In the past fifty years, the Inuvialuit have adapted to a western way of wage economy, but still many people go out on the land and depend on game for subsistence. This chapter concentrates on how the participants made a living; what percentage of time did people spend on wage economy and what percentage of time did people spend on the land hunting, guiding, picking berries.

One fourth of the participants did not spend any time on the land, 39% spent 1-20%, 32% spent 21-50% and 5% spent 51-80% of their time on the land.

In Inuvik, 38% of the questionnaire participants did not spend any time on the land. There was a significant difference in spending time on the land and living place (Chi-

square=20.196, df=6, p=0.003). The biggest difference in time that the participants spent on the land was between Inuvik and Holman. Over 70% of the questionnaire participants in Holman spend 21-80% of their time on the land in Inuvik the percentage was less than 30. (Fig. 3) *“We mostly live on animals of the land. Some years are good, some poor. The money I get from work goes into gas and bills... We try to teach our kids to eat native food. We don't go for Northern (Northern Store) or Co-op (Holman Eskimo Co-op.) food. We want to save our land and animals for the good of our community and future.”* (/p173/ - male, age 45, Holman) *“I have lots of people to feed, grandparents and sisters, aunts and uncles. They never do it (hunting) cause they're too busy working so what I do is I go out and supply them with what they need. They just buy me ammo and gas after that it's fun for me and I like it a lot.”* (/i8/ - male, age 28, Inuvik)



**Figure 3** The time that the participants spent on the land (%).

There was a clear gender difference in how much people spent time on the land ( $r_s=-0.362$ ,  $p=0.000$ ). Men spent more time on the land than women, 12% of men spent no time on the land when the corresponding figure for women was 38%. *“I would spend more time on the land, but it's hard because I am a single parent.”* (/p83/ - female, age 51, Tuktoyaktuk)

There was no association between age of the participants and how much they spent time on the land ( $r=-0.005$ ,  $p=0.952$ ).

The questionnaire participants were also asked how often per year did they go out on the land. (Table 3) As expected, there was a strong correlation ( $r=0.624$ ,  $p=0.000$ ) in how much questionnaire participants spent time on the land and how often people went out on the land. The participants that spent more time on the land also went more often on the land.

**Table 3** How many times per year did the questionnaire participants go out on the land.

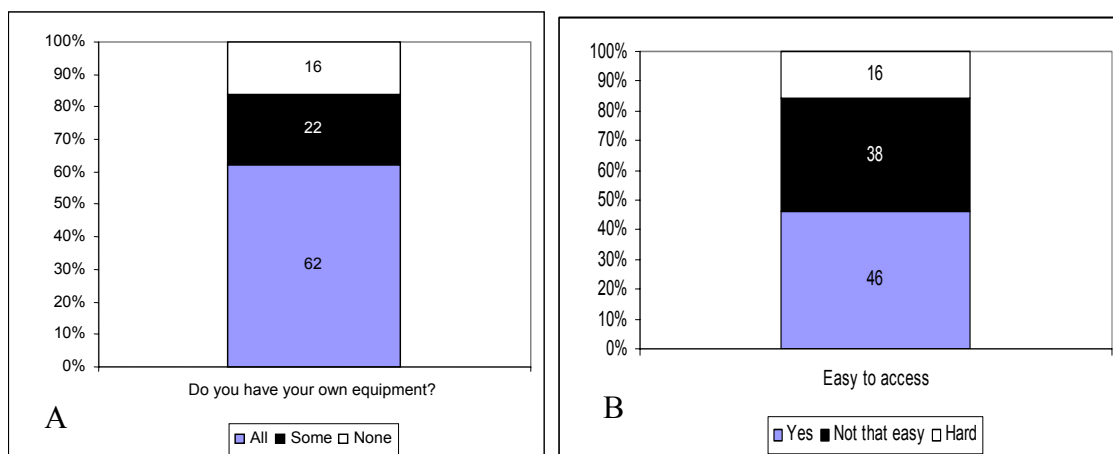
	Living place										Total	
	Inuvik		Tuktoyaktuk		Holman		Other		Unknown			
I do not go out on the land	11	16 %	4	5%	0	0%	0	0%	0	0%	15	8%
Less than 5 times a year	26	38%	23	27%	4	14%	2	25%	1	50%	56	30%
5-10 times a year	16	23%	19	23%	2	7%	2	25%	0	0%	39	20%
11-20 times a year	4	6%	18	22%	3	11%	4	50%	1	50%	30	16%
More than 20 times a year	12	17%	19	23%	19	68%	0	0%	0	0%	50	26%
Total	69	100%	83	100%	28	100%	8	100%	2	100%	190	100%

From participants living in Inuvik, Tuktoyaktuk and Holman, participants in Holman went on the land more often and participants in Inuvik less often than others. There was a significant difference between living place and the frequency of going on the land (Chi-square=41.795,  $df=8$ ,  $p=0.000$ ). There was a slight association ( $r_s=0.295$ ,  $p=0.002$ ) between having own equipment for going on the land and the frequency how many times per year participants went on the land and a even slighter association ( $r_s=0.268$ ,  $p=0.055$ ) between having own equipment and how much people spent time on the land (table 4). The clear majority (86%) of the people who went on the land used the meat for only personal usage.

**Table 4** Amount of participants (%) with equipment to use out on the land and how easy (%) was it to get a hold of some equipment (n=193).

If you go out on the land, do you have your own equipment to use?	%	If you do not have your own equipment, how easy is it for you to access the necessary equipment?	%
All	58	Easy	28
Some of them	21	Not that easy	23
None	15	Hard	10
Response rate	94	Response rate	61
Missing	6	Missing	39
Total	100	Total	100

Over one third (38%) of the participants did not have all the necessary equipment that they needed to go on the land with. Nearly half (46%) of the participants that did not have their own equipment to go to the land with found it easy to access the necessary equipment. (Fig. 4)



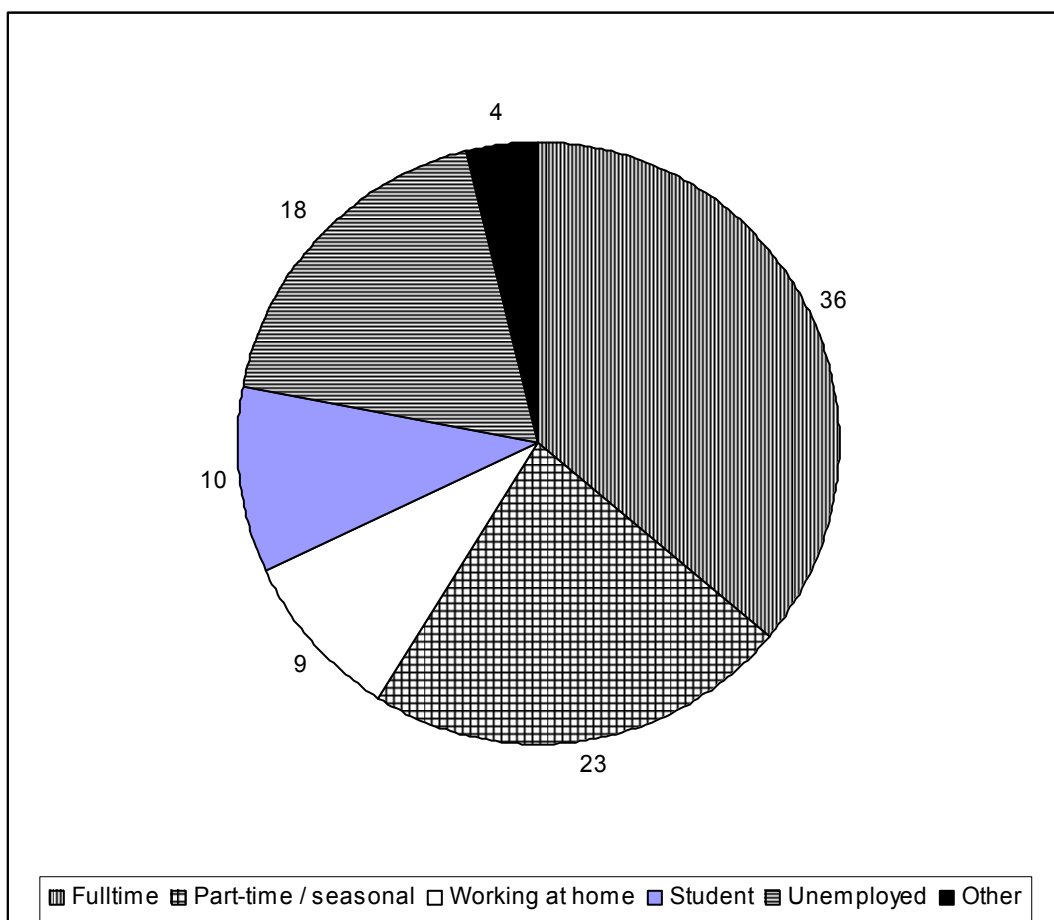
**Figure 4** (A) Amount of people (%) that had their own equipment to use (n=181) and (B) how easy it was for those who did not have the equipment to get a hold of some (n=118).

One interviewee mentioned that the lack of a camp on the land can also reduce the time spent on the land. *“I used to (go out on the land) as a young child. Every spring we’d go out to a muskrat cap and during the summer we’d go out to the coastal areas where they did the fishing and harvesting of whales. Now I haven’t been out there in a number of years and I don’t go out in this area (Inuvik) as much as I’d love to. I do go picking berries, we do go for picnics, but I don’t have a camp, so no, I don’t go out as much as I’d love to.”* (/i1/ - female, age 34, Inuvik)

Some participants noted that spending time on the land is also a question of money. *“It is expensive to go out on the land, to get the gas and skidoo, dog teams etc. We can't go out as much as we want to.”* (/p99/ - male, age 46, Tuktoyaktuk)

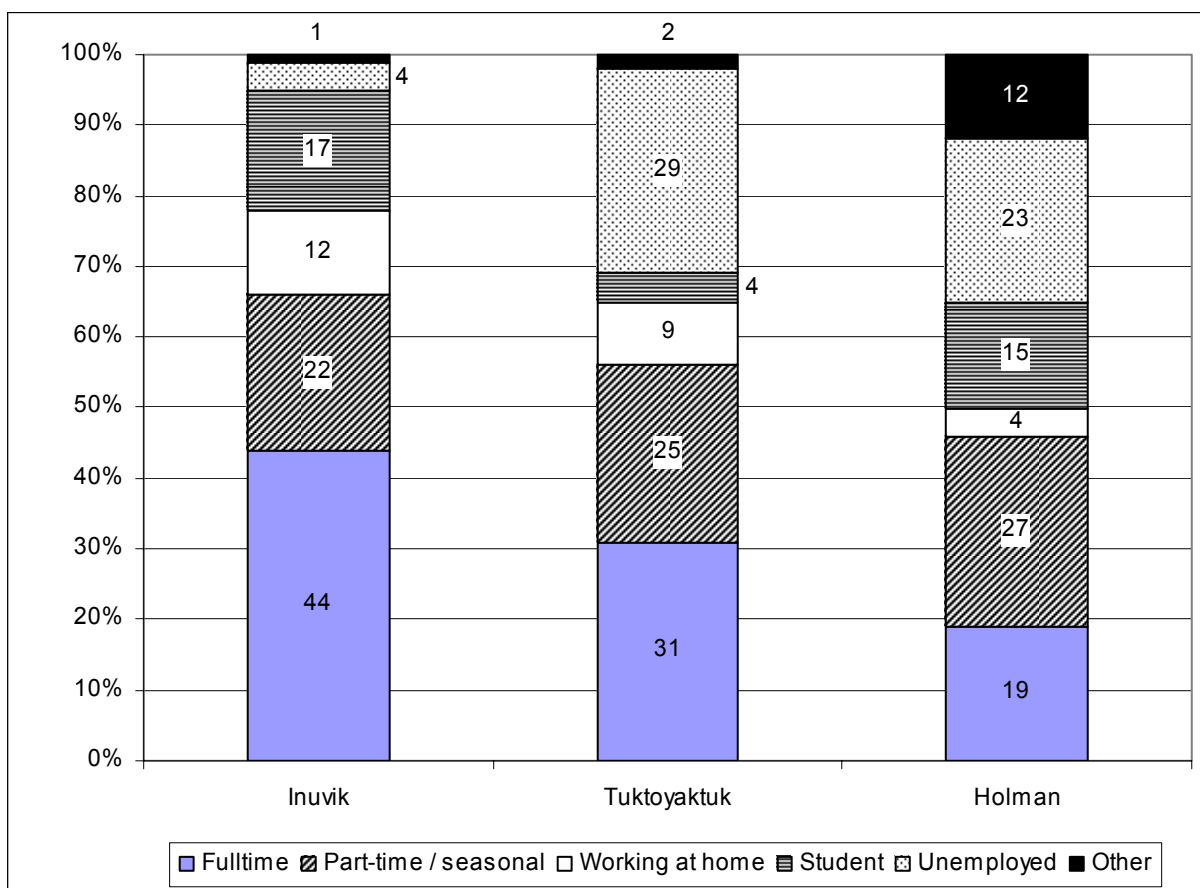
### 7.6. Current work situation

Employment rate in the ISR (taking into account all communities except Inuvik) in 2002 was 47% and unemployment rate 27%. In Inuvik, the employment rate was 68% and unemployment rate 11%. (Mackenzie Gas Project, 2004d: 3-3) More than one third (36%) of the participants had fulltime jobs, 18% were unemployed. (Fig. 5) When we take into account that 23% of the participants worked part-time or had seasonal jobs, it can be estimated that the people interviewed represent quite well the employment situation in the ISR in 2004.



**Figure 5** The questionnaire participants’ current work situation. (%)

Wage economy was more common amongst the participants in Inuvik (which is the government center and largest community of the ISR) than in Tuktoyaktuk and Holman. Part-time jobs, seasonal jobs and unemployment were high in Holman and Tuktoyaktuk. In Inuvik, 44% of the questionnaire participants had a fulltime job and only 4% were unemployed. Tuktoyaktuk participants had the highest unemployment rate of 29%. (Fig. 6) *“I can't wait for them to get started (the MGP), the sooner the better. We are short of work up here. I would like to be working for them.”* (/p116/ - male, age 55, Tuktoyaktuk) *“We definitely need more jobs, the unemployment rate is high, a lot of times jobs are short term. I expect that with all this going on with the Mackenzie Gas Project it'll provide longer term more stable jobs so that local people can apply for work.”* (/i6/ - female, age 23, Tuktoyaktuk)



**Figure 6** Current work situation (%) in the three communities.

There was a clear gender difference in current work situation (Chi-square=19.625, df=5, p=0.001). Women possessed more fulltime jobs. Of women, 42% were working fulltime,

while the corresponding figure for men was only 30%. Men (33%) possessed more part-time and seasonal jobs than women (14%), which might relate to men spending more time on the land. *“I don’t really care to hold a fulltime job because I do traditional things, a fulltime job will just mess with that, I wouldn’t be able to do that anymore. Part-time - I like it, but fulltime - I don’t! I like doing a lot of different things. I don’t like being tied down to one thing too long.”* (/i8/ - male, age 28, Inuvik) Men also worked more for the oil and gas industry (as explained in the next chapter), and that work is often seasonal. More women worked at home (14%) looking after the family than men (3%). In the amount of students (about 10%) and unemployed (about 17%) there were no gender differences.

There was also a clear difference between age groups and current work situation (Chi-square=20.174, df=9, p=0.017). The oldest age group (45-over) possessed more (46%) fulltime jobs than the younger age groups; 43% (35-44), 38% (25-34) and 22% (16-24). The oldest age group possessed less (30%) part-time and seasonal jobs and looked after the family less than the younger age groups; 33% for (35-44), 34% for (25-34) and 39% for (16-24). The amount of students was naturally highest (30%) in the youngest age category, in other age categories; 6% for (25-34), 10% for (35-44) and 2% for (45-over). Unemployment was lowest (11%) in the youngest age group (16-24), in other age groups; 22% (25-33), 14% (34-44) and 23% (45-over).

### **7.7. People working for the oil and gas industry**

At the time of survey, about 15 % of all participants’ worked while 47 % had worked for the oil and gas industry in the past. (Table 5) *“I have been working out in the oil companies for a couple of years. Season is short; mid November till mid April, so it’s pretty intense. I just hope it will be year round if the project goes through.”* (/i2/ - male, age 27, Inuvik) *“Me and my friends have been working for the last five years now (for the oil companies) steady all winter long before that we didn’t work too much. So, you can really see it, everybody’s having a good time. It’s nice to be working, it’s nice to have money, and it sure is nice to be able to go out hunting. Time off you can go out hunting.”* (/i5/ - male, age 26, Tuktoyaktuk)

**Table 5** Questionnaire participants' interest in working for the oil and gas industry (%).

	Do you work for the oil and gas industry? n=190	Have you worked for the oil and gas industry in the past? n=185	Would you like to work for the oil and gas industry? n=182
Yes	15	47	47
Maybe	-	-	32
No	85	53	21
Total	100	100	100

There was a significant difference between living place and working for the oil and gas industry (currently: Chi-square=11.535, df=2, p=0.003 and past: Chi-square=26.126, df=2, p=0.000). From the participants living in Tuktoyaktuk, 26% worked currently and 67% had worked in the past for the oil and gas industry (Table 6). *“I have work experience with Inuvik Gas, I've gone to rig sites in Alberta and ISR. It would be cool to work on rigs.”* (/p111/ - male, age 18, Tuktoyaktuk) In Holman and Inuvik, these figures were much smaller.

**Table 6** Amount of participants who worked / had worked for the oil and gas industry (%).

		Living place			Total n=180
		Inuvik n=69	Holman n=28	Tuktoyaktuk n=83	
<b>Currently</b>					
	<b>Male</b>	21	7	40	28
	<b>Female</b>	0	0	6	3
	<b>*Both</b>	9	4	26	15
<b>Past</b>					
	<b>Male</b>	74	21	82	69
	<b>Female</b>	20	7	46	27
	<b>*Both</b>	41	14	67	47

\*Both: the percentage for both male and female who worked or had worked for the oil and gas industry. Note that \*Both figures are not averages from the male and female figures, because the number of male and female participants varied in different communities.

There was a significant difference between gender and working for the oil and gas industry (currently: Chi-square=22.424, df=1, p=0.000 and past: Chi-square=32.994, df=1, p=0.000). Of the male participants, 28% worked currently and 69% had worked for the oil

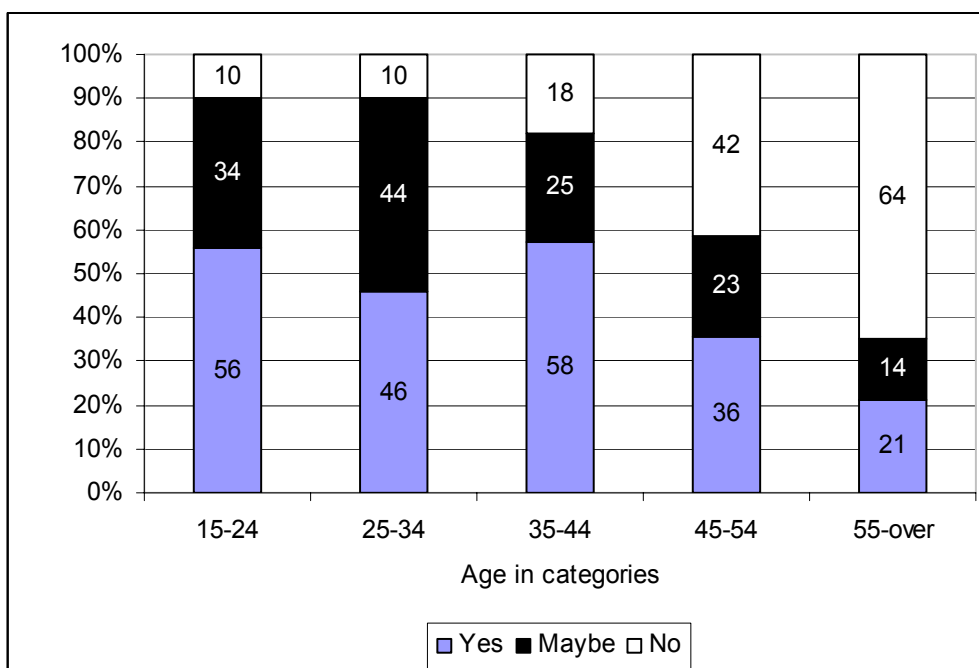


and gas industry in the past. For women the corresponding figures were 3% and 27%. (Table 6)

There was no significant difference between age and working for the oil and gas industry during the summer 2004, or having had worked for the oil and gas industry in the past.

The participants had quite a positive attitude towards the oil and gas industry. From all participants, 47% would have liked to work for the oil and gas companies, and 32% would have considered working for them. (Table 5) *“I would like to work for the oil and gas industry, it's something different, benefits might be better.”* (/p187/ - female, age 40, Holman) *“I would like to work for the oil and gas industry to make some money, get my life on a start.”* (/p171/ - male, age 22, Holman) Only one fifth of the participants did not want to work for the oil and gas industry. From people who had worked for the oil and gas industry in the past 12 % would not have wanted to work for them in the future.

There was no significant difference between living place and people wanting to work for the oil and gas industry. There was a significant difference between gender and people wanting to work for the industry (Chi-square=20.660, df=2, p=0.000). Most male participants (65%) wanted to work for the oil and gas industry and 23% would have considered it. The corresponding figures for women were 31% and 40%. There was also a significant difference between age and wanting to work for the oil and gas companies (Chi-square=33.567, df=8, p=0.000). (Fig. 7) Older people were less interested in working for the industry than younger people.



**Figure 7** How many participants (%) wanted to work for the oil and gas industry (n=176).

### 7.8. Opinions on the Mackenzie Gas Project

*“I have two main concerns. No.1. I have two sons, one is thirteen and the youngest is eleven. I hope by the time this is in full swing or over and done with my sons will be able to jump on their skidoos or in their boats and go out on the land and come home with the same fresh game as we have now. No. 2. Making sure our people are ready for the social impact that this will bring. Assist us in keeping our children in school to complete their education.”* (/p10/ - female, age 39, Inuvik)

#### 7.8.1. Interest in the Mackenzie Gas Project

Most (55 %) of the participants were interested in the MGP, one third (34 %) was somewhat interested and one tenth (11 %) not interested. There was no significant difference between the living place and the participants’ interest in the project (Chi-square=2.089, df=4, p=0.719). Nor was there a significant association between age and interest in the project ( $r_s=0.077$ , p=0.298). But, there was a significant gender difference in people’s interest in the MGP (Chi-square=18.689, df=2, p=0.000). Of men, 72 % were interested, while the corresponding figure for women was only 41%.

The participants also had a positive attitude towards the project. Most of the participants thought that the project would go through in the next couple of years (from year 2004) and wanted it to through in the next couple of years. (Table 7) *“The people are for it (the MGP) because there are no jobs”*. (/i12/ - female, age over 50, Yellowknife, a former resident of Holman) From the 15 % who did not want the project to go through in the next couple of years, most (66 %) wanted the project to go through in the next 15 years, only 29 % never wanted the MGP to go through. (Table 7)

**Table 7** Participants’ opinions on MGP (%).

		Living place				Total N=181
		Inuvik n=67	Tuktoyaktuk n=81	Holman n=25	Other n=8	
<b>Do you think that the proposed MGP will go through now?</b>	Yes	69	63	48	50	62
	No	4	11	16	0	9
	I do not know	27	26	36	50	29
Total		100	100	100	100	100
		Inuvik n=66	Tuktoyaktuk n=79	Holman n=25	Other n=8	Total N=178
<b>Do you want the proposed MGP to go through now?</b>	Yes	64	71	60	38	65
	No	15	13	20	12	15
	I do not know	21	16	20	50	20
Total		100	100	100	100	100

The essential point was that the participants wanted the MGP to go through because they believed that the project would bring education, employment and business opportunities. *“My main hope is that this goes through and the Inuvialuit can get educated.”* (/p82/ - male, age 27, Tuktoyaktuk) *“I want the MGP to go through now so that there will be more jobs.”* (/p177/ - male, age 38, Holman) *“My biggest hope is that it goes through, I want everybody to get an income and not to depend on social assistance.”* (/p172/ - male, age 41, Holman)

There was no significant difference between the living place and did the participants think that the MGP would go through in the next couple of years (Chi-square=5.147, df=4, p=0.273). Nor was there a significant association between age and did the participants think that the project would go through in the next couple of years.

There was no significant difference between living place and did the participants want the MGP to go through (Chi-square=1.633, df=4, p=0.803), and there was no association between age and did the participants want the MGP to go through in the next couple of years.

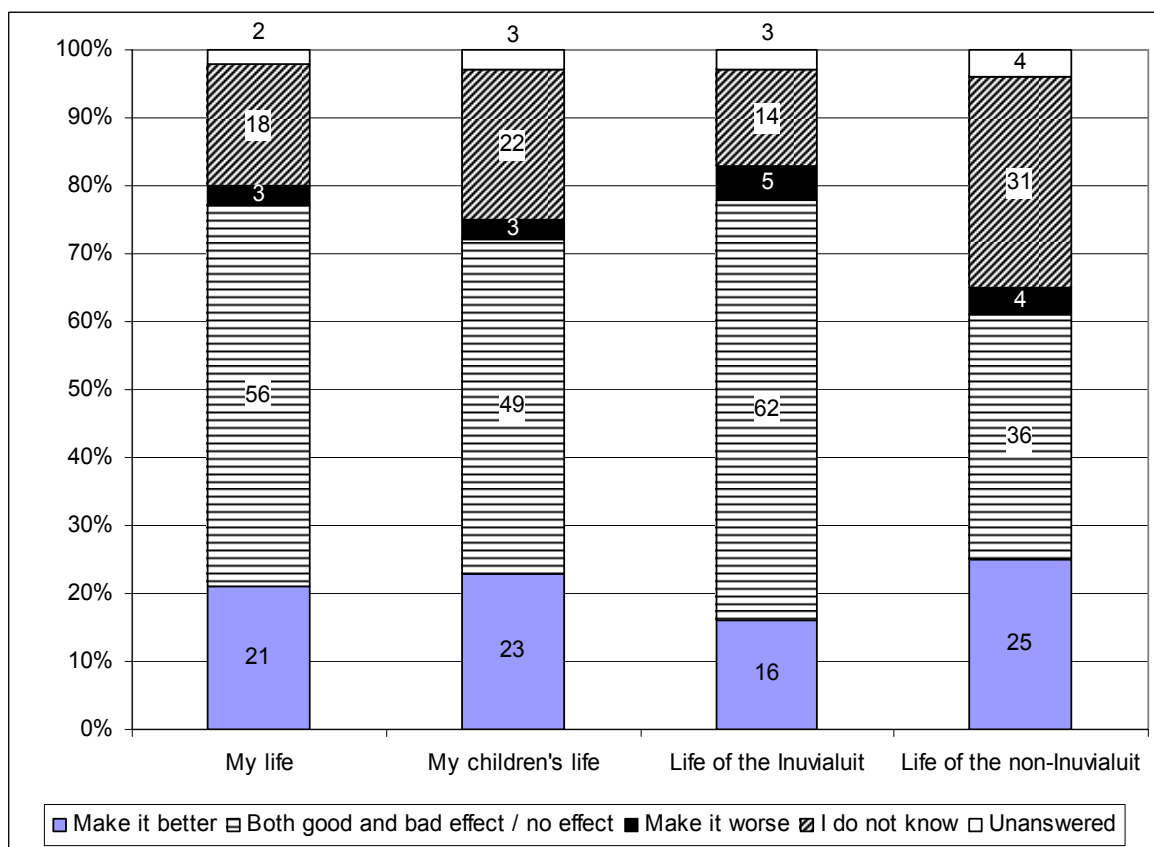
However, there were clear gender differences. Of men, 67 % thought that the MGP would go through in the next couple of years, 12 % that it would not and 21% did not know. For women, the corresponding figures were 57 %, 6 % and 37 % (Chi-square=7.212, df=2, p=0.027). Concerning the question “did the participants want the MGP to go through”, the same figures for men were 73 %, 16 % and 11 % and for women 56 %, 15 % and 29 % (Chi-square=9.350, df=2, p=0.009). In both questions, men had higher numbers in “yes”-answers than women, while women were more often uncertain than men. *“I would like to see the proposed MGP to go through only if the people are well informed and trained.”* (/p186/ - female, age 42, Holman) *“I don’t know where I stand in this. I’m for both. I would like to see employment, but I do want people to respect the land as well. The land provides food for our people and not only food – livelihood, camping out and just getting away from the town life.”* (/i1/ - female, age 34, Inuvik)

### **7.8.2. How the Mackenzie Gas Project would affect people’s lives**

About a half of the participants thought that the project would have both positive and negative effects or no effects on their own lives, and 21 % thought that the project would make their own lives better. (Fig. 8) *“The MGP will have good and bad effects on the Inuvialuit. We might get benefits, but then hunting might be affected.”* (/p191/ - female, age 52, Holman) *“The Mackenzie Gas Project got to do a lot of planning for the region / aboriginals who are willing to take training and time to go school, create enough jobs and*

*training for people who want to further their education. And (then), if it goes through, it will be a good project.” (i2/ -male, age 27, Inuvik)*

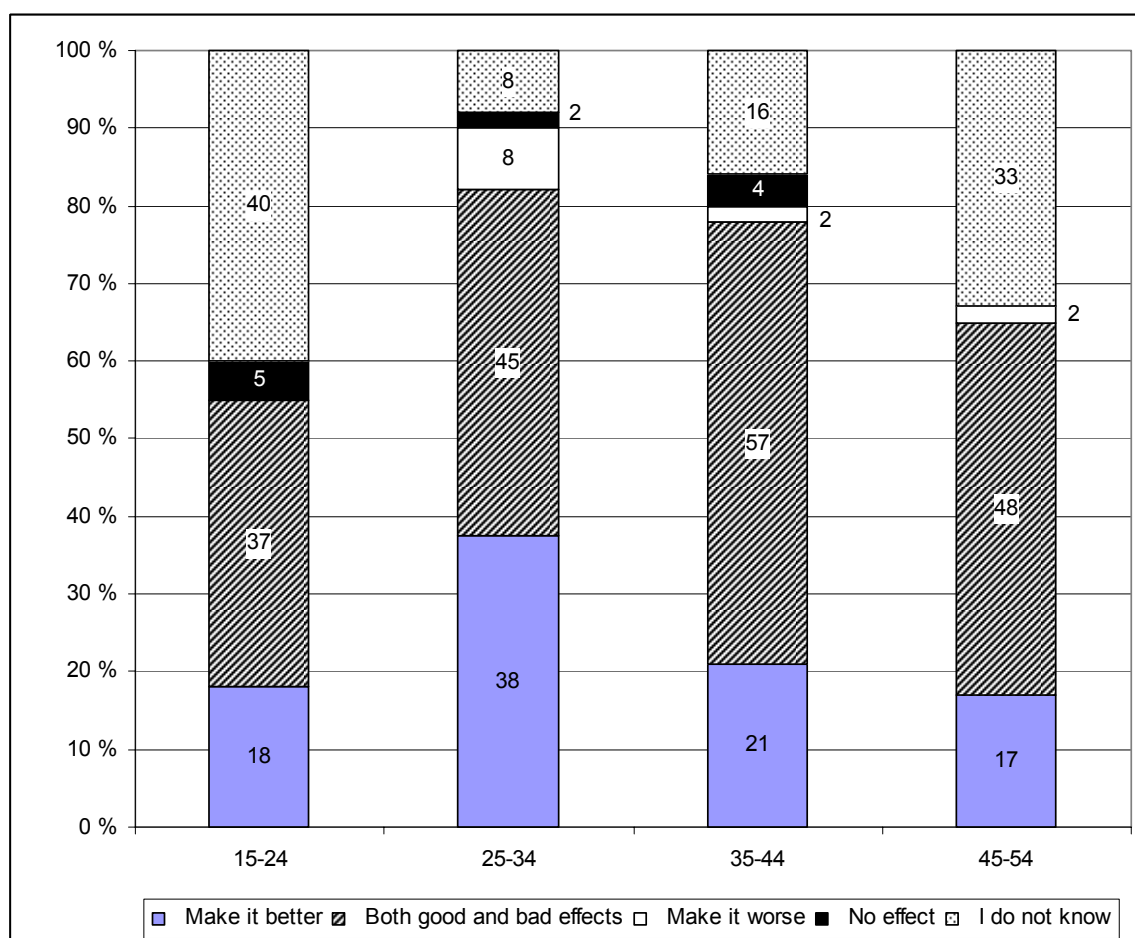
In the case concerning the non-Inuvialuit, one fourth (25%) of the participants thought that they would benefit from the project. *“The white people always gain. The only time they come is when boom comes. They just make the money and go back south. There will be no change for the Inuvialuit in employment opportunities. Most of the employees will be southerners.” (p71/ - female, age 58, Inuvik)* The proportion of unsure answers was highest concerning the non-Inuvialuit. *“I do not know about the non-Inuvialuit, they don't stay that long.” (p191/ - female, age 52, Holman)*



**Figure 8** How did the participants think that the MGP would affect their lives' (%).

There was a significant difference between age groups and how the participants thought that the project would affect their children's lives (Chi-square=11.163, df=3, p=0.011). Participants of middle age (25-44) saw more positive effects than other age groups. The participants in the age category 25-34 had the clearest opinion on how the project would

affect their children, 38 % of people in that age category thought that the MGP would make their children’s lives better, which was far more positive than what people in the younger and older age categories thought. But, the participants in age category 25-34 were also most negative about how the project would affect their children; 8 % said that the project would make their children’s lives worse. The questionnaire participants in age category 25-35 had the lowest percent in answer “I do not know” (8 %). The youngest participants (15-24) seemed to be most uncertain on how the project might affect their children; 40 % answered “I do not know”. (Fig. 9)

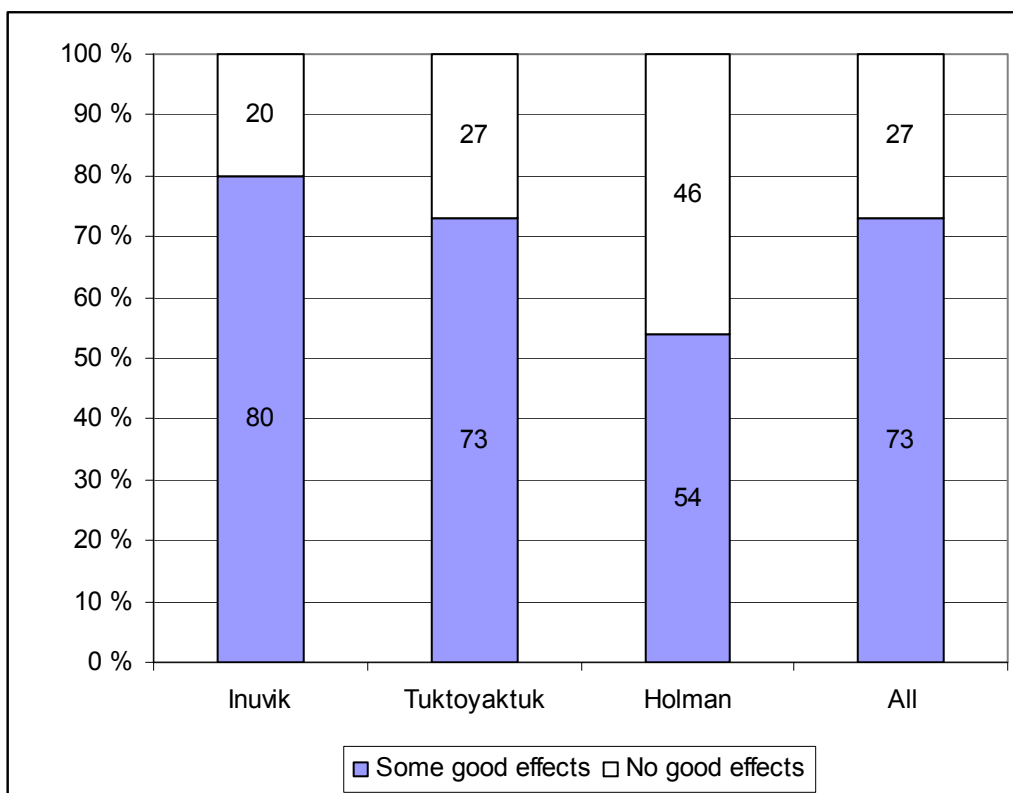


**Figure 9** Participants’ opinions on how the MGP would affect their children’s lives (%).

Concerning other questions shown in fig. 8, corresponding analyses revealed no significant age differences.

For statistical analyses, the question “how participants thought the MGP would affect their lives” was re-classified so that to the options “both good and bad effects” and “make it

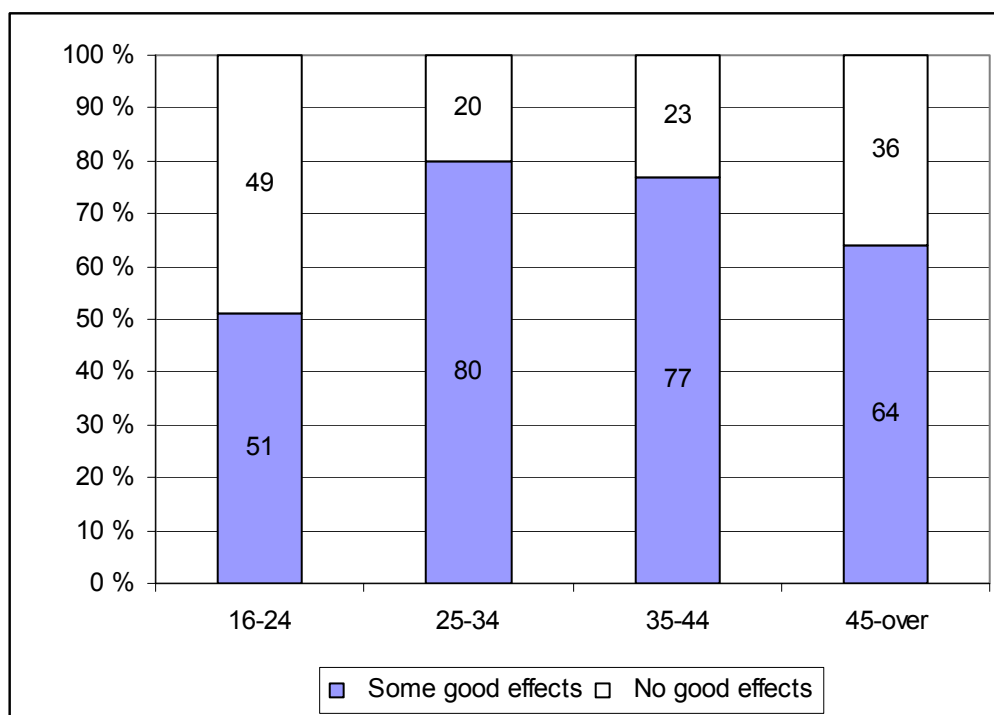
better” were given a value 1 (some good) and all other options value 0 (no good). From all participants, 73 % thought that the MGP would have “some good effects”. (Fig. 10) The corresponding figures were 80 % in Inuvik, 73 % in Tuktoyaktuk and 54 % in Holman (Chi-square=6.880, df=2, p=0.032).



**Figure 10** Proportions of participants who thought that the MGP would have some positive effects on their lives (%).

Of men, 83 % and of women 65 % thought that the MGP would have some positive (better or good and bad) effects on their life (Fisher’s exact, p=0.006). Concerning other questions showed in fig. 10, corresponding analyses revealed no significant gender differences.

The age group 25-34 felt most positive about how the MGP would affect their lives. The great majority (80%) believed that the project would have some positive effects on their lives. The youngest age group’s (16-24) answers were most negative, but still a half thought that the project would have some good effects on their lives. (Fig. 11)



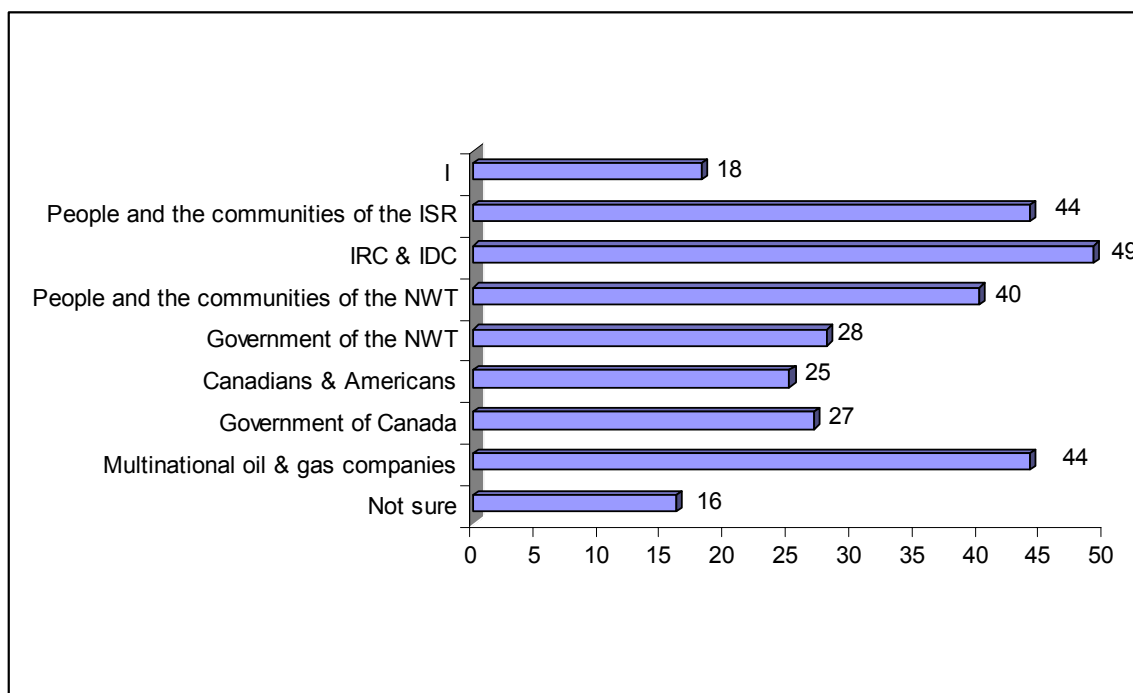
**Figure 11** Proportions of participants who thought that the MGP would have some positive effects on their lives (%).

### 7.8.3. Who would benefit from the project

Nearly half of the questionnaire participants thought that the IDC and the IRC would benefit from the MGP. (Fig. 12) *“The IDC will benefit; contracts and jobs.”* (/p1/ - female, age 30, Inuvik) *“The corporate groups will get financial benefits. With more money in the corporate groups, hopefully it will benefit also the people e.g. money put into education opportunities.”* (/p66/ - male, age 38, Inuvik)

Though 44% thought that the people and the communities of the ISR would benefit from the project and 40% thought that the people and the communities of the NWT would benefit, only 18% of the participants themselves thought that they would benefit from it. (Fig. 12) *“I owned a business earlier and I could not compete against the IDC or Gwich'in. You don't get contracts because they require a lot of people to do things. It's always the big corporations that gain, not the local people.”* (/p71/ - female, age 58, Inuvik) *“Once they start all the construction, maybe small local companies can put in bids or proposals to lease equipment or services for all the construction. But other than that, I don't honestly see how we are going to benefit in the long term.”* (/i6/ - female, age 23, Tuktoyaktuk)





**Figure 12** Participants’ opinions on who would benefit from the project (%).

Nearly half of the participants (44%) thought that oil and gas companies would benefit. (Fig. 12) *“The multinational oil and gas companies will get a lot of money.”* (/p107/ - female, age 42, Tuktoyaktuk) Some participants also thought that foreign oil and gas companies, and southern oil and gas companies would benefit from the project. Fewer participants thought that the Government of Canada (27%), the Government of the NWT (28%) and Canadians and Americans (25%) would benefit. (Fig. 12)

Four participants thought that other native groups in the NWT would also benefit from the project. Also large local companies like the E. Gruben's Transport, local contractors, and people working for the contractors were believed to benefit. Some participants believed that the project would not benefit the ordinary person. *“There will always be bigger companies overpowering the small ones. People who have money will get wealthier and the people that do not have money will get poorer.”* (/p64/ - female, age 45, Inuvik)

There was also concern among the participants and interviewees that from the communities in the ISR only Inuvik would benefit from the MGP, as a former Sachs Harbour resident explains: *“If they (people in Sachs Harbour) do benefit from the project, the benefits would be very minimal. I don’t see anybody working as wildlife or environmental monitor,*

*because they get all picked from here (Inuvik) and Tuk. The IRC has a profit sharing in place. That doesn't seem to be working because we see very little of any benefit from anything in Sachs Harbour. Sure we get a flight every other month or something, and have a town weekend, but very little happens there. It will be completely different for the Inuvik region. People will get a lot of jobs and it will bring money in the area. Like the swimming pool for instance, a lot of oil companies put up money for that development. They do a lot of other things too, but that's only in Inuvik area. They do very little for the smaller communities.” (/i9/ - male, age 27, Inuvik)*

There was no significant difference between living place and who the participants thought would benefit from the project except in the case of the Government of Canada (GC) (Chi-square=7.551, df=2, p=0.023) and the Government of the NWT (GNWT) (Chi-square=6.512, df=2, p=0.039). In Inuvik, 39% of the participants thought that the GC would benefit, but the corresponding figures for Tuktoyaktuk (25%) and Holman (19%) were much lower, same for the GNWT; Inuvik (38%), Tuktoyaktuk (19%) and Holman (25%).

There was a significant gender difference in participants opinion on would they themselves benefit from the project (Chi-square=6.864, df=1, p=0.009). More men (26%) than women (11%) thought that they would benefit from the MGP. *“I think I will (benefit from the project) because there will be a lot of work and I lacked out, like I got this job (engineer), it's a good start for me.” (/i3/ - male, age 25, Tuktoyaktuk) “I have a chance to work there, in that field. Then you're there watching it, you're there working with it, something happens then your there to stop it or tell somebody about it. So it would be better for more Inuvialuit to work on it and keep an eye on it too.” (/i10/ - male, age 25, Tuktoyaktuk)*

There was a moderate association between participants who thought that the MGP would make their lives better and participants who thought that they would benefit from the project (C=0.394, p=0.000). The participants who thought that the project would make their lives better also believed that they would benefit from the project. There was a significant gender difference in participants opinion on would the GC benefit from the project (Chi-square=5.643, df=1, p=0.018). More men (35%) than women (20%) thought that the GC

would benefit. There was also a significant gender difference in participants opinion on would the multinational oil and gas companies benefit from the project (Chi-square=5.26, df=1, p=0.022). Again more men (52%) than women (36%) thought that the companies would benefit. There was no difference between age and opinion on who would benefit from the project.

#### **7.8.4. Socio-economic and cultural impacts**

From all of the participants, 82 % thought that the project would have social, economic and cultural impacts, 2 % thought that it would not have any impacts and 16 % did not know.

In the questionnaire, the question on what kind of socio-economic impacts did the participants think that the project would have on the Inuvialuit in the ISR (app.1. q.19b) was found difficult, time consuming and too long. That is why about 17% (n=32) of the participants who assessed that the project would have socio-economic impacts did not answer the question. The participants that took part in the question often forgot what was asked. The question was as follows: “What kind of social, economic and cultural impacts do you think that the project will have on the Inuvialuit in the ISR. Will these impacts be: 1. greater or smaller due to the project and are these impacts; 2. positive, neutral, negative or both positive and negative? (select all appropriate answers)”. What often happened was that participants forgot that the question was focused on how the project would affect the Inuvialuit in the ISR, instead many participants answered how the project would affect all people living or coming to the ISR. The answers from question 19b are shown in table 8 below and explained in more detail in the following chapters.

**Table 8** The socio-economic impacts the participants thought that the MGP might have and how positive they thought that those impacts would be (%).

	Greater / more	No change	Smaller / less	Positive	Positive & negative / neutral	Negative
Employment	87	11	2	44	53	3
Education	77	17	6	50	44	6
Financial benefits	81	16	3	41	55	4
Infrastructure	76	19	5	29	58	14
New oil and gas development	84	11	5	33	59	8
New natural resources development	60	26	15	30	60	10
New business opportunities	83	11	6	48	48	4
Influx of people	84	9	7	24	57	19
Cost of living	64	23	13	18	32	50
Substance abuse	76	18	6	3	20	77
Health of the people				22	66	12
Community well-being				23	67	10
Culture				13	58	29
Traditional lifestyle				13	55	32
Money management				22	65	13

#### 7.8.4.1. Employment opportunities

Nearly 90 % of the participants thought that there would be more employment opportunities due to the MGP, but only 44% thought that these opportunities would have only positive impacts. (Table 8) *“There will be employment, because everybody knows in pipelines the boom and bust cycle. There’s going to be high jobs for maybe two or three years. Once it’s tested and in service you probably looking thirty or forty jobs at a compressor station, it’s not going to be much. Those two or three years, people could upgrade their skidoos, boats, or trucks. With that two or three year cycle it’s going to be good.”* (i4/ - male, age 32, Tuktoyaktuk) *“Employment opportunities will be greater for the Inuvialuit in the ISR. I see that as both positive and negative. The jobs will bring more dollars into communities, for some this will be positive and for others it will bring social*

*problems.*” (/p29/ - female, age 53, Inuvik) *“Employment opportunities are both negative and positive, positive in the sense that people work, negative in the sense that more money will be spent in the bars.”* (/p66/ - male, age 38, Inuvik)

Some participants were also concerned that the youth might drop out of school to go and work for the project. Many participants assessed that though there would be more employment opportunities, a lot of the local people were not educated enough to get the jobs. *“Not all are educated enough, they might not get a job.”* (/p107/ - male, age 42, Tuktoyaktuk) There was also concern that the jobs would go to southerners. *“I’d be worried that all the jobs that they’re promising, like the permanent jobs at the processing facility in Inuvik, would be taken by southerners or people that don’t permanently live here.”* (/i6/ - female, age 23, Tuktoyaktuk) Participants also hoped that the jobs would be distributed equally in the ISR. *“The leaders will hopefully divide the jobs into the communities and advocate more the communities.”* (/i12/ - female, age over 50, Yellowknife, a former resident of Holman)

About one participant in ten thought that there would be no change in employment opportunities due to the project. (Table 8) *“If the Inuvialuit, IRC, and the Gwich’in aren’t able to hire their own people, how are the oil companies going to do it?”* (/p66/ - male, age 38, Inuvik) Some participants were also concerned for who will look after the children if both parents work. *“A childcare centre is needed when people go and work out on the land.”* (/p1/ - female, age 30, Inuvik)

#### **7.8.4.2. Education opportunities**

Most (77%) participants assessed that there would be more education opportunities due to the project, but again only half thought that the impacts would be only positive. (Table 8) Participants and interviewees felt that everybody would not be able to benefit from those opportunities. *“Some people can’t go to post-secondary, because of the money.”* (/p111/ - male, age 18, Tuktoyaktuk) There was also concern that the training or some of the training that was being offered was too far e.g. in Alberta. *“It’s completely different when you get to the smaller communities. People don’t want to leave for any training. It would be good if*

*they could have people come in for training. I'd propose that the oil companies get together and build a training centre here in town (in Inuvik), where the people can get all their training and then go and get the job training out in the field. The employee bill will be much higher, but that way they could include the communities more, instead just the Inuvik area.”* (/i9/ - male, age 27, Inuvik)

People hoped that the gas companies would assist the local people in getting the proper education. *“There is a lack of education, people haven't had the opportunity to finish school or get post-secondary training. I'd like to see commitment on the companies' parts that are involved in the Mackenzie Gas Project to make sure there are opportunities for training, whatever the Inuvialuit need, so they can fill these roles, and be qualified for the jobs.”* (/i6/ - female, age 23, Tuktoyaktuk)

Interviewees hoped that the project could educate the local children in seeing that there are also other profession possibilities that are not often represented in the smaller communities. *“I would like to see them take more kids out and do more onsite work with the kids, take a class out for a science project. The project has many specialists in certain fields; engineers, social science people working on economics, botanist, and all these different things. Show them exactly what they are doing. So they see what's out there, so it opens their eyes. I think the kids here they don't see a lot of that because there is only certain jobs in the community.”* (/i7/ - male, age 30, Inuvik)

#### **7.8.4.3. Financial benefits**

The great majority (81%) believed that financial benefits would increase, but only 41% thought that the impacts would be only positive. (Table 8) *“Financial benefits will be greater, but it will increase the drug & alcohol abuse which is negative.”* (/p193/ - female, age 24, Inuvik) *“The IRC and the IDC will get royalties like in Alberta. We might get royalties. In Alberta my friends got royalties, but I don't know if it is a good or bad because they got it for free.”* (/p75/ - female, age 47, Inuvik) *“Looking at support, I think we get a lot for free and I don't know if people don't realize it that we do get a lot. But, everybody*

*always wants more. And I just feel like we need to work for it.”* (/i1/ - female, age 34, Inuvik)

Participants and interviewees felt that some of the possible benefits should be put into education, alcohol and drug programs and family healing programs. (as explained in chapters 7.8.4.2. Education opportunities, 7.8.4.9. Substance abuse, and 7.8.4.11. Individual, family and community wellness).

#### **7.8.4.3. Infrastructure**

The majority (76%) of the participants thought that there would be more infrastructure due to the project and 58% thought that the impacts would be both positive and negative or neutral. (Table 8) *“There may be more infrastructure, but not enough for the amount of development happening e.g. to take care of the garbage.”* (/p2/ - male, age 30, Inuvik) *“They sure are building a lot of houses now. These are going to be for people that can afford houses. The low income families, whether they are aboriginal or non-aboriginal, they’re not going to be interviewed for any of these places. And already you see some of your people living in expensive units that are run down and that’s all they have. Some are forced to getting two or three people in to that same unit, so they can afford to pay the rent. With that you see more abuse, more family violence, more elder abuse.”* (/i11/ - female, age 53, Inuvik)

#### **7.2.4.4. New natural resources development**

The great majority (84%) thought that the MGP would increase oil and gas development and the majority (69%) that it would also increase other natural resources development than oil and gas. Most participants (about 60%) thought that new natural resources development would have either good and bad effects or neutral effects on the people. (Table 8) *“If everything went well, then they could have new oil and gas development, if not, then they shouldn't. New natural resources development would be good for employment, bad for hunting grounds.”* (/p191/ - female, age 52, Holman)

There were also participants and interviewees who were afraid that there could be too much new development coming to the ISR due the MGP. *“That’s the part that scares me about this project. That’s like that Kevin Costner movie “If you build it they will come!” Field of Dreams. If this infrastructure gets in the ground then it truly becomes an open market, companies will then want to come up here because then they have a way to get their product out on the market. IRC and the ILA, I would like to see them have a draft lottery if companies want to come up here. Like Veritas, there is so many that each community gets and you have to be lucky enough to be one. It’s easier to monitor one or two different projects at a time rather than having to manage twenty worksites. There are seven companies doing four different sites right over the big Delta. Do we, the Inuvialuit, have the man power to monitor all that? I think a lottery of some sort should be developed. Just to spread it out. You could actually sustain it, make it over ten years and then that way families around here have ten years of good pay checks instead of having two really good years of pay. That way we in the community are not overwhelmed.”* (/i7/ - male, age 30, Inuvik)

#### **7.8.4.5. New business opportunities**

Most participants (83%) felt that there would be more business opportunities, 48% of the participants felt that the impacts would be positive and 48% that the impacts would be both positive and negative or neutral. (Table 8) *“My main concern is that bigger companies will get all the work. New business opportunities are both positive and negative because you do not know who will get the work. I hope that the Inuvialuit will be given priority on all ventures that is happening on private lands. If all the work goes to bigger companies, e.g. the Gruben’s, it’s negative.”* (/p193/ - female, age 24, Inuvik) *“Corporate groups will get new business opportunities. Small companies will find it tough to compete with the big ones. The IRC & IDC are corporate. They are not the General Motors, but they are still a corporate and they are there to make money.”* (/p66/ - male, age 38, Inuvik) *“There will be more business opportunities due to the project and it will be good for competition and prices, but also negative business opportunities might raise and crime.”* (/p29/ - female, age 53, Inuvik)



Participants and interviewees were also concerned that locals might not be ready for the long-term business opportunities that could develop from the MGP and that those opportunities should be identified in time for the people to get themselves prepared for them. *“I hope to see long-term development, long-term jobs... IRC has a lot of their policies in place. One of those policies is collective bargaining agreements with companies that do work in the ISR. A part of that there are so many Inuvialuit that have to be working on a certain project. It is my hope that the main contracts once the pipeline is running will go out to Inuvialuit companies. There is going to be a lot of training that needs to happen before that can come to a reality. It will be my hope that the MGP identifies these business opportunities now before this happens. So people in the ISR can get a couple years of training if they need it or experience in the field before these opportunities do come. It’s a huge pipeline but it’s only really three winters of work, a person might be able to get fifteen months worth of work out of this project on a construction phase and that’s nothing. You have to get in on the back end which is the long-term, maintenance contracts and that kind of thing. I think it could be a win- win situation for everybody.”* (/i7/ - male, age 30, Inuvik)

#### **7.8.4.6. Influx of people**

The great majority (87%) assessed that influx of people would be greater due to the project. (Table 8) Most of the participants (57%) felt that the impacts of influx of people would be both positive and negative or neutral. *“Yet to be seen if influx of people is bad or not, if single men move up it is bad.”* (/p66/ - male, age 38, Inuvik) Nearly one fourth (24%) felt that the impacts would be positive. *“A lot of people got mixed in Tuk, it’s good to mix.”* (/p72/ - female, age 40, Inuvik) The rest (19%) answered negative. *“There will be no change for the Inuvialuit in employment opportunities. Most of the employees will be southerners. The influx of people is mostly negative.”* (/p29/ - female, age 53, Inuvik)

One interviewee was concerned that the influx of people would increase the number of children being born without knowing their father and how that would affect those children and families. *“Because a lot of people will be coming to work up north, there’s going to be children born with out not even knowing who their father is. That’s a devastating thing, I’m*

*a product of that - not knowing who my natural father is for many years and it affected my life big time.” (/i11/ - female, age 53, Inuvik)*

#### **7.8.4.7. Camps**

Some interviewees talked also about the fear of having camps outside the communities and men who are not locals coming to spend their leisure time in town. *“They’re so close and the amount of men that will be here to lure young women and young teens. That is an awful fear. As much as they’re trying to keep the camp separated from the community I doubt if it can happen. Our people need to be preparing our parents and young youth the importance of the proper wedlock. Not just going out and getting into relationships that can be harmful or hurtful in the end. They won’t most likely be staying. They are people that will be gone. They are only pleasures and that’s something that has been done in the past... I know when they have public meetings these issues are brought up, but we need to, not just to talk about it but develop some sort of program, or an educational event.” (/i1/ - female, age 34, Inuvik)*

Some interviewees were worried that the local workers are kept at the camps for weeks and not given the opportunity to spend nights and weekends with their families. *“Inuvialuit people have really strong family connections and we need our family, we can’t go on without them. They should have planes or boats or whatever to bring them back on the time off. They shouldn’t have to bring people in from the south unless it’s really specific work. But for entry level jobs they shouldn’t have to. Workers should be able to go back and forth whenever they want. I have a couple of friends who work security at the Trapper (a bar in Inuvik) and they just dread it when there’s a crew change, because people have been hooked, been deprived from drugs or alcohol. They come back and all they want to do is party, party, party. It’s bad news. Really makes everything look bad for oil companies and just for themselves in general.” (/i9/ - male, age 27, Inuvik)* *“The kids are the worse affected cause if I go out and work for three weeks, I am gone out of my home for three week and I don’t see my kids... I come home for a week or two weeks and then I go back out for three more weeks. Unfortunately the calendar doesn’t stop if my kid has a birthday. And I’m out working, well I would love to be there, but I have to be out there working, so I*

*can provide a shelter, a house, and things for my son or daughter. And I think the little kids don't understand why mom or dad isn't home when they should be.” (/i7/ - male, age 30, Inuvik)*

#### **7.8.4.8. Cost of living**

The increase in cost of living was seen as the second biggest negative socio-economic impact. (Table 8) *“Our town is under-housed. Though there is more construction in town our beneficiaries are not getting those houses. Those houses are for the people who come just for a year or two and they are the ones who access all the Government grants for the houses, they fit that profile, they've got the credit and we are charged more for the housing.” (/p1/ - female, age 30, Inuvik)* *“I think the biggest thing is housing. We have very limited housing in this community and you cannot come in with a big project like this and not affect the housing. I pay now a row house a lot more than I did for that row house a couple years ago. And the row house has done nothing but age and get poorer in its looks and its feel. Its aged and its gotten worse, but I pay more, it should be the other way around. I shouldn't be paying more for a worse product. I think that's the problem when companies like this come to an area and there's lots of work. Houses get taken up really quick and after they get a couple houses here and they pay this much, they are willing to pay this much, well now the other guy down the block is going to raise their rent and everybody is going to raise their rent and who gets killed but us local people. Our jobs they don't give us a big bonus or stuff like that to sustain ourselves but we get stuck in the war out there trying to get as much as you can.” (/i7/ - male, age 30, Inuvik)* Some participants believed that the higher cost of living would not last for long. *“The cost of living will skyrocket in the beginning. After some time I think that the price of rent and food will go down.” (/p66/ - male, age 38, Inuvik)*

In Tuktoyaktuk the people who were for an all year road believed that the cost of living would be cheaper if the road was built and hoped that the project would help the community in building one. *“The cost of living would be cheaper if they build a road, but it's hard to say will it change if the road will not be built.” (/p117/ - male, age 45, Tuktoyaktuk).* *“There will be millions of dollars in this, so I don't see why they can't build*

*a highway right up to Tuk, with that we would have lower prices, not only for groceries but housing will be affordable, and we might see more business development, and could base more operations out of Tuk.” (/i6/ - female, age 23, Tuktoyaktuk)*

Some participants were scared that the cost of living would increase the number of homeless people.

#### **7.8.4.9. Substance abuse**

The great majority of the participants (76%) thought that the project would increase substance abuse, this was seen as the most negative (77%) social impact that the project could bring. (Table 8) Participant and interviewees had clear suggestions on how to tackle the problem of substance abuse; more money should be put into alcohol and drug programs and a treatment centre is needed in Inuvik. *“Drugs and alcohol will be negative impacts. You see it already in Yellowknife, the cocaine and crack use. You see the negative impacts of that there. The youth in Inuvik are just getting into it. You won't see the negative impacts until about 5 year's time. There is no drug and alcohol treatment in Inuvik that is the number 1. need. They try to go down south, but it does not work for them, because it is all different culture.” (/p1/ - female, age 30, Inuvik) “How can you not have an alcohol and drug program in a community, especially in a bigger community like Inuvik? The oil and gas people are they going put any money forward to a social impacts program, willing to help out with programs like Turning Point or Shelter (Women's Shelter)?” (/i11/ - female, age 53, Inuvik) “We need another drug officer in Inuvik, now there is only one. They could shut down the highway and check the post and airplanes etc. Substance abuse goes up when not enough people are going on the land. They don't have the equipment to go on the land with. People with drug and alcohol problems should be helped by taking them out on the land. Also when people don't have jobs the substance abuse becomes greater.” (/p193/ - female, age 24, Inuvik)*

#### **7.8.4.10. Health**

The majority (66%) of the participants assessed that the project would have both positive and negative or neutral impacts on the health of the people. (Table 8) *“Health of the people depends on who you are and you’re upbringing.”* (/p187/ - female, age 40, Holman) *“With any industry boom there are negative cycles. I have seen the social problem it goes from elders to the youth. Suicide from the abuse... To get well you need a positive lifestyle. Mental health is something each person should seek out for when the industry come. You need to be well in order to tackle the new era. I hope there will be mental health facilities so that our own people could be looked after.”* (/i12/ - female, age over 50, Yellowknife, a former resident of Holman) About one fifth (22%) of the participants assessed that the project would have positive impacts on health of the people and about one tenth (12%) that the impacts would be negative. *“We’re already seeing the flow of people coming in and then we’re going to run into the health issues, especially the sexually transmitted diseases HIV, Aids, Hepatitis, and all these other illnesses we might not even be aware of. My biggest fear is the social impacts that we’re going to see, it’s going to be devastating. Children going to unwed mothers or mothers dying of HIV / Aids or children are being born with HIV or all these other illnesses. There will be a lot of depression. I really think there’s going to be a lot of issues, more deaths and more crime.”* (/i11/ - female, age 53, Inuvik)

#### **7.8.4.11. Individual, family and community wellness**

As explained earlier (in chapter 7.8.2. How the MGP would affect people’s lives) most Inuvialuit felt that the project would have both good and bad effects or no effects on their lives, 21% felt that the project would have a positive affect and only 3% felt that the project would have a negative effect on their life. An interviewer explained how the individual well-being is directly associated with the employment: *“Self esteem isn’t very high; not very many jobs around. People have to go for income support, there is no other way. Now people need jobs to build confidence and self esteem from jobs. The young people need the confidence and need to be well looked after, encouraged.”* (/i12/ - female, age over 50, Yellowknife, a former resident of Holman)

Most participants (67%) felt that the project would have both good and bad or neutral effects on community well-being. (Table 8) *“Community well-being will be positive because there will be more jobs, but negative because of the drugs.”* (/p183/ - female, age 48, Holman)

Participants and interviewees also had concerns for the family unit. *“My biggest social concern is that the effects on families will be very, very, very trying. It's already trying, when the young go and drink and buy drugs. What kind of mitigation will be done for broken homes? You can't mitigate that.”* (/p71/ - female, age 58, Inuvik) One Interviewee explained how a lot of people are still suffering from residential schools and the fast changes that have happened in the Inuvialuit way of life. She suggested a family healing program for the whole family unit: *“A lot of us are not well, emotionally or spiritually. Turn to drugs, because it just numbs it more. Turn to drinking, because of bad memories. I feel that we need programs that can heal whole families, because the cycle comes from the whole families. We are still facing the impacts of the residential schools that had an impact on many people. My parents were five when they went to residential school. So, I see the impacts that my parents never had mother - father nurturing and then the loss of their own traditional ways and their traditional lifestyle. We couldn't learn much about their ways, because they never knew much about them either. So I see all that, the change being happen. It's been devastating. I have friends and brothers that committed suicide, for what? For the abuse that was done to them. We just get band aid solutions. Our people need to go through a healing process and the Government could be putting more dollars into the programs that we need. An on the land family unit program should be implemented.”* (/i11/ - female, age 53, Inuvik)

#### **7.8.4.12. Culture and traditional lifestyle**

Most of the participants thought that the project would have both positive and negative effects or that the effects would be neutral on the culture and traditional lifestyle. (Table 8) *“The project might have both positive and negative effects on traditional lifestyle; depending on how they prevent the negative effects. Depending how the project will effect*

*the caribou migration and water. How much will they be pumping hot water in our waters and how will that affect the ecosystems.” (/p193/ - female, age 24, Inuvik) “Projects promote culture and traditions, but they don't always do what they say. Young people going to work, they don't have to think about culture and tradition so much, they might forget about it.” (/p183/ - female, age 48, Holman)*

More participants assessed that the project would have negative (about 30%) rather than positive (13%) effects on the culture and traditional lifestyle. (Table 8) *“A lot of youth don't want to learn their culture because of drugs and alcohol.” (/p111/ - male, age 18, Tuktoyaktuk) “With all this development happening there might not be enough time to keep trying to live the culture that we have... Even with myself, I'm already missing out on lot, because I'm at work all the time. During that period stuff might be forgotten, stories being forgotten and all the old time ways. Don't let that discourage us, because the whole world is changing, we'll have to just adapt to what's happening around the world. I don't want us to completely lose our culture, but it's going to be a big change.” (/i3/ - male, age 25, Tuktoyaktuk)*

Participants and interviewees were concerned for the language and how changes in caribou routes would interfere with traditional teachings. *“Projects like this have impacted on the culture. It's an old fact, it's seen. The language is almost gone, dying very fast. The culture is going. There is a huge impact on us.” (/i1/ - female, age 34, Inuvik) “Because of the project the caribou are going to be further away. My son won't be able to hunt. He won't learn his traditional teachings on caribou hunting. The next generation won't know how to butcher and prepare the caribou.” (/p1/ - female, age 30, Inuvik)*

People were hoping for assistance so that the communities could afford to promote their culture. *“What I would love to see is a cultural and language centre, where we could preserve certain aspects of our culture and heritage, and take language classes. That's important not only to me but to a lot of people in town.” (/i6/ - female, age 23, Tuktoyaktuk)*

#### 7.8.4.13. Money management

Most participants (65%) assessed that the project would have both bad and good or neutral effects on the money management. (Table 8) More participants thought that the effects would be positive (22%) than negative (13%). *“The negative impact is that money might go to liqueur or drugs which make the social impacts worse.”* (/p187/ - female, age 40, Holman)

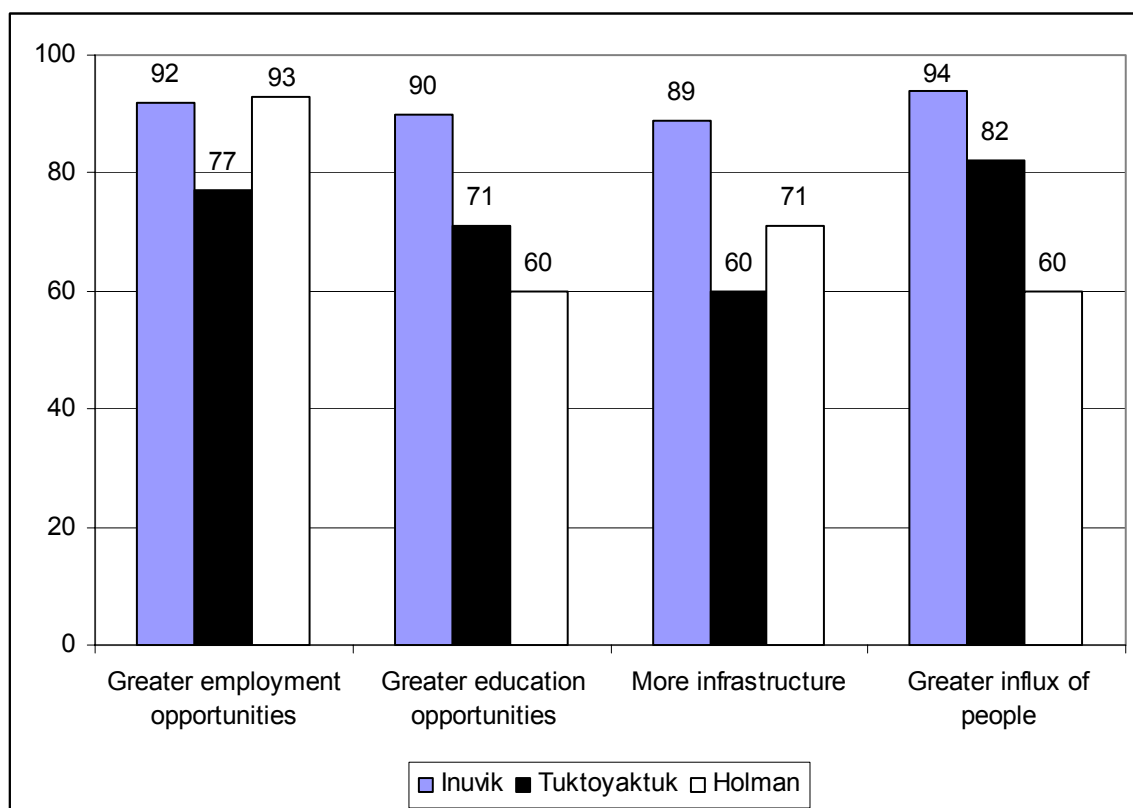
The participants and interviewees believed that there is a strong connection between money being miss-managed and substance abuse and that gas companies could help their workers to overcome their problems. *“Even now there is a big problem with drugs and alcohol with the people that work out at the camps and in the communities there’s no support for that. A lot of people take the money that they make at the camps back home with them, that causes a lot of problems there too with the drugs and alcohol. The oil companies could join a partnership, pay for some of the counselling or drug rehab programs. When you’re at work, they could have to take a drug rehab program or AA. A lot of people my age and a little older, the drugs and alcohol is a big problem and the gambling too, it would be a big problem with all of the money that the people are making. A lot of people spend their money on drugs and alcohol and leave their families with nothing.”* (/i9/ - male, age 27, Inuvik)

#### 7.8.4.14. Statistical differences in socio-economic opinions

For statistical analyses, the results from table 8 were re-classified so that to the option “greater / more” was given a value 1 (greater / more) and the opinions “no change” and “smaller / less” 0 (not greater / more). Using the re-classified results concerning the questions on socio-economic impacts, there were significant differences between living place and opinions on education (Chi-square=8.150, df=2, p=0.017), on infrastructure (Chi-square=10.433, df=2, p=0.005), on influx of people (Chi-square=10.720, df=2, p=0.005), and a nearly significant difference in the case of employment (Chi-square=5.839, df=2, p=0.054). (Fig. 13)



A higher amount of participants in Inuvik (90%) believed in greater education opportunities than participants in Tuktoyaktuk (71%) and Holman (60%), this was also the case in more infrastructure and greater influx of people. In Inuvik, 92% of participants believed that there would be greater employment opportunities for the Inuvialuit in the ISR due to the MGP, the corresponding figures were 77% for Tuktoyaktuk and 93% for Holman. (Fig. 13)



**Figure 13** Proportion of participants who expected greater or more socio-economic impacts. Only questions where differences were significant or nearly significant (%).

In Tuktoyaktuk, only 60 % of the participants believed that there would be more infrastructure for the Inuvialuit in the ISR due to the MGP when the corresponding figure was 89 % in Inuvik and 71 % in Holman. One reason for this might be that the all weather road ends in Inuvik and many people in Tuktoyaktuk have wanted the all year road to continue all the way to their community. The MGP is not planning on building one. *“There will be no change in infrastructure and that’s negative - the road from Inuvik to Tuk is not happening.”* (/p162/ - male, age 23, Tuktoyaktuk) Some participants and interviewees

thought that there was also a lack of other infrastructure in Tuktoyaktuk. *“There should be something coming back to the people, because this is where the gas is coming from. I think there should be a little bit thought given into that because we’re the ones in the community of Tuk and Inuvik dealing with the social impacts. The roads, the water and sewage, there’s more people here it stresses out. Get a curling rink or a family centre like Inuvik’s getting. The biggest one is making sure that we have our community gas supplied because there is only forty miles of pipe to run into Tuk for gasification for the community. The cost for fuel oil in the winter is six to seven hundred dollars a month for a private home owner if not more. I think gasification should be looked at.”* (i4/ - male, age 32, Tuktoyaktuk)

Again for statistical analyses, the results from table 8 were re-classified so that the option “positive” was given a value 1 (positive) and the opinions “positive and negative / no change” and “negative” 0 (not entirely positive). Using the re-classified results concerning the questions on socio-economic impacts, there were no other significant differences between living place and expectations on socio-economic impacts except in the question of infrastructure (Chi-square=7.518, df=2, p=0.023). In Holman, most participants felt that new infrastructure would be a positive change, in Tuktoyaktuk only one fifth felt that. (Table 9)

**Table 9** Participants opinions on how positive new infrastructure would be (%).

		Living place			Total
		Inuvik	Tuktoyaktuk	Holman	
New infrastructure	Positive	29	20	56	29
	Not entirely positive	71	80	44	71
Total		100	100	100	100

There were no significant gender differences in expectations on the magnitude of socio-economic impacts. Instead, men assessed that the changes concerning health of people (Fisher’s exact, p=0.011), on costs of living (Fisher’s exact, p=0.034) and on money management (Fisher’s exact, p=0.001) would be more often positive than the women did. *“My greatest concern is the money management, drugs and alcohol. I hope that people*

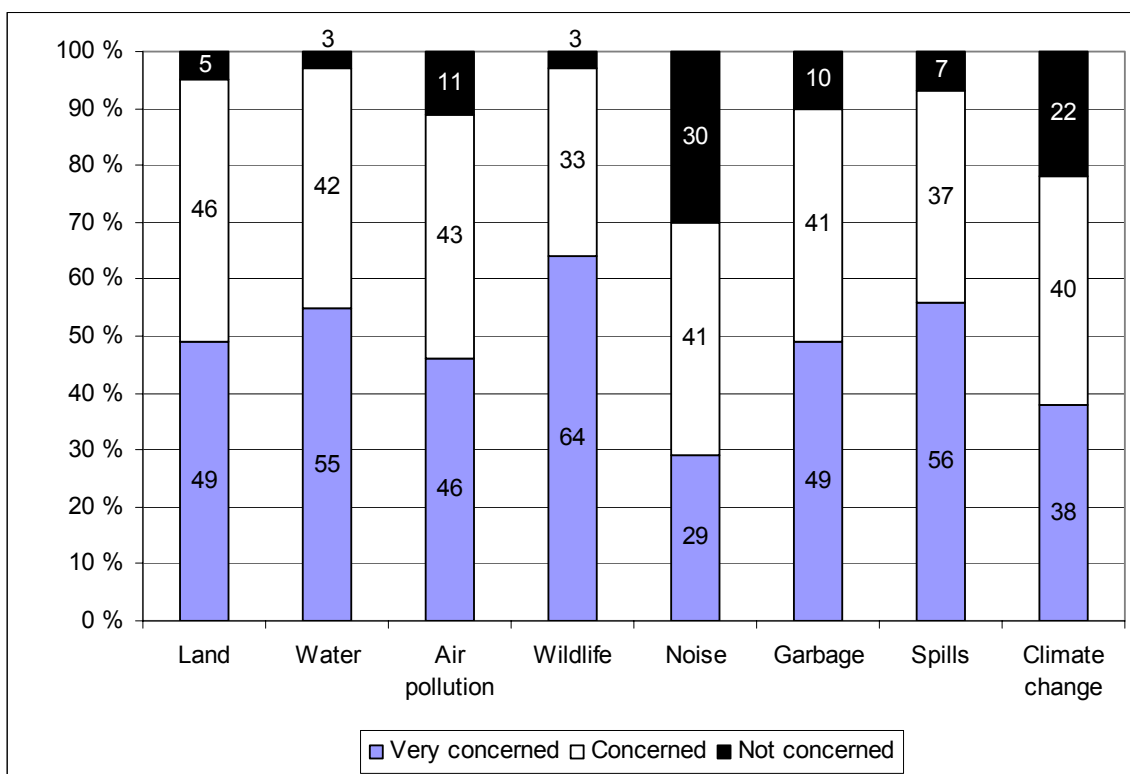
*would spend their money wisely. The people should be educated to use their money wisely.”*  
(/p107/ - female, age 42, Tuktoyaktuk)

Age associated with expectations on changes in employment and substance abuse. From people of age 16-24 years, 82 % expected more employment possibilities, while the corresponding figures for other age groups were 93 % (25-34 years), 97 % (35-44 years), but only 74 % from people of age older than 45 years ( $r_s=-0.279$ ,  $p=0.002$ ) In same order, people felt that these changes were entirely positive as follows: 58 % (16-24 years), 61 % (25-34 years), 27 % (35-44 years) and 31 % (45 years or more) (Chi-square=11.54685,  $df=3$ ,  $p=0.009$ ). Thus, participants younger than 35 years of age assessed employment changes would be more positive than older participants. Additionally, the youngest age group assessed that the influx of people would be more positive (46 %) than the older age groups (15 %, 22 %, 17 %) (Chi-square=8.510,  $df=3$ ,  $p=0.037$ ). On the other hand, the older people expected increase in substance abuse more than the young people ( $r_s=0.288$ ,  $p=0.001$ ).

#### **7.8.5. Environmental impacts**

*“I hope that it (the MGP) would benefit everybody's life for the better. My main concern is oil spills and gas spills, and effects on hunting and fishing for the Inuvialuit, fish and meat are expensive in the store.”* (/p75/ - female, age 47, Inuvik)

A great majority (87 %) thought that the project would have environmental impacts (on the land, water, air etc.) in the ISR. Only 5 % did not expect any environmental impacts and 8 % did not know. The participants were most concerned about wildlife. Most participants (64%) answered “very concerned”. *“Main concern the animals, because our culture is to live off the land.”* (/p50/ - female, age 38, Inuvik) Noise posed the smallest concern, but still 29% were very concerned and 41% concerned. (Fig. 14)



**Figure 14** Participants’ level of concern for different environmental impacts (%).

### 7.8.5.1. Land

Close to a majority (49%) of the participants were very concerned about the impacts that the MGP might have on the land, 46% were concerned. (Fig. 14) People were concerned on how the construction, an accident, or a spill might effect the vegetation and the food chain. *“If there is an oil or gas spill, it might pollute the berries etc. If there is a fire and if the ground is dry, it might make a big fire.”* (/p96/ - male, age 24, Tuktoyaktuk) *“With any construction the land is going to be affected, so that’s a big concern for me. Is there going to be a guarantee that it (the pipeline) won’t leak or break? Cause it’s going to affect a lot if something like that happens, that’s if it’s not caught in time.”* (/i10/ - male, age 25, Tuktoyaktuk) *“The amount of damage that can happen, that is already happening throughout the ISR due to the oil companies coming in and tearing open the land. I’m concerned for the land itself and the animals, because the animals do feed off the land, we feed off the animals and it’s just like a cycle. And if the land is contaminated the animals*

*are contaminated and the people are most likely to be contaminated.” (/i1/ - female, age 34, Inuvik)*

Concerns were also raised on the pipeline being built underground which might melt the permafrost and that the land might erode and cause difficulties to the pipeline.

#### **7.8.5.2. Water**

The majority of the participants (55%) were very concerned for water. (Fig. 14) People were concerned how much hot water would be pumped into the Mackenzie Delta and how would that affect the ecosystems, the protection of fresh drinking water, impacts on water flow, gas leaks to the water and dredging. *“The Big Lake here, if something were to happen there fish would be killed or disturbed, along with all the creeks and ravines that go along here. So if something were to happen like a spill, everywhere would be affected, for sure, cause it’s all connected through here, through these little creeks. That would also be for Parsons since it’s such a big lake and there’s a lot of creeks connected to it and Husky Lakes.” (/i10/ - male, age 25, Tuktoyaktuk) “About dredging - anything they do with water flow will affect us and fish.” (/p70/ - male, age 40, Inuvik)*

#### **7.8.5.3. Air**

Participants were not as concerned for air as for land and water, but still 46% were very concerned and 43% concerned. (Fig. 14) *“The environmental impacts will be huge. The air quality of the stations they are building is the main concern... Alberta has had problems with gas production. The cows have got sick from the air pollution.” (/p66/ - male, age 38, Inuvik)*

#### **7.8.5.4. Wildlife**

Wildlife was the main environmental concern that the participants had. Most participants (64%) were very concerned. (Fig.14) Participants and interviewees were concerned for wildlife (whales, seals, moose, bears, polar bears, fish, foxes, muskrats, beavers, otters,

geese and caribou were mentioned), wildlife habitat and migration routes. Participants told how the caribou crossings had changed in the past near the ocean (Beaufort Sea) and river (the Mackenzie River) meeting because of rigs. People were afraid that noise and traffic might make the wildlife change their migration routes. *“Our main meat is caribou. Because of the project the caribou are going to be further away... Even this year (2004) we had to go all the way to Tuk, because of the oil & gas activity the caribou change their routes. The caribou will stay further from the activity; putting the pipe down, traffic, noise from the compressor stations, it will be all new to them. The compressor stations are going to be loud.”* (/p1/ - female, age 30, Inuvik) *“We like to hunt up at Big Horn Point, Taglu area for caribou, moose, and all this stuff is going to be in the middle of the area and we’ll have to travel a little farther next time just to even find something in all those compressor shacks, and places with big things sticking up... It’s kind of right in the area where I and my family like to go, because of that it’s going to make it harder to gather what we need like the meat, the fish, pick berries.”* (/i8/ - male, age 28, Inuvik)

Some people felt that the oil companies were not always to blame for the changes in caribou routes. *“I don’t know if it’s going to affect the caribou, because the caribou are already changing all the time. They were really wild this year (2004), last year they were really tame and a few years before they were all over. Their acts change all the time and I don’t know if that’s the effect from the gas or what’s going on. But who knows if something major happens what’s going to happen to the animals... Like it (migration routes) changes from year to year... You go somewhere else and it’s a lot tougher to hunt and other years it’s just like nothing.”* (/i5/ - male, age 26, Tuktoyaktuk)

There was also concern that spills would harm the wildlife and wildlife habitat, and that the Mackenzie River would no longer provide people with fish. *“The fish may be (affected) because there’s lakes around they are full of fish, Lake Trout, White Fish and other kinds of fish. If they have to go in or around the lakes, but when a machine goes through and the tundra is so easy to disturb, because it’s all ice underneath. If you take off the cover, it’ll melt and it’ll put all kinds of salt from the ground into lakes and it just runs off in the spring, killing the fish. I often say: “When you put another fish into another lake all the*

*other fish will die, because it's something different." You can't do that." (/i8/ - male, age 28, Inuvik)*

People were not that worried about trap lines, mostly because people did not trap that much anymore. *"I go out in the winters and I catch lynx and foxes, wolverines and wolves, I don't really trap them but I hunt them, muskrats I go out and catch muskrats every spring, from March to April and part of May. A lot of people used to trap in the seventies so they are worried about their trap line, but today not too many people trap. My trap line is way out of the way of the pipeline. It's more in the centre of the Delta." (/i8/ - male, age 28, Inuvik)*

#### **7.8.5.4.1. Caribou and Parsons Lake**

Parsons Lake area is on of the main caribou hunting grounds that the people from Inuvik and Tuktoyaktuk use. Participants and interviewees were concerned especially on how the Parson Lake above ground flow line from the South Pad to the North Pad might impact caribou hunting. *"Parsons Lake, that's where I see the main problem, because of the caribou. A lot of people use that Parsons Lake are for hunting caribou and I think any development would push the caribou further, people would have to try harder and travel further to hunt the caribou... The caribou would have to move somewhere else. I don't think they would want to be around any development. Not at first anyway. It's the main concern with the development." (/i9/ - male, age 27, Inuvik)* *"I am worried that all this activity in the winter during the time they are coming through probably scare them away. After that we'll have to travel great distances just to find them. Most of it is through rugged country. I travelled in the northeast tend of Sitidgi, to find caribou, because there was so much seismic activity in the Tuk Peninsula and pushed them all over. I had to go over into the timber, it was awful in there because of the deep snow and the trees and there's really rugged hilly country. I think it would be a good idea if they did put it underground at least by the Parsons area, because they still have lots of room to come by the Husky Lakes. I don't think it will bother them too much, but it takes away a lot of the grazing area from around where they like to be in the Mountain Lakes area and Shelter Creek." (/i8/ - male, age 28, Inuvik)*

Some interviewees brought up the concern of people shooting the above ground pipeline and also the possibility of a no shooting area to protect the pipeline from bullets. *“If it’s underground you don’t really see it, and if something breaks it might take a lot to fix or check, but there’s danger on both sides, underground or above ground. The main concern if it’s above ground then migration routes might be affected. People might want to shoot it so that could be a big concern too.”* (/i10/ - male, age 25, Tuktoyaktuk) *“Having a pipeline above ground such as the Parsons Lake area will make it harder for hunters if there is a no shooting area, hunters do not like to chase their game, because of reasons such as meat being more tough and also more musky tasting.”* (/p112/ - male, age 23, Tuktoyaktuk)

#### **7.8.5.5. Noise**

From the different environmental impacts presented in fig.14 noise proposed the smallest environmental concern within the participants. Close to one third of the participants (30%) were not concerned about noise, 41% were concerned and 29% very concerned. (Fig. 14) Participants who were concerned about noise, related their concern to noise disturbing the wildlife and the wildlife ending up changing their migration routes. *“There will be the impact from vehicles and more helicopters, they interfere with migratory routes.”* (/p81/ - female, age 49, Tuktoyaktuk)

#### **7.8.5.6. Garbage**

Nearly half of the participants were very concerned about garbage (49%) and 41% were concerned. (Fig.14) *“When the Dew Lines was shut down they just left all the equipment and buried the oil drums. The people are concerned that that won’t happen again. There’s been an effort from outsiders such as oil companies to prevent any such thing. I think if we as the people – the Inuvialuit, keep on top of them and assure that those concerns and rules do apply, we can be environmentally safe.”* (/i1/ - female, age 34, Inuvik)

There was a concern that the present infrastructure would not be enough to take care of the garbage that the project might produce. Rest of the participants (10%) were not concerned. (Fig. 14) Many felt that now days the garbage is well taken care of. *“We did a sumps*



*reclamation claim here at Parsons Lake, which would be the site above all the waste. I've been there and seen the site myself and I have no concerns about that. I know they are doing a good job with the waste. Maybe the groundwater runoff there, that might be some concerns, but as far as spillage or anything like that, they have it under control. Because they have wildlife monitors and environmental monitors and I don't think they would let anything happen to the land or to the animals. And even if something were to happen they write reports and submit them to the HTC's and to the Game Council and the IRC itself."* (/i9/ - male, age 27, Inuvik) *"The oil companies are really taking responsibility and hauling garbage back in if not getting the proper permits to burn right at the site, so I think they are doing a good job."* (/i4/ - male, age 32, Tuktoyaktuk)

Participants had questions about how the project would handle the garbage. *"Toxics might affect the animals. What are they going to do with the garbage, bury it?"* (/p75/ - female, age 47, Inuvik)

#### **7.8.5.7. Spills and accidents**

Most participants (56%) were very concerned about the possibility of spills. (Fig.14) People often accepted that spills are a part of gas activity, but many had concerns that the cleanup would not be done at all, or would not be done early or efficiently enough. *"My main concern is spills and the gas companies not cleaning up. At Minto they did not cleanup."* (/p187/ - female, age 40, Holman) *"I was at one of the seismic camps and they do have fuel spills and if they have all this activity going on in the pipeline, they are going to have a lot more. When I went to a few places I could smell diesel fuel, just like you were standing in it and the vegetation round was all dead because of the contaminants. I went back to the same place for a few years back and I noticed the grass still hasn't grown back. I don't think it ever will, because they don't have good enough cleanup procedures. They have to look into that and try to find a way to cleanup a bit better."* (/i8/ - male, age 28, Inuvik) *"The bottom line is making sure it's done right. I've worked on pipelines before. I've seen blowouts of pipe within the kilometres of that area affected cause it's all burnt up."* (/i4/ - male, age 32, Tuktoyaktuk) *"We just need to be insured that there are going to*

*be people and equipment readily available to clean that up as soon as possible so that the land and the animals won't be disturbed.” (/i1/ - female, age 34, Inuvik)*

Participants were also concerned that there could be a spill due to something happening to the pipeline. *“The people should be told about the pipeline, what material they are using, is it going to rust, about spills etc... what kind of technology they are going to use. It (the pipeline) won't last forever.” (/p113/ - male, age 33, Tuktoyaktuk)*

#### **7.8.5.8. Climate change**

Climate change proposed the second smallest concern amongst the participants. Over one fourth (22%) of the participants were not concerned about climate change. *“The climate is changing anyway. This project won't make it that much worse.” (/p71/ - female, age 58, Inuvik)*

#### **7.8.5.9. Offshore drilling**

With some of the participants and interviewees the possibility of future offshore drilling was also discussed. *“If there would be drilling in the ocean, then I would be more concerned about the drilling site.” (/p186/ - female, age 42, Holman)* *“Offshore, it's a big issue with the people, because a lot of the animals are very sensitive to noises or pressures.” (/i9/ - male, age 27, Inuvik)* *“(Offshore drilling would) be more of a concern, because there's a lot of ice that happens there, its water. Contaminate the water then it's pretty hard to cleanup, it's not contained, it's just going to affect a lot. Let's hope they have a bigger fuss about that.” (/i10/ - male, age 25, Tuktoyaktuk)*

#### **7.8.5.10. Statistical differences on concern for the environment**

In participants' concern related to environment there was a clear trend. When asked, how concerned are you for a certain environmental aspect, Holman had the highest percentage of answers in the category very concerned, Tuktoyaktuk had the second highest and Inuvik the lowest. (Table 10)

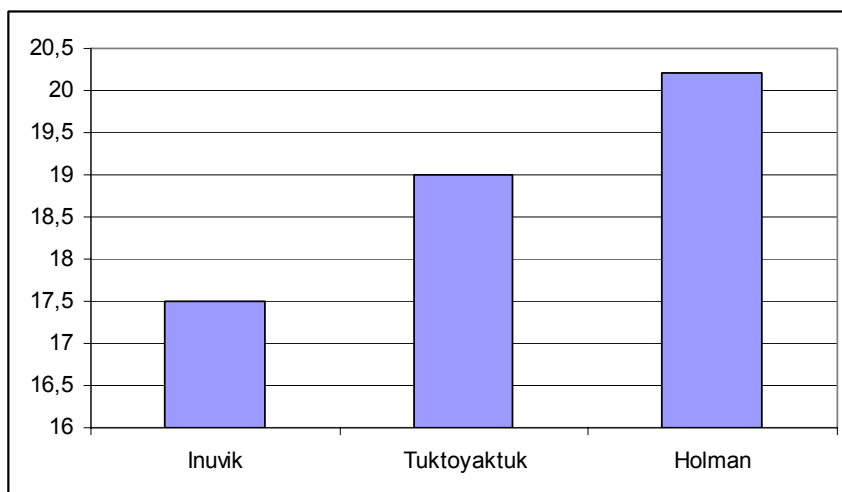
**Table 10** The level of concerned about possible environmental impacts (%).

		Living place			Total
		Inuvik	Tuktoyaktuk	Holman	
<b>Land</b>	Not concerned	3	6	4	5
	Concerned	62	36	36	46
	Very concerned	35	58	60	59
<b>Water</b>	Not concerned	2	4	0	3
	Concerned	55	38	20	42
	Very concerned	43	58	80	55
<b>Air</b>	Not concerned	14	13	0	11
	Concerned	58	30	40	43
	Very concerned	28	57	60	46
<b>Wildlife</b>	Not concerned	0	3	8	3
	Concerned	38	34	20	33
	Very concerned	62	63	72	64
<b>Noise</b>	Not concerned	42	23	21	30
	Concerned	38	44	37	41
	Very concerned	20	33	42	29
<b>Garbage</b>	Not concerned	10	13	0	10
	Concerned	52	39	21	41
	Very concerned	38	48	79	49
<b>Spills</b>	Not concerned	13	4	0	7
	Concerned	47	34	17	37
	Very concerned	40	62	83	56
<b>Climate change</b>	Not concerned	24	26	4	22
	Concerned	47	39	26	40
	Very concerned	29	35	70	38

For further analyses, a sum score of concern was calculated by adding together values (3=very concerned, 2=concerned, 1=not concerned) of all the questions showed in fig. 14 and table 10. In analysing the cases, values 0 (they had not given answer to any question) were omitted. Again people living in Holman, were generally most concerned, next were people in Tuktoyaktuk and least concerned were people in Inuvik (fig. 15). In individual

questions, differences were significant in concern on water (ANOVA  $p=0.023$ ), air (ANOVA  $p=0.013$ ), garbage (ANOVA  $p=0.047$ ) and climate change (ANOVA  $p=0.038$ ).

Though participants in Holman were more concerned for the environment than participants in Inuvik and Tuktoyaktuk, the people in Holman believed that this project in the scope proposed now would not effect their close environment. *“The effects won't be big in Holman, too far from it.”* (/p183/ - female, age 48, Holman) *“My main concern is oil spill, busted pipe and Inuvik hunting grounds.”* (/p191/ - female, age 52, Holman) A hunter, who used to live in Sachs Harbour, also believed that the impacts of the MGP would not affect the wildlife in Banks Island. *“I don't think there would be any negative effects at all.”* (/i9/ - male, age 27, Inuvik)



**Figure 15** Sum score of concern that the participants had for the environment.

The older people were generally more concerned than the younger people for the environmental impacts ( $r=0.174$ ,  $p=0.029$ ). In the individual questions, the differences were not significant except in the question of noise ( $r_s=0.243$ ,  $p=0.002$ ). Older people were more concerned about noise than younger people. There were no gender differences or association between how much the questionnaire participants spent time on the land and how concerned were they for the environment.

### 7.8.6. The EIA and the SEIA

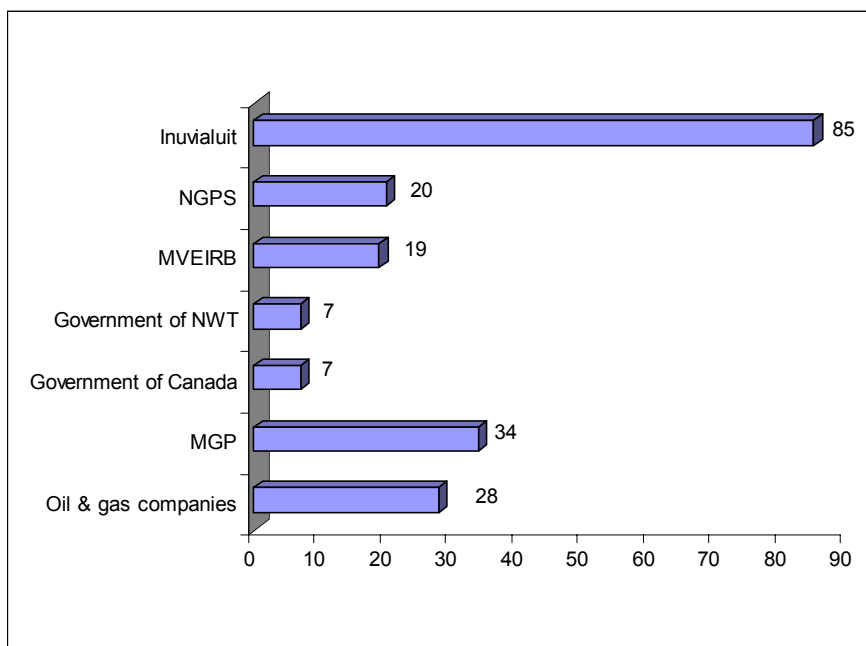
Most participants (55%) were interested in the Environmental Impact Assessment (EIA) and the Socio-economic Impact Assessment (SEIA) of the MGP but they did not know how they work. (Table 11)

**Table 11** How familiar were the participants with the EIA and the SEIA of the MGP (%).

	Are you interested in how the EIA and the SEIA of the project work?	Do you know how the EIA and the SEIA of the project work?	Are you accessing information on the EIA and SEIA of the project?
<b>Yes</b>	55	16	42
<b>Somewhat</b>	35	34	-
<b>No</b>	10	50	58
<b>Total</b>	100	100	100

There was a dependency between participants knowing how the EIA and the SEIA work and access in information on the EIA and the SEIA (Chi-square=57.090, df=2, C=0.494, p=0.000). From the participants that were accessing information most assessed that they knew (33%) or somewhat knew (48%) how the EIA and the SEIA worked and most of the participants that were not accessing information assessed that they did not know how the EIA and the SEIA worked (74%). There was no dependency between participants' interest in the EIA and the SEIA and accessing information about them.

From the 42 % (table 11) of the participants, who had an access to information on the EIS and the SEIA of the project, 85 % got the information from the Inuvialuit (IDC, IRC, Inuvialuit Joint Secretariat, Hunters' and Trappers' Committees etc.). The Mackenzie Gas Project (34%) and the gas companies (28 %) were also popular sources of information. (Fig. 16)



**Figure 16** Source for the information on the EIA and the SEIA of the MGP (%).

There were no differences between living places and how interested and familiar participants were with the EIA and the SEIA of the project or living place and were the participants accessing information on the EIA and the SEIA.

There was a difference between gender and the participants' interest in how the EIA and the SEIA work (Chi-square=22.133, df=2, p=0.000). Of men, 72% were interested in how the EIA and the SEIA work, while the corresponding figure for women was only 38%. But there was no significant dependency in gender and how well the participants felt that they knew how the EIA and SEIA of the project work (p=0.245). Similarly, 50 % of men and 35 % of women assessed that they had an access to the information on the EIA and the SEIA of the project (Fisher's exact, p=0.049).

There was a small difference between age groups and interest in the EIA and the SEIA of the project. Only about one third (34%) of the participants in the age group 15-24 expressed their interest, while the corresponding figure in older groups was 53 % or more. This difference was not significant (Chi-square=11.025, df=6, p=0.088), however. When the age grouping was done again, there was a significant difference (Chi-square=6.386, df=2, p=0.041). Close to a half (46%) of participants (16-44 years) were interested in the

EIA and the SEIA of the project, while the corresponding figure was 65% (45 years or more). Older people felt that they had an understanding on how the EIA and the SEIA of the project work (ANOVA  $p=0.015$ ) more often than the younger people. Also, more often the older people had an access to information (ANOVA  $p=0.028$ ) than the younger people.

Some mistrust was seen related to the studies on the EIA and the SEIA. *“If the environmental & socio-economic studies are done by the Government, oil & gas companies and their contractors it won't mean nothing, it will be a useless piece of paper. In B.C., where there is the issue with the fish farms and the decline of wild salmon, the Government is doing its studies, which say that there is no problem, but the studies are not trustworthy.”* (/p66/ - male, age 38, Inuvik) *“The Mackenzie Environment Group (the Mackenzie Project Environment Group) is a bunch of crap; it should consist of Inuvialuit, Gwich'in and other native groups. So many off shoots like the Environmental Group and other groups that it makes it hard for the focus to be where the real concern is - ordinary person, they are not focused on. It becomes a family group, a group of community... We want the Environmental Group to go and talk to people from home to home, not at Ingamo Hall. If you have a concern, you don't want to state it out loud. There is not enough individual consulting.”* (/p71/ - female, age 58, Inuvik)

Though some participants and interviewees thought that more studies should be done on the people and land before the project could go through, there were also Inuvialuit who were satisfied in the amount of research. *“I think that a lot of research is being done into the environment, the Inuvialuit and the Gwich'in have done a lot of studies on water bodies, creeks, lakes. The route of the pipeline they are planning to take or possibility of where the pipeline could be they have had a few places where they have done samples where water is, creeks and what not, depending on what's back there out in the wetland. I think that they are really concerned about the environment.”* (/i2/ - male, age 27, Inuvik)

### 7.8.7. A say in environmental and socio-economic issues

More than one third (36%) of the participants assessed that they had a say in how cultural, economic, environmental and social issues related to the project were dealt with. *"I think they want our opinions and what we say a lot more now than they did in the 70s"* (/p38/ - male, age 24, Inuvik) *"I am born and raised here, so I have a say."* (/p70/ - male, age 40, Inuvik) *"No one can say "they do not have a say in the decisions". It is bull because they can attend meetings, write letters to IRC, ICC members, or go to private meetings with the people at the IRC offices."* (/p6/ - female, age 30, Inuvik) Most participants (51%) assessed that they had somewhat a say and 12% answered no say. *"If you attend the meetings you have a say."* (/p81/ - female, age 49, Tuktoyaktuk) The people who assessed that they did not have a say, were asked reasons for their opinions. *"Smaller people do not have a say unless you do it as a majority."* (/p64/ - female, age 45, Inuvik) *"The individual people are not listened to, the bigger corporations have a say though."* (/p71/ - female, age 58, Inuvik)

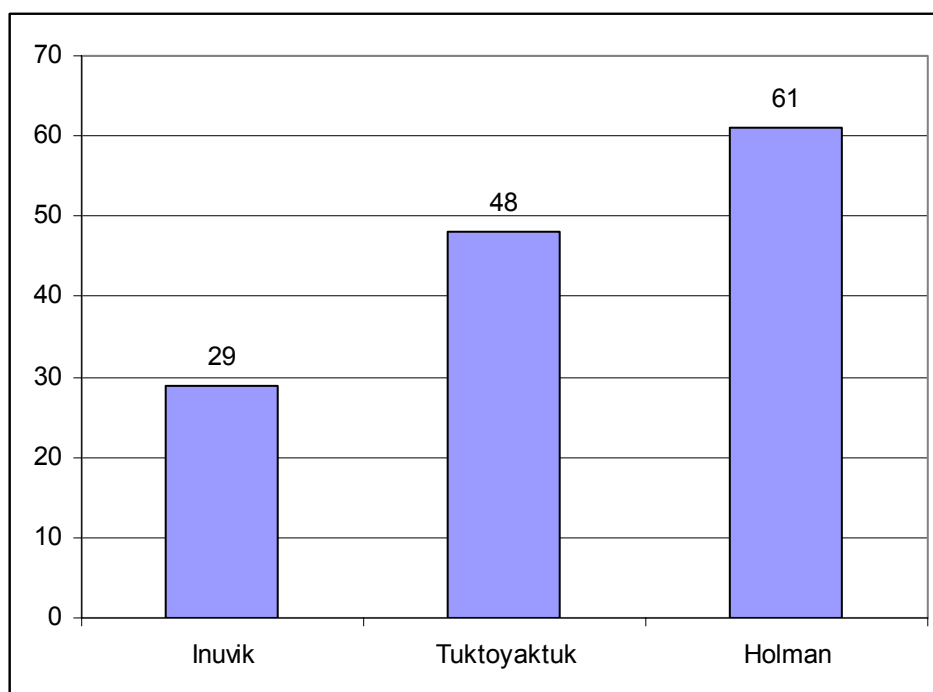
There were no differences between living places and did the participants feel that they had a say in how cultural, economic and social issues related to the project were dealt with. There was a slight dependency in gender and did the participants feel that they had a say in how the cultural, economic and social issues related to the project were dealt with (Chi-square=15.041, df=2, C=0.278, p=0.001). More often men (49%) than women (23%) felt that they had a say. There was no difference between age groups and did the participants feel that they had a say (Chi-square=5.015, df=6, p=0.542).

### 7.8.8. Public consulting

From all participants, 46 % had and 54 % had not attended public meetings related to the MGP. In this respect, there was no significant difference between living places. *"I've tried to go to all the public meetings to learn more about it (the MGP) because I feel I don't know enough about it. Sometimes it's kind of confusing, there's so much going on, it's hard to keep the facts straight. I do attend these meetings, to try to learn and understand more about what's going on and form my opinions on it."* (/i6/ - female, age 23, Tuktoyaktuk)



From the participants, 43 % thought that the amount of public consulting related to the MGP had been sufficient (enough), 32 % thought it had been insufficient (not enough), only 5 % expressed that the amount of information had been too much and 20 % did not know. However, there was a clear difference between living place and feeling that the amount of information had been insufficient (fig. 17) (Chi-square=9.482, df=2, p=0.009). Most (61 %) of participants in Holman felt that there is not enough public consulting related to the MGP. Participants in Inuvik were most satisfied in the amount of public consulting. *“There are enough public meetings. They are always saying they are having public meetings. People just don't bother going.”* (p75/ - female, age 47, Inuvik)



**Figure 17** Proportion of people who were unsatisfied with the public consulting (%).

From men, 50 % and from women 36 % thought that they had not been enough public consulting related to the project (Chi-square=12.135, df=3, p=0.007). Age did not have any significant association with how satisfied the participants were in the amount of public consulting.

There was a dependency between participants knowledge on how the EIA and the SEIA work and had they attended public meetings concerning the project (Chi-square=23.183,

df=2, C=0.339, p=0.000). Most participants that had attended public meetings felt that they knew (25%) or somewhat knew (43%) how the EIA and the SEIA of the project work and most participants that had not attended public meetings felt that they did not know (67%) how they worked.

Participants and interviewees had recommendations for the public participation. *“I think more information the better. If the oil companies and producers could work together a little bit and having it in a two or three day stand instead of once every second weekend or week. Sometimes you’re getting the same information twice in that same month. We do get enough information of the projects that are going on. I think that local people helping them to give it (the information) to the public would be a good idea, so it’s not just them coming in. This week we’ve been in two meeting, we had two elders in one. One of the elders has a hard time hearing. It would have been nice to have a translator for them, to help them out, to let them know what’s going on.”* (/i4/ - male, age 32, Tuktoyaktuk) People hoped that the gas companies would continue consulting elders and the ordinary people. There was also hope for one on one consultation and not only consultation at meetings.

There was uncertainty amongst some of the participants on what the elders thought about the MGP and it was hoped that elders’ views would be brought forward. *“Going and consulting with the elders and see what they think about the project, they’ve been here before, so it would be nice to see the elders’ point of view.”* (/i2/ - male, age 27, Inuvik)

Some interviewees were worried that the young generations had not been informed well enough by the MGP on what is going on in the project. *“Let the students be aware of what’s going to be happening that way when the time does come, we don’t have to go back to school. A lot drop out of school because they do not know what they want to do. The children, they need to adapt themselves, because when I was growing up there wasn’t much of this oil and gas stuff.”* (/i3/ - male, age 25, Tuktoyaktuk) *“It’s important that the younger people not just my age, but high school and junior high students, should be learning about this stuff. We are going to be the future leaders and this is our land. We’re the ones going to be inheriting it from our parents. We have to be educated so we can make the best possible choices for our people, the land and ourselves. I haven’t seen the gas*

*companies making visits to the school. I don't see any of that happening.” (/i6/ - female, age 23, Tuktoyaktuk)*

### 7.8.9. Readiness

Close to on third (31%) of the participants felt that their community was ready for the MGP, 35% assessed “yes and no”, one fifth did not know and 14% felt that it was not ready. “Yes and no” meant that in some areas the participants thought that their community was ready for the project and in other areas it was not. There was a significant difference between the living place and opinion on the readiness. In Holman, 29 % of the participants thought that their community was ready and just as many that it was not ready for the MGP. In other areas the former proportion was greater and the later one smaller. Holman had the highest proportion (36 %) of answer “I do not know” (Chi-square=16.779, df=6, p=0.010). (Table 12)

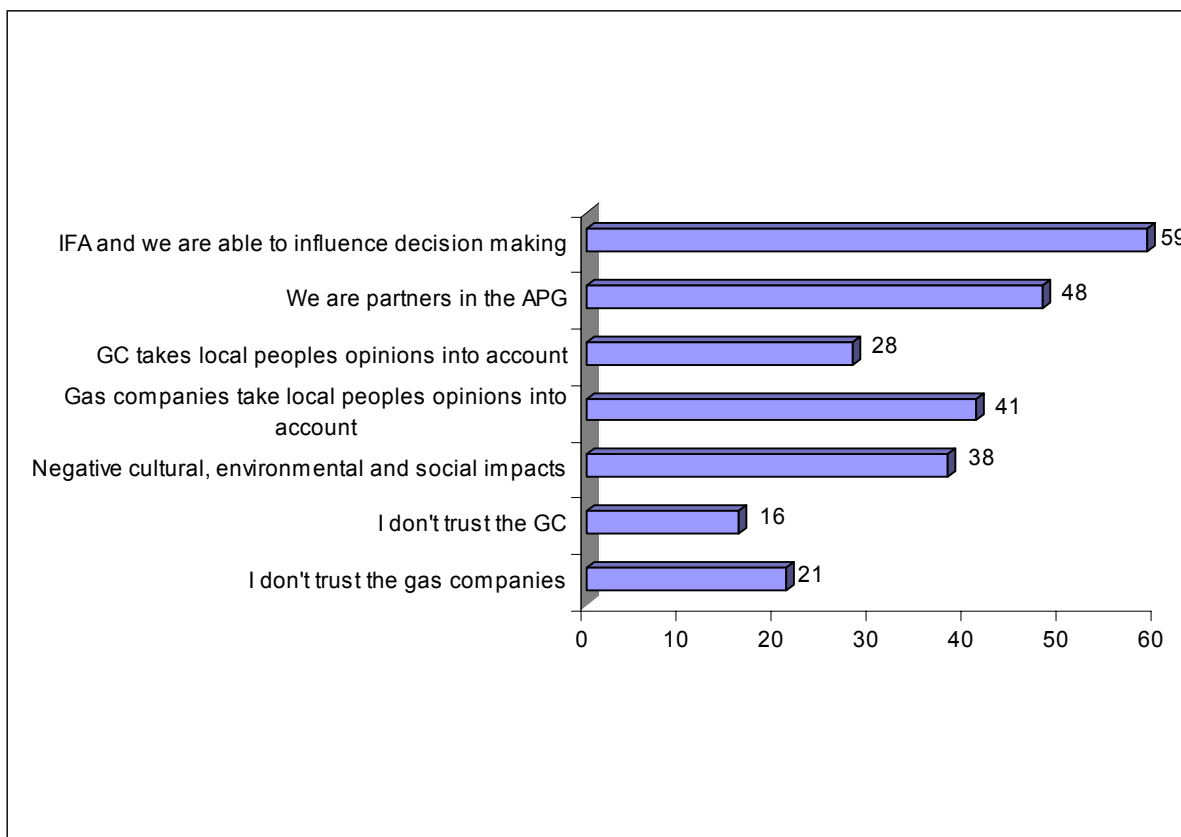
**Table 12** Participants’ opinions about the readiness (%).

		Living place			Total
		Inuvik	Tuktoyaktuk	Holman	
<b>In your opinion is your community ready for the MGP?</b>	Yes	33	31	29	31
	Yes and no	38	42	7	35
	No	11	12	29	14
	I do not know	18	16	36	20
Total		100	100	100	100

From men 41 % but from women only 21 % thought that their community was ready for the MGP. *“I think we are ready and we’re more than capable of taking on whatever tasks and work we do get, I think we’re - the Inuvialuit, are taking a lead role in the MGP especially on our side in the ISR and I see us helping the other communities upriver.” (/i4/ - male, age 32, Tuktoyaktuk)* *“I think we are ready, the community has experienced an oil or gas boom before we know what to expect.” (/i10/ - male, age 25, Tuktoyaktuk)* *“People are not ready in the sense that the people are not educated enough.” (/p81/ - female, age 49, Inuvik)*

Women were more often unsure about the readiness (“yes and no” 42 % and “I do not know” 27 %) than men (“yes and no” 29 % and “I do not know” 13 %) (Chi-square=13.577, df=3, p=0.004). *“Whether we are ready or not it’s coming, so we have to make ourselves ready for it. I feel that people are scrambling. A lot of people are struggling with education and I’m included in that group. I am still trying to finish my schooling. While we may not be totally ready, I don’t know if we ever would be totally ready so we’re going to learn as we go along. A lot of older people, like my parents age, they were around for the first time they had talks about building a pipeline, so they know a little bit about it, but for people my age I don’t know how we would prepare ourselves to be ready, maybe by learning and going to these meetings, educating ourselves and finding out as much as we can.”* (/i6/ - female, age 23, Tuktoyaktuk) There were no significant differences between age groups with this question.

The participants were asked reasons for their opinion on did they think that their community was ready for the MGP. Most participants’ (59%) opinion was influenced by the fact that the Inuvialuit land claim (the IFA) has been settled and that the Inuvialuit are able to influence decision making in the MGP. (Fig. 18) *“Because of IFA we have land protection, water protection, we have so many regulations and with IRC and IDC, we’ll be able to benefit.”* (/i12/ - female, age over 50, Yellowknife, a former resident of Holman) *“They want the gas they need, and like all outsiders before them they want to give us less trinkets, as little as possible, thank god for the land rights settlement.”* (/p124/ - male, age 50, Tuktoyaktuk)



**Figure 18** Participants’ opinions on why they think their communities are or are not prepared for the MGP (%).

There was seen both mistrust and trust in the Canadian Government (CG) and the gas companies (Fig. 18) *“The Government and the gas companies take people’s opinions into account, but I don’t trust them. I hope there will be no lies about caribou are still going to come around, but they won’t. They say they’ll cleanup, but most of it doesn’t get cleaned up.”* (/p192/ - female, age 16, Holman) *“I’m happy with the way the gas companies are doing their job. The gas companies could hire more natives. They take southerners over the northerners. There should be more training and opportunities for northerners to get hired.”* (/p162/ - male, age 23, Tuktoyaktuk) *“I don’t know about gas companies taking local peoples opinions into account. It’s all about money with the gas companies. With the Canadian Government it’s the same thing - feeding the south with the pipeline.”* (/p70/ - male, age 40, Inuvik)

There was also trust and mistrust towards the Inuvialuit leaders. *“There was the diamond exploration in the end of Prince Albert Sound where a group of caribou migrate. The people in Holman did not want the exploration to take place, even though it was just to see*

*if there is something there. We made a petition, but it was turned down. Where is IRC when you need them? 7 days 200 miles one has to travel to get caribou. Money is good, but Government is twofaced.” (/p183/ - female, age 48, Holman) “IRC does do a lot for the community that’s not seen, like with the day care or the preschool, they operate that and fund that basically on whatever grants they get. I think their doing a really good job. I hope the MGP does go through. I think we - the Inuvialuit people and all aboriginals, are more than capable of doing it now than we were in 70s. We got key people in key positions now who could make good decisions for us.” (/i14/ - male, age 32, Tuktoyaktuk)*

The major reasons why the participants thought that their communities would not be ready for the MGP were the possible negative cultural, environmental and social impacts. *“The people won't be ready for what is coming. People are still healing from residential schools. A lot of people have been born to non-Inuvialuit, not knowing who their father is. Intergenerational stuff is still to be dealt with. There has been a lot of alcoholism, sexual abuse, violence and incest. But people don't want to talk about that. Still ten years ago no one admitted to being an alcoholic. You could call them by any swear word as long as you did not call them an alcoholic. That is how it is with the incest now. Nobody wants to talk about it, but it is still there. It is a cycle. Our parents or grandparents were abused in residential schools and they started drinking and abusing their children. And it just continues if nothing is done if that is all you know. We need healthy leaders, leaders that talk about stuff. But if the leaders are not healthy, they don't want to talk about the social issues. The leadership, IRC, has been working so hard. They are ready or close to being ready. The membership and I rely on our board of directors and our chief that way we are ready, but on the social issues we are not ready. Why does not the social and economic readiness go hand in hand?” (/i11/ - female, age 53, Inuvik)*

There was no significant difference between living places, gender, or age and reasons for the participants' opinion on did they think that their community was ready or not for the MGP.

Participants also talked about other reasons for their opinion on why they thought that their community is or is not ready for the project. Three participants from Holman felt that there

was not enough face to face consultation, education and information about the project. In Holman, there was also concern that the elders or other community members had not brought up the MGP, so opinions about it had not been shared among the community members. In Tuktoyaktuk, participants were concerned that the people were not educated so that they could benefit from the project. Participants were also concerned that not enough studies had been made on the possible impacts of the project. *“Tuk is not ready for the project, not yet. More studies on the land and the people have to be made.”* (/p117/ - male, age 45, Tuktoyaktuk)

Some Inuvialuit also felt that because technology had gone further in 30 years, the time was more suitable for the project now than in the 1970s. *“Even in the couple of years the advances that they’ve had, they are very non invasive on the land. The technologies that they have now make it a lot easier. They don’t have to do anything with the land. They just dig a hole, put what they want in and cover it. And that really shouldn’t be a problem.”* (/i9/ - male, age 27, Inuvik)

Some participants felt that the Inuvialuit were more ready for the project in 2004 than before because the Inuvialuit were more educated than in the 1970s. *“1975-76 I was working in a bar and it was like the Wild West - a lot of alcohol. Both Indian and Inuvialuit were against each other. There was anger and that anger made the social problems worse. The anger came from not being educated. Native people weren't educated. They didn't have jobs other than kitchen or janitor. Alcoholism and drugs will be a great problem. Now there are harder drugs in town; cocaine and crack, not just marijuana, hash and mushrooms. The people that suffered in the 70s were the children - when the parents weren't looking after the kids, but just gambling and drinking. Now the people are ready because people are educated and parents want the children to get educated. Education is the answer to most social problems so that people can get a better job. Without education what are you going to do?”* (/p75/ - female, age 47, Inuvik)

## **8. DISCUSSION**

### **8.1. Methodological considerations**

Though the study expanded considerably due to the triangulation in methods used, the researcher believes that due to the multiple methods used, the data gained is significantly more compelling than what it would have been if only semi-structured interviews or a survey would have been conducted.

It would have been better for the statistical representativeness of the study that the survey done with the participants would have been done as a random selection, where each element of the population has an equal chance of selection (as explained e.g. in Creswell, 2003: p. 164; O'Leary, 2004: p. 106). Stratified random selection would have probably been the best option, since one of the aims was to involve participants from different working backgrounds; students, people working on a wage, land based people, unemployed and people working for a family business. But since there was no list of the Inuvialuit households, let alone of households and people's working backgrounds available, the only option was to do a non-random selection survey. The survey can be considered a success since the response rate was 75% and the proportion of the missing data was low. Thus, the results of the survey do correspond to the general opinions of especially the Inuvialuit under the age 45 in the communities of Inuvik, Tuktoyaktuk and Holman.

Some of the participants felt that the questionnaire was too long. As explained before (in chapter 7.8.4. Socio-economic impacts and cultural impacts), in the questionnaire the question on what kind of socio-economic impacts did the participants think that the project would have on the Inuvialuit in the ISR (app.1. q.19b) was found difficult, time consuming and too long. This particular question should have been made easier to understand. Also question 11. How do you make a living (what percentage of your time do spend on wage economy and what percentage of your time do you spend on land) (app.1. q.11.), was not worded clearly enough and often needed some extra explaining. Some words, like socio-economic impacts, environmental impact assessment and socio-economic impact assessment, seemed too vague or undefined and needed some clarifying. Otherwise the participants seemed to respond well to the questions in the questionnaire.



It was important that the semi-directed interviews were recorded. That way the interviewee could talk freely, not having to wait for the interviewer to write quotations down. The recording also helped to make the interviewing situation feel more like a casual conversation. All in all I think that the participants and the interviewees response to the study were favourable and good results were received.

Many participants expressed their gratitude that the study was conducted by an objective source – not one getting paid by the MGP, and that the study was being done. But the study did get some criticism too. One participant felt that the survey was rushed. On a personal note, the researcher felt that at one point the pace at which the surveys were conducted was too much. There were days when one interviewer conducted close to 20 surveys, with the result that the interviewer could not remember the participants faces the next day, let alone their names. This brought the researcher to realise that she had jeopardised the quality of the study by focusing too much on the quantity, and for the benefit of the participants, communities and the study it was better to lower the amount of surveys conducted in one day.

## **8.2. Comparison on participants' and interviewees' comments now to the time of the Berger Inquiry**

*“He want to talk about that settlement of land claims should be first before anything, oil companies start to work. He said we’re just like nothing, we’re Eskimos, and oil companies start coming around and do their own work before sometime notifying people. Every time the oil companies start coming around for their meeting, they were telling the same stories all over again. He said they were trying to make the people get used to that same story so they think it’s not really dangerous, they were trying to make them get used to that same story, and then the people lay down and said, “Go ahead, it’s not that dangerous anyway. Go ahead and drill.”” (male, Holman; Mackenzie Valley Pipeline Inquiry, 1976e: p. 3928)*

In this chapter, the Inuvialuit views on the MGP that were presented earlier (chapter 7. Results) are compared to what they were during public hearings in 1976 during the Berger Inquiry.

The main concerns the Inuvialuit had in the 1970s were the unsettled land claim, offshore drilling, spills, accidents and development that might jeopardize subsistence economy, stress on the animals, migration route changes and wildlife deaths. These issues were also brought up in this study. The 20<sup>th</sup> anniversary of the IFA (DIAND, 1984) was celebrated in 2004 and many participants and interviewees thought that the land claim settlement has been a big step forward so that the Inuvialuit can benefit from the projects that are happening on their lands. As the MGP does not include offshore drilling, in 2004 the Inuvialuit did not bring up their concern for offshore drilling as much as people did during the Berger Inquiry. Spills and accidents were a great concern also in 2004, as was the concern for wildlife and subsistence economy.

Though some social concerns were brought up by the Inuvialuit also in the 1970s hearings, it is apparent that social concerns were not brought up as much in the hearings as the environmental concerns. There could have been several reasons for this. In the 1970s, the Inuvialuit lands were not protected and the people might have been more concerned for the environment than in 2004. Social concerns are often regarded as intimate issues, of which people might not feel comfortable talking about in front of a big crowd, and nowadays social concerns are talked about more openly than thirty years ago.

### **8.2.1. Differences between the compared data**

Though it is relevant to do the comparison it has to be noted that the circumstances of this study and the public hearings in the 1970s were very different.

#### **8.2.1.1. Differences in methods used**

The results of this study were gathered with a help of a questionnaire and recorded interviews at people's homes, work places, or at the Aurora Research Institute, usually with only the participant or the interviewee and the interviewer present (as explained in more detail in chapter 6. Methods). During the public hearings in the 1970s, people stood up in front of a crowd, the Berger Commission staff and reporters, and the hearings were broadcasted throughout the NWT and Canada.

During the Berger Inquiry all the people who stood up stated their names. In this study, all the questionnaire participants and the interviewees remained anonymous. So, there is a possibility that people were more open and willing to express their concerns and hopes during this study, than during the Berger Inquiry. On the other hand, the times have changed and so have the leaders' opinions about the project. In the 1970s, the leaders in all the different native areas in the NWT were against the MGP, but now most of the aboriginal leaders are for it. This shapes the way the project is being presented to the public now compared to the 1970s and influences the public's opinions.

Often the people, who stood up at the hearings in the 1970s, were people who represented different organizations with established positions in the community and people who were not afraid to state their opinions. Many of the people had written their statements beforehand and were familiar with details of the project. In this study, the majority of the participants were randomly approached as explained in chapter 6. Methods. Some of the participants did not know that much about the project. When this was the case the interviewer would explain the different steps of the project. This would obviously lead to bringing up certain parts of the project that felt worth considering in relation to this study, so the participant or interviewee could have been influenced by the interviewers, though our goal was to represent the issues in a neutral way.

The hearing documents did not have background information on the people's ages, living places, level of education, current work situation etc. so it was not possible to compare opinions statistically. That is why the comparison is based merely on the qualitative information and the sense of what the people in the 1970s mentioned and stressed the most.

Most of the people that stated their opinion in the ISR in the 70s spoke English, but some of the quotations were translated from Inuvialuktun into English by an interpreter who was present at the hearings. All the quotations for this study were stated in English.

### **8.2.1.2. Differences in the way that the Mackenzie Gas Project has been proposed now to how it was proposed in the 1970s**

Even though the pipeline project in the 1970s was planned to start drilling only at the three gas fields (Niglintgak, Parsons Lake and Taglu) Judge Berger stated during the public hearings that the interest of the Government was to build an oil pipeline after the gas pipeline, and to proceed with offshore oil and gas drillings in the future. (for more information see chapter 4.1. History of the Mackenzie Gas Project) The MGP in the beginning of the 21<sup>st</sup> century emphasizes that the pipeline is a gas pipeline and that the MGP includes only the three onshore anchor fields. So the participants in this study did not bring out the topic of offshore drilling as much as the Inuvialuit did in the 1970s. But since there is a possibility that the pipeline which is planned now could also transport oil and gas drilled from offshore in the future, the possibility was discussed with some of the participants and interviewees. Most of these people felt that offshore drilling would be a great concern (see chapter 7.8.5.9. Offshore drilling). In the 1970s, the possibility of offshore drilling, especially for the people living in Holman, Sachs Harbour and Tuktoyaktuk, was a big concern. (see for example Mackenzie Valley Pipeline Inquiry, 1976e: p. 3925, 3931; *ibid.*, 1976f: p. 4027, *ibid.*, 1976g: p. 4163, *ibid.*, 1976h: p. 4362-4363, 4406-4407)

### **8.2.1.3. Differences in subsistence economy**

*“This country is our livelihood, it’s our bank. We’ve got no jobs, we’re out of dollar, I’ll go out rapping in the spring, it wouldn’t take me an hour and I’d have about \$10 right there.”*  
(male, Inuvik; Mackenzie Valley Pipeline Inquiry, 1976b: p. 3674)

In the 1970s, the Inuvialuit were more dependent on the land for subsistence economy than in the beginning of the 21<sup>st</sup> century. As mentioned earlier (in chapters 7.5. How do people make a living, 7.6. Current work situation and 7.8.5.4. Wildlife), not as many people hunt, trapped and spent time on the land as in 2004 they did in the 1970s. The Inuvialuit in 2004 were more involved in the wage economy than earlier, one third (36%) of the participants had fulltime jobs, 24% had part-time jobs.

### 8.2.2. Land claim

The major concern in the 1970s was that the land claims should be settled before major development was to happen in the north. This was something that was brought up in the public hearings wherever they were held from Sachs Harbour to Vancouver. The land claim settlement was a concern amongst the Inuvialuit (see for example Mackenzie Valley Pipeline Inquiry, 1976a: p. 3450, 3483; *ibid.*, 1976b: p. 3651; *ibid.*, 1976e: p. 3927), other native groups, non-aboriginal local residents (see for example *ibid.*, 1976b: p. 3622, 3637) and oil and gas companies (see for example *ibid.*, 1976b: p. 3640-3643).

In the 70s the Inuvialuit felt that the land claim would be the only way that the local people would be able to benefit from the project. *“...one of you gentlemen talked about paying farmers for crossing their land (in Alberta), but until we have a land claims settlement in the N.W.T. nobody is going to pay anybody because nobody owns the land. So perhaps that’s why land claims is very, very important.”* (male, Inuvik; Mackenzie Valley Pipeline Inquiry, 1976b: 3651)

One third (31%) of the participants in this study felt that their community was ready for the MGP and 32% answered “yes and no”. Most participants’ (59%) opinion was influenced by the fact that the Inuvialuit land claim had been settled and that the Inuvialuit were able to influence decision making in the MGP (see for more in chapter 7.8.9. Readiness). *“The gas project is doing a lot of things differently then they did in the past. When they tried to do this in the seventies, that was pre land claim days, and they could just do basically what they want. That time the Federal Government was giving a lot of money to the companies for development - to open up the north. So with that money came little regulatory guidelines for them to follow. Since the settlement of the land claim, now with IRC and having the Joint Secretariat and all our other bodies together, ILA have their policies of what companies can do on the land and have very strict guidelines. So now the Mackenzie Gas Project has to follow guidelines that Inuvialuit people themselves have put down on paper. It is a much better time for this project to happen.”* (/i7/ - male, age 30, Inuvik)

### **8.2.3. Route of the pipeline**

For the Inuvialuit living in Aklavik, a big concern in the 1970s was a proposed pipeline route from Alaska to the mouth of the Mackenzie River. *“In Aklavik we haven’t got very many jobs, very few of us got jobs and we mostly depend on trapping and hunting, and that is why I think everybody, most people in Aklavik don’t want the pipeline from Alaska to come down by the coast, and this is – it’s like a deep freeze to us in summertime, we go down and get our whales and in summer we get our caribou, in the fall we get our geese, in August we go down to Fish River and get Arctic char. I believe if they ever put the pipeline down there won’t be as many game as there used to.”* (male, Aklavik; Mackenzie Valley Pipeline Inquiry, 1976d: p. 3832; see also *ibid.*, 1976d: p. 3831)

As explained earlier (in chapter 2.1.1. Berger Inquiry), The Report of the Mackenzie Valley Pipeline Inquiry (Berger, 1977a, b) principle recommendation was that no pipeline should be built from Alaska across the Northern Yukon because of environmental reasons. Though the option of building a pipeline along the Northern Route could be an option in the future, it was not discussed with most participants and interviewees, for this route has not been proposed by the MGP. So the concerns that the Inuvialuit had in the 1970s, with the pipeline built across Northern Yukon was not relevant with the modern plan of the MGP. Participants in this study were concerned about e.g. the route of the pipeline at Parsons Lake (as explained in 7.8.5.4.1. Caribou and Parsons Lake).

### **8.2.4. Socio-economic and cultural issues**

#### **8.2.4.1. Employment and education opportunities**

The same concerns that the Inuvialuit had in the 1970s related to employment and education opportunities were also addressed in this study (see chapters 7.8.4.1. Employment opportunities and 7.8.4.2. Education opportunities). Some people that participated in this study felt that the Inuvialuit still are not more ready for the job opportunities than in the 1970s, but it was mostly the job, business and education

opportunities that participants and interviewees mentioned, when they talked about possible positive effects of the MGP.

As in this study, people 30 years ago had concerns about job opportunities for the Inuvialuit in the MGP. People were worried that union workers would get most of the jobs related to the project and that the local people were not educated enough for the jobs. *“What happens if you were working for the last 20 years and then the pipeline come in and you’ve got no education, have you got any chance to get in there, or do you just have to sit back and there’s a union tractor and union man – when you got no education, do you have to do that?”* (male, Inuvik; Mackenzie Valley Pipeline Inquiry, 1976b: p. 3662, see also *ibid.*, 1976a: p. 3457; *ibid.*, 1976b: p. 3660, *ibid.*, 1976d: p. 3843; *ibid.*, 1976e: p. 3931)

Hopes that the Inuvialuit had in the 1970s concerning the project helping them to get educated so that they could work on the project were also addressed in this study. *“... give these young people that are coming up, give them a chance to have their part of education so that they’ll be able to be out there working on it, and really be responsible for their own land, which we don’t want other people just to go in there and destroy it.”* (female, Paulatuk; Mackenzie Valley Pipeline Inquiry, 1976i: p. 4457) Few participants in this study were concerned that the lack of money makes it impossible for some Inuvialuit to educate themselves and that more money should be put into education.

During the public hearings in the 1970s, the closest town where people from the ISR could continue their education after high school was in Fort Smith. The Inuvialuit hoped that post-secondary education would also be offered in Inuvik. *“...the only type of schooling in the Northwest Territories now is in Fort Smith, and what people want now is that school be brought to them. No one hardly wants to spend time in Fort Smith away from their families any more. They want a school closer to home so that they can see their kids on the weekends and so forth. What does a person do in Fort Smith on the weekends but resort to the temptation of booze? What I am saying is that we should ask the Federal Government to consider reopening Stringer Hall at Inuvik for the purpose of training our people to be able to participate on the development if there was to be a pipeline built.”* (male, Tuktoyaktuk; Mackenzie Valley Pipeline Inquiry, 1976g: p. 4183-4184). Though the

Aurora College has operated in Inuvik since 1995 some of the participants were hoping for more education and training opportunities within the ISR (as explained in chapter 7.8.4.2. Education opportunities). Inuvialuit also hoped for higher quality in education, and more variation in courses given at primary and high schools e.g. art's classes, music classes.

#### **8.2.4.2. Influx of people and camps**

The concerns that people had related to the influx of people and camps located close to the communities were identified already in the 1970s (see e.g. Mackenzie Valley Pipeline Inquiry, 1976a: p. 3488), and many participants and interviewees were concerned about these issues also in the beginning of the 21<sup>st</sup> century (see chapter 7.8.4.6. Influx of people and 7.8.4.7. Camps). There were some differences to how the concerns were addressed though. In this study, participants and interviewees did not express concern for the Inuvialuit race, as some people did in the 1970s. *“People from the south who are going to work on the pipeline should be kept out of the communities as much as possible. There are enough half-breed kids running around now in the north without adding to the problem. As I observed the situation today, more and more white people are marrying native people and their children are beginning to look palefaces from the south. I foresee the day that the once smiling happy man’s moon-shaped face of the Inuit will dwindle away and become extinct, and finally disappear from the face of the earth.”* (male, Tuktoyaktuk; Mackenzie Valley Pipeline Inquiry, 1976g: p. 4190) In this study participants and interviewees were more concerned about children being born without getting to know their father.

#### **8.2.4.3. Community well-being**

During this study some participants and interviewees, especially women, talked quite openly and in detail, referring to their own personal experiences about social concerns; family violence, alcohol and drug abuse, community well-being, and their relations to the MGP. In the 1970s, only a few Inuvialuit brought these issues up in the public hearings. Reasons for this could be that in the hearings people might have felt uncomfortable talking about those issues, also the times have changed and people do tend to talk more openly about abuse. But there were also some Inuvialuit in the 1970s, that brought up the concern



of exploration activities contributing to social problems (Mackenzie Valley Pipeline Inquiry, 1976h: p. 4356) and as in this study, some people in the 1970s also talked about low self esteem as a remainder from the residential schools and how time spent on the land was the best cure for the Inuvialuit. (ibid., 1976i: p. 4465)

#### **8.2.4.4 Traditional lifestyle and subsistence economy**

Most of the participants in this study thought that the project would have both positive and negative effects or that the effects would be neutral on the culture and traditional lifestyle. More participants assessed that the project would have negative (about 30%) rather than positive (13%) effects on the culture and traditional lifestyle. (see chapter 7.8.4.12. Culture and traditional lifestyle and 7.8.5.4. Wildlife). The concern of how the oil and gas development had affected and could affect the hunting, wildlife and traditional food and lifestyle was a great concern in the 1970s. *“He said they’re trying to teach their children how they are growing up, teach them the way they lived, but he said if the Government keep on doing things that they’re doing now, he don’t know what kind of future the children have.”* (male, Sachs Harbour; Mackenzie Valley Pipeline Inquiry, 1976f: p.4028) *“Because of the project the caribou are going to be further away. My son won’t be able to hunt. He won’t learn his traditional teachings on caribou hunting. The next generation won’t know how to butcher and prepare the caribou.”* (/p1/ - female, age 30, Inuvik; see also Mackenzie Valley Pipeline Inquiry, 1976f: p. 4025-4029, 4038, 4040-4041, ibid., 1976h: p. 4406)

In the 1970s, the Inuvialuit were worried that the project, especially an accident like a spill, might jeopardize peoples’ subsistence economy. *“The reason the people are worried about the food in the sea and their land here is because the Eskimos that make a living around here, they don’t have funds like people down south, and they don’t grow anything. They only hunt and trap and make a living off the land. That’s the only way they live; and if things ever get spoiled, they will end up with nothing.”* (male, Tuktoyaktuk; ibid., 1976g: p. 4178) *“You know, the white man might like potatoes, he love potatoes, he can’t go without potatoes. White man, whatever he eat, he’s got to have them. It’s just like potatoes to us, the muktuk we had eating whales. We can’t go without it. If we go without it, you know, it’s*

*just when you miss something, when you've grown up and you're feeding all the time and you miss it, you can't feel good.*" (male, Tuktoyaktuk; Mackenzie Valley Pipeline Inquiry, 1976h: p. 4398; see also *ibid.*, 1976b: p. 3678-3679, 3669; *ibid.*, 1976f: p. 4040) Participants also in this study emphasized the importance of native food for its cultural value, but people also stressed that food in the stores was expensive. And though the Inuvialuit do not spend time on the land as much in the beginning of the 21<sup>st</sup> century as in 1976, the Inuvialuit, especially in the smaller communities of the ISR, still depend on the wildlife for subsistence economy.

## **8.2.5. Environmental issues**

### **8.2.5.1. Land and water**

Close to a majority (49%) of the participants were very concerned about the impacts that the MGP might have on the land. 46% were concerned. Participant often connected their concern for land and water to wildlife and the food cycle (see for more detail 7.8.5. Environmental impacts). Inuvialuit in the 1970s and 30 years later brought up the concern of having the pipeline underground, thawing of permafrost, and leaks to land and water.

The majority of the participants (55%) were very concerned for water. People were concerned how much hot water would be pumped into the Delta and how would that affect the ecosystems, the protection of fresh drinking water, impacts on water flow, gas leaks to the water and dredging. Also, during the public hearings 30 years ago, the Inuvialuit were concerned on how a break or blowouts in the pipeline would affect the waters and the animals living in them (see for example Mackenzie Valley Pipeline Inquiry, 1976a: p. 3450; *ibid.*, 1976b: p. 3643, 3670, 3674-3676; *ibid.*, 1976g: p. 4163, 4168)

### **8.2.5.2. Wildlife habitat, populations and migration patterns**

The biggest environmental concern related to the MGP for the Inuvialuit both in the 1970s and in the beginning of the 21<sup>st</sup> century was wildlife. In this study, 64% were very concerned for wildlife. The participants in this study expressed concern mostly for caribou,

but during the Mackenzie Valley Pipeline Inquiry the Inuvialuit seemed to be just as concerned for the impacts on whales, seals, fish, muskrats and geese. This difference may be explained for example by how the proposed project has changed, by the fact that people do not hunt or trap muskrats as much as earlier, and that almost one third of the ISR land has been protected since the Inuvialuit land claim settlement.

In the seventies the Inuvialuit raised concerns on how oil and gas production had affected and might affect the wildlife populations and migration patterns in the ISR. (see for example Mackenzie Valley Pipeline Inquiry, 1976a: p. 3449-3450, 3458-3459; *ibid.*, 1976g: p. 4170; *ibid.*, 1976h: p. 4356, 4397-4399, 4403) “... *he brought up all his kids living out in the bush by hunting and trapping, but since over five years ago he was forced to leave his home out in the bush and move to Aklavik, where he could make a living, because there wasn't anything else more to hunt. He said he sure hope that the oil company quit blasting soon because if they keep it up, there will be no more animals left for sure... He said most of them (Inuvialuit and Gwich'in) now, because they have no place to hunt or trap, the Government is looking after them, and this year especially with no food around he said people are giving them fish to eat, a little bit here and there. He said how many years he lived all this time in the Delta he never ever had any problems until the oil company came, so he said himself, he sure hope that they quit blasting soon.*” (male, Aklavik; Mackenzie Valley Pipeline Inquiry, 1976d: p. 3815)

In the 1970s, a lot of the Inuvialuit also felt that the seal, muskrat and fish populations had dropped due to the oil and gas activities. People felt that the whales changed their routes, because of the noises partly due to oil and gas exploration. This perception might be true. During this study it seemed that participants and interviewees considered more the possibility of natural decline or natural change of migration routes than in the 70s, though many Inuvialuit in 2004 felt that there was also a clear connection in the increase in oil and gas activity and the changes in migration routes (see chapter 7.8.5.4. Wildlife).

#### 8.2.5.2.1. Fish, whales, polar bears and seals

As in this study, also in the 1970s the Inuvialuit were worried that the fish populations might drop due to the MGP. Some people felt that the fish populations at Husky Lakes had dropped, because of the exploration done by the oil companies. (see for example Mackenzie Valley Pipeline Inquiry, 1976b: p. 3670; *ibid.*, 1976g: p. 4163, 4168-4169) Inuvialuit in this study and in the 1970s were worried about how the noise might affect the fish and the whales. *“When we go out whaling, our fathers and uncles, they tell us not to make any noise because the whales can hear very easily, and even if you throw little pebble in the water, them whales would be out, they won’t come near the village there. So with all the noise going on will it do anything to the whales and fishes? ...the vibration that the pipe will create, and the vibration will certainly make a noise and that could scare the fish and whales and other animals away.”* (male, Aklavik; Mackenzie Valley Pipeline Inquiry, 1976d: 3835). *“Whales are very sensitive to sound. The environmental impacts on that would be really bad, especially for the people of Tuk. Especially since that’s (showing Richard’s Island) the area that’s going to be developed, especially the Kugmallit Bay area, where the whales calve, that would be really bad.”* (/i9/ - male, age 27, Inuvik) In the seventies there were also concerns that during whaling season seismic work and boats had interfered so that the whales moved on from Hendrickson Island where the whaling took place (Mackenzie Valley Pipeline Inquiry, 1976h: p. 4397-4399).

In the 1970s, the Inuvialuit from Sachs Harbour had noticed how the amount of seals had dropped due to the oil company activities. *“...if the things from the oil companies ever destroy the ocean water, they will be killing all the bugs that are in the sea, what the seals eat. He said that since they started blasting a lot of seals been dying. He said now that if they work some more, he said the polar bears will be next to go.”* (male, Aklavik; Mackenzie Valley Pipeline Inquiry, 1976g: p. 4176) The drop in seal numbers had lead to the starvation of the polar bears, which lead to polar bear attacks towards humans (Mackenzie Valley Pipeline Inquiry, 1976f: p. 4025, 4027, 4038; *ibid.*, 1976g: p. 4176). In this study, some interviewees were concerned for the polar bears and the seals, but thought that the MGP might not impact the species as much as ice conditions.

#### 8.2.5.2.2. Trap lines and muskrat

The Inuvialuit that participated in this study did not state their concern for the MGP impacting trap lines and muskrat, because people do not trap as much now as they did in the 1970s (for more detail see chapter 7.8.5.4. Wildlife).

During the Mackenzie Valley Pipeline Inquiry the Inuvialuit were concerned for their trap lines and many people were worried that the project might affect the muskrat populations. *“He said two years ago (year 1973) him and Floyd was out setting traps for foxes and the oil company been putting up a camp right around where their traps were. I mean just do it on purpose, like. Where their traps were they just run over them or spoil where their traps are... when they told them about why they were doing that to their traps, they said, “Oh, we’re not worried, we’re leaving tomorrow anyway”... He said people here; they worry about their trapping areas all the time. They look after the food and everything, how much to get and how much not to get. That’s why he said even in the papers you read sometimes that the Sachs Harbour people are stingy of their land; but he says they can’t help it, that’s the way they live. They have to look after it themselves in order to keep it the way they want to.”* (male, Sachs Harbour; Mackenzie Valley Pipeline Inquiry, 1976f: p. 4029-4030) *“The whole Delta area is just like our bank book, when we want to harvest muskrats in the spring that’s when we make a few dollars... things are really changing, especially since they started blasting all over the rivers and he know that there is even no muskrats in some lakes.”* (male, Aklavik; *ibid.*, 1976d: p. 3815, 3835)

#### 8.2.5.2.3. Geese

In the 1970s, the Inuvialuit raised concerns over the changing of geese routes due to the project and how that would result in hardship for the people that hunt geese. *“If there is gas gathering stations established at Parsons Lake and Taglu, there will be more activities around the mouth of the Mackenzie and I am afraid by that time the geese will be taking a different route altogether. This means we will not be depending on this renewable resource as much as we used to.”* (male, Tuktoyaktuk; Mackenzie Valley Pipeline Inquiry, 1976h: p. 4357; see also *ibid.*, 1976h: p. 4356) These concerns were also raised during this study.

*“The MGP will have effects on the animals, such as geese and caribou. They will avoid structures put in place by development, thus taking different migration routes.”* (/p112/ - male, age 23, Tuktoyaktuk) *“The Shallow Bay hunting area, that’s the prime habitat for geese. I’d hate to see any of that destroyed... It will have a negative impact on the geese. Geese are very, very sensitive. It doesn’t take much to affect them and they’ll leave the nests. It’s a prime feeding habitat and the land does that, so it’s very sensitive.”* (/i9/ - male, age 27, Inuvik) But some participants also mentioned that the geese populations were much higher now than in the 1970s, so there was not as much concern in 2004 as during the Mackenzie Valley Pipeline Inquiry.

### **8.2.5.3. Offshore drilling**

As explained earlier (see chapters 4.1. History of the Mackenzie Gas Project and 8.2.1.2. Differences in the way that the Mackenzie Gas Project has been proposed now to how it was proposed in the 1970s), during the Mackenzie Valley Pipeline Inquiry the project was proposed so that offshore drilling would follow, but this has not been the case with the MGP in the beginning of the 21<sup>st</sup> century. Thus, the participants and the interviewees in this study did not bring up the issue of offshore drilling as much as the Inuvialuit did in the 1970s. But when the issue was discussed with some Inuvialuit, they were very concerned about it (for more detail see 7.8.5.9. Offshore drilling)

The possibility of offshore drillings was a big concern for the Inuvialuit in the 1970s (see for example Mackenzie Valley Pipeline Inquiry, 1976e: p. 3931; *ibid.*, 1976f: p. 4027; 4168; *ibid.*, 1976h: p. 4362, 4403-4404). *“He said oil companies tell about their oil rigs. He said they’re real good oil rigs and so on, and they got everything prepared for this kind of pressure and he knows that these machines sometimes nothing to these big currents because coming around they’re going to be pushed around; but even though these oil companies say they got No. 1 rigs and big ships and so on, but he knows that there is going to be very difficult for them to drill offshore because there’s huge currents of ice broken and so on, and they’re going to push them around.”* (male, Holman; Mackenzie Valley Pipeline Inquiry, 1976e: 3931-3932) *“... if they ever had a blowout he think that it will ruin*

*the whole sea, and there will be no more fish, and all the animals, and the fish and the mammals will be all dead.” (male, Tuktoyaktuk; ibid., 1976g: p. 4163)*

#### **8.2.6. Public consulting and trust in the oil and gas companies and the governments**

As explained earlier (in chapter 3.3. Inuvialuit today), in the early years of oil and gas exploration (1968 to 1984) the Federal Government issued all the permits and licenses required by the companies to operate in the ISR and the Inuvialuit felt that they were not consulted enough about the activities that happened on their lands. From some of the Inuvialuit opinions during the Berger Inquiry it can be seen that the peoples' trust in the oil and gas companies and the Government was weak. *“...the oil companies and the Federal Government and governments are working hand in hand... the Government and the oil companies are just like one big company working together... I'm tired of hearing governments, the oil company people saying – and the resource people as well saying “We are experts. You tell us what and how your way of life is and we'll judge it from our standpoint of view” I say that is hogwash now because it is no longer the Government people or the oil companies or any researcher type people that are experts. This is no longer so. You'll hear later on in this Inquiry of who are the masters. Who are the experts on this very land that you people are sitting on now. I'm saying that we, the Inuit people, consider ourselves to be experts when people are doing, let's say, research, exploration and so on to consult with. We are the experts, because we know how the animal behavior is, how weather changes might affect their patterns and so on. We are the people to consult with, because we are the ones that has been and are living here on this land.” (male, Paulatuk; Mackenzie Valley Pipeline Inquiry, 1976i: p. 4437-4444, see also ibid., 1976a: p. 3485-3487; ibid., 1976h: p. 4022-4023; ibid., 1976h: p. 4399)* In the 1970s, there was also concern that the information that the gas companies were giving related to the pipeline project was too positive e.g. by promising jobs and money (see e.g. Mackenzie Valley Pipeline Inquiry, 1976a: p. 3457).

In this study 43 % of the participants thought that the amount of public consulting related to the MGP had been sufficient (see chapter 7.8.8. Public consulting). But there was a clear difference between the communities and how satisfied the participants were in the amount

of public consulting. In Holman 61%, in Tuktoyaktuk 48%, and in Inuvik 29% assessed that there had not been enough public consulting related to the project. One third (36%) of the participants assessed that they had a say on how cultural, economic, environmental and social issues related to the project are dealt with and 51% that they have somewhat a say (see chapter 7.8.7. A say in environmental and socio-economic issues). There was more trust than mistrust for the Canadian Government and the oil and gas companies (see chapter 7.8.9. Readiness). So it seems the Inuvialuit, at least in Inuvik and Tuktoyaktuk, are more satisfied in their overall ability to influence decision making in the MGP now than in the 1970s. *“We have a say in socio-economic & environmental decisions, I think they want our opinions and what we say a lot more now than they did in the 70s.”* (/p38/ - male, age 24, Inuvik)

An elder in Holman had been against oil and gas drilling in the 1970s because there was no consulting between the oil and gas companies and local people. He had also been concerned about the mess the companies left behind them. He used to worry how an oil spill might affect the marine food chain killing the shrimp, fish, seals and whales. But his views had changed towards the development in 30 years. *“There is the trust now. Things have changed since the 70’s. We were really scared in the 70s. We’re not that scared anymore. Now we all work together. Now everybody can benefit – the Gwich’in, Inuvialuit, the Government. They never used to talk to us before. Now we are sitting around the same table. We are able to say what we think. We still care for the land and don’t want to ruin it. But now that we work together, we do our part, the oil companies do their part and the Government does their part, it is good.”* (/i13/ - male, age over 60, Holman)

### **8.2.7. Lack of research**

In the 1970s, some Inuvialuit were also concerned for the lack of research done in the area, to know how the land and animals would be affected by a pipeline project. (Mackenzie Valley Pipeline Inquiry, 1976a: p. 3459, 3483-3484; *ibid.*, 1976h: p. 4407-4408) The lack of research also came up in this study. Some participants also criticized the objectivity of the research being done, especially if the studies were done only by the gas companies and the Government (for more see chapter 7.8.6. The EIA and the SEIA).



### **8.2.8. Life after the gas**

Thirty years ago the Inuvialuit had concerns about people relying too much on short term jobs. *“After Dew Line was built, after construction came to a halt in Inuvik, to pretty well a standstill, people started looking around and they were making fast money and at the same time they were spending fast money, and they looked around, they didn’t have no cabins left at home, they didn’t have no dog teams left, so this short of belief today, a lot of people that are still living at Inuvik or in some town, would go back onto the land if they had the means of getting back onto the land... what concerns me more than anything else is the people, the people of this country, will they do the same thing they done again when the Dew Line was on, and what will they have after it’s all over.”* (male, Inuvik; Mackenzie Valley Pipeline Inquiry, 1976c: p. 3804-3806) The Inuvialuit continued to have concerns for the bust and boom cycle. It was realized also in 2004 that big scale short term development would not be sustainable and the local people tend to suffer from it. *“What happened in the past (in the 80’s) once the oil companies shut down, it felt like abandonment. Inuvik was booming, we had not only the oil companies, but the Canadian Forces base here. It was a busy town and all of a sudden they picked up and left and oil companies shut down. A lot of the Canadian Forces base homes were shut down. And yet people were looking for houses and finally they’ve opened up over the past decade for the local people to rent. The boom era social issues weren’t dealt with, alcoholism, uncaring attitude carried along down the families to younger children. I don’t want a see that happen again. It is almost as if we are just being used.”* (/i1/ - female, age 34, Inuvik)

### **8.3. Implications for further studies**

This study represents the opinions of the Inuvialuit in Inuvik, Tuktoyaktuk and Holman in 2004 concerning sustainability of the MGP. For this study to better represent the Inuvialuit opinions in the ISR as a whole, the survey should have been conducted also in Aklavik, Paulatuk and Sachs Harbour. Also more surveys should be done in Holman, to ensure that the results gained are more reliable. The results of this study represent mostly the opinions of the Inuvialuit in Inuvik, Tuktoyaktuk and Holman between the ages 16-45. It would be important for the Inuvialuit to hear what the elders’ opinions concerning the project are. A qualitative study on the elders’ views could be one option, but a well advertised and

organized public meeting just amongst the Inuvialuit could be even more effective to reach the greater public.

The MGP also affects other native areas (Gwich'in Settlement Area, Sahtu Settlement Area and Deh Cho First Nation) along the pipeline route, and it would be important to know how the other nations feel about the sustainability of the project and how their opinions have changed or unchanged in 30 years.

## 9. SUMMARY AND CONCLUSIONS

Most of the participants were interested in the MGP and one third were somewhat interested. Most of the participants wanted the MGP to go through now (or within a few years), 15% did not want it to go through now and one fifth were unsure of their opinions. The Inuvialuit opinion about the project has changed from strong opposition to support in 30 years.

Most of the participants thought that the project would have both good and bad effects on their lives, one fifth thought that it would make their lives better and only 3% thought that it would make their lives worse. During the Mackenzie Valley Pipeline Inquiry most Inuvialuit thought that the project would make their lives worse.

Nearly half of the participants thought that the IRC and the IDC would benefit from the project, 44% thought that multinational oil and gas companies and the people of the ISR would benefit. During the 1970s the Inuvialuit felt that the Canadian Government, oil and gas companies, and the southern workers would benefit from the project.

Most of the participants thought that the project would have social, economic and cultural impacts (82%) and environmental impacts (87%). According to the participants, increase in employment opportunities, education opportunities, new business opportunities and financial benefits were seen as the most positive changes that the project could offer. Clearly the participants thought that the most negative social impact of the project would be increase in substance abuse. Increase in cost of living was seen as the second biggest negative social impact. The impacts on traditional lifestyle and culture were seen more negative than positive. The biggest environmental concern for the participants was wildlife, especially caribou, geese and fish. There was also a high concern for water and land amongst the participants. In the 1970s, Inuvialuit were mostly concerned about the settling of land claim, offshore drilling, spills and accidents, and the negative impacts on the subsistence economy.

The Environmental Impact Assessment (EIA) and the Socio-Economic Assessment (SEIA) of the project were not familiar to the participants. Less than one fifth felt that they knew

how the EIA and the SEIA of the project work, though most of the participants were interested in it and 42% were getting information on the EIA and the SEIA. Nearly half of the participants had attended public meetings concerning the project. Most of the participants (68%) that attended public meetings felt that they knew or somewhat knew how the EIA and the SEIA work and most of the participants (67%) that did not attend public meetings felt that they did not know how the EIA and the SEIA work. One third of the participants thought that there had not been enough public consulting concerning the project, 43% answered enough. There was a clear difference in how satisfied the participants were in the public consulting in the different communities. In Inuvik, nearly half of the interviewees thought that there was enough public consulting, in Tuktoyaktuk nearly one third and in Holman only one tenth. In the 1970s, Inuvialuit were unsatisfied in the amount and quality of consultation from the oil and gas companies.

In Inuvik, Holman and Tuktoyaktuk about one third of the participants thought that their community is ready for the project. In Inuvik and Tuktoyaktuk, about one tenth of the participants thought that their community was not ready for the project, in Holman the percentage was 29%. The fact that the Inuvialuit land claim (IFA) has been settled and that the Inuvialuit are able to influence decision making in the MGP influenced most of the participants' opinions. In the 1970s, Inuvialuit felt that they were not ready for the project mostly because of the unsettled land claim, low level of education working as a barrier for the Inuvialuit to be able to benefit from the job opportunities, and negative effects on subsistence economy.

## **10. RECOMMENDATIONS**

The majority of the recommendations are based on the results represented in chapter 7. Results. Taking into account the vast scale of the project, these recommendations are anything but comprehensive, but rather bring out the hopes and wishes of the Inuvialuit in 2004 in Inuvik, Tuktoyaktuk and Holman concerning the proposed Mackenzie Gas Project.

### **10.1. How to present the project to the public**

In the public meetings held by the MGP in 2004 there were some flaws in presenting the information to the public e.g. the size of the production facility sites and transportation of the barge in the Mackenzie River. The information presented at public meetings has to be accurate well before the hearings so that the public would have the time to internalize the right information and not be confused by new information.

To ensure equal opportunities for all Inuvialuit in the ISR in education, job markets, and contracts related to the MGP, public consulting related to the project should be increased to involve more also the smaller communities of the ISR.

In 2004 some Inuvialuit had unrealistic hopes concerning direct long-term job opportunities related to project. The amount of direct long-term jobs related to the MGP in the ISR should be emphasized to the public so that these false hopes will not continue.

The communities should organize meetings on the sustainability of the MGP before the hearings so that the people would be able to hear each others opinions and thoughts about the issues. It is especially important that the elders' opinions about the sustainability of the MGP are heard. In 2004, some Inuvialuit felt that they did not know what the elders' thoughts about the project were.

If the MGP will proceed to public hearings, it is critical that the project will be presented to the public so that the cumulative effects of the project are addressed. It should be made clear to the public how likely it is that there will be production on other gas fields if the MGP does go through. Which gas fields would be the likely ones up for production? How

likely is it that offshore drilling would take place? Furthermore, is it possible that the now proposed gas pipeline could transport oil in the future, and how likely is that?

## **10.2. Distribution of benefits**

Benefits gained from the MGP or other oil and gas development should be distributed into education, alcohol and drug programs and family healing programs.

Whether or not the MGP goes through, an alcohol and drug center should be provided for the residents of the ISR in the ISR. If an alcohol and drug centre would be located in the ISR, it would make it easier for the Inuvialuit to access help and get support in earlier stages of addictions.

A family healing program should be provided for the Inuvialuit. Parents are children's most important teachers, but when the parents are not well, it is impossible for them to give the children the means, encouragement and example that the children need to stay in school. The level of education in the ISR continues to drag behind compared to other areas in the north because of the complex social problems that the families are struggling with. The low level of education is a barrier for the Inuvialuit to benefit from the MGP, other oil and gas activities that take place in the ISR, and the overall job market in the ISR.

The communities are also responsible for teaching, educating and looking after the children. More funds should be put into early childhood education, to make school more interesting for teenagers and to ensure that more adults, who want to educate themselves, have the opportunity to do so.

The ISR should not solely depend on non-renewable resources development for energy supplies, but rather use the money gained from the oil and gas sector to find alternative renewable resources possibilities to advance the long-term sustainable energy supplies for the region. Communities should be supported to endorse alternative renewable energy supply plans to help them find the best possible combination of energy management strategies for each community.

### **10.3. Socio-economic and cultural equality**

The equality of the education possibilities and opportunities within the ISR should be addressed. The children in the smaller communities should have equal possibilities and opportunities to encourage them to continue with their education as the children in Inuvik have. Funds should be addressed so that the schools in smaller communities would also have sufficient libraries, computers and gyms. Adult education should be supported more so that the Inuvialuit, who are eager to continue their studies, would have the possibility to do that. The option of having the whole training periods, e.g. for the Pipeline and Production Operations Technical Training Program organized by the Aurora College in the ISR, should be looked into so that Inuvialuit students would not have to spend two years in Alberta at the Northern Alberta Institute of Technology (NAIT) or the Southern Alberta Institute of Technology (SAIT).

The MGP and its contractors, specialists in different fields could involve and educate the children and youngsters of the communities by taking them out in the field to teach them about their work. Also the MGP could increase visiting lectures at schools, not only by telling about the MGP in general, but e.g. about studies done on the plats, animals or permafrost.

The equality of job and contracting possibilities, and opportunities within the ISR should be addressed. Contracts should be given to local companies as much as possible. This would be good for local economy, but also in mitigating the negative social impacts. The MGP should make an extra effort to distribute contracts also to small local businesses and family businesses, not only to the corporate groups and bigger businesses.

It should be considered if local people working on the camps could have the possibility to spend at least weekends, preferably all free time at home with their families. The weeks that a father or mother spends away from home are very demanding for the whole families and they add to the social problems. The families, whose members work for the MGP, should have the opportunity to get counseling for money management to reduce the money spent on drugs, alcohol and gambling.

The amount of permits for future oil and gas activities in the ISR have to be carefully assessed so that the Inuvialuit would be aware of the impacts that the developments would have on the ecology and the Inuvialuit, and would be able to get the maximum long-term benefits from the developments. To sustain oil and gas development in the ISR the development needs to be spread out so that the MGP would not become another bust and boom cycle. That way the MGP could be the beginning of a long-term development offering local people long lasting business opportunities, instead of an overwhelming few years of quick money and devastation.

The public, especially the youth in Inuvik, should be well informed about the negative businesses; crime, prostitution and drugs trafficking, that might increase due to the MGP. The amount of law enforcement should be increased during the high activity years. Homes, school nurses and the community should work together in finding the best ways to educate the youth. The young women should be educated about being careful in getting into relationships with men that have come to the area only for a short time. Sex education especially with girls should be enforced. Safe sex and the use of condoms can not be overemphasized.

To induce equality in housing, it should be ensured that there is enough public housing for locals, with regular rents not affected by private market prices. That way the Inuvialuit would not have to pay considerably higher rents during the high activity years. The access for loans on houses could be made more available for the Inuvialuit. That way the people would be not be so dependent on influxes on rent.

#### **10.4. Environmental issues**

The size of the production sites, compressor stations, camps, sumps, roads and air strips should be designed as small scale as possible so that the environmental impacts would be kept to minimal. Also the equipment used should be selected so that the environmental damage would be kept to the minimum.



The wildlife and the environment should be monitored and reports should be sent to the communities on the impacts that the project would have on the wildlife and the environment.

Ground waters and drinking waters should be protected. The amount of warm water to the natural waters should be avoided. Dredging and stream crossings should be avoided at places where the fish might be affected.

Noise levels should be kept as low as possible so that the wildlife would not be disturbed. Monitoring of the noise levels should be done, to see how the wildlife reacts to them. Great and inconsistent noise variations should be avoided near wildlife habitat, especially noise levels and variations at the airstrip at Parsons Lake and compressor stations should be minimized. The building materials used should be selected so that the noise effects would be kept to the minimum.

Waste management plans, not only for the camps, construction sites and production sites, but also for the towns of Inuvik and Tuktoyaktuk should be assessed.

It should be assured that all the necessary equipment for a cleanup operation would be readily available and that the MGP staff, contractors and volunteers would be prepared and trained for emergency situations and cleanup. Cleanup from accidents and spills should be conducted as soon as possible so that the negative impacts on the environment would be kept to the minimum.

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## **12. APPENDICES**

APP.1. Questionnaire

APP.2. Consent Form

**Appendix 1. Questionnaire**

## **A Study on Sustainable Development in the Mackenzie Gas Project; Views of Inuvialuit Adults in the Inuvialuit Settlement Region**

### **Background**

This study has been designed to document Inuvialuit adults' current views in Holman, Inuvik and Tuktoyaktuk, NWT, on the sustainable development in the proposed Mackenzie Gas Project. The information gathered is part of Raila Salokangas' bachelor's thesis at the Tampere Polytechnic, Finland. The study is a co-operation between Aurora Research Institute and Tampere Polytechnic. The fieldwork is conducted by Raila Salokangas and Rebecca Pokiak from the Aurora Research Institute during the summer 2004. Hopefully the results of this study will be useful to the people of Holman, Inuvik and Tuktoyaktuk in giving current information on Inuvialuit adults' hopes and concerns on cultural, economic, environmental and social impacts that might occur due to the Mackenzie Gas Project.

This questionnaire has been developed to assist Raila and Rebecca to document information from the interview. The study is interested in your personal opinion. There are no right or wrong answers. The interview is anonymous. You may choose not to answer all the questions presented in this form. You may withdraw from the interview for any reason, at any time. If you withdraw from the interview, you may request that any data that you have contributed be returned or destroyed.

### **Questions**

#### **A: Interviewee Information**

1. Date of interview |\_|\_|\_|\_|\_|\_|\_|  
DD MM YY
2. Place of the interview \_\_\_\_\_
3. Interviewee number (1-999) |\_|\_|\_|\_|

#### **B. Socio-demographic background**

4. Gender 1  male  
2  female
5. Inuvialuit beneficiary 1  yes  
2  no
6. Age |\_|\_|
7. Living place (municipal community) \_\_\_\_\_
8. How long have you lived in the Inuvialuit Settlement Region (years) |\_|\_|

9. Education
- 1  Less than high school graduation certificate
  - 2  High school graduation certificate only
  - 3  Some post-secondary education
  - 4  Trades certificate or diploma
  - 5  College certificate or diploma
  - 6  University certificate or diploma below bachelor's degree
  - 7  University degree

10. Occupation (current or latest) \_\_\_\_\_

11. How do you make a living (what percentage of your time do you spend on a wage economy and what percentage of your time do you spend on land).

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12. Current work situation
- Specifications (description of the present job)
- \_\_\_\_\_
- \_\_\_\_\_
- 1  fulltime work
  - 2  part-time work/ seasonal work
  - 3  working at home (looking after family or home)
  - 4  student
  - 5  unemployed
  - 6  other

13. a) Do you work for the oil and gas industry?

- 1  Yes
- 2  No

b) Have you worked for the oil and gas industry in the past?

- 1  Yes
- 2  No

c) Would you like to work for the oil and gas industry?

- 1  Yes
- 1  Maybe
- 2  No

14. a) How many times per year do you go out on the land (hunting, guiding, picking berries...)?

- 1  more than 20 times a year
- 2  11-20 times a year
- 3  5-10 times a year
- 4  less than 5 times a year
- 5  I do not go out on the land

b) If you go out on the land, how do you use the meat, fur, berries, etc. Are the products for (you can select all appropriate answers)

- 1  personal usage (family, relatives, friends)?
- 2  for sale in the community?
- 3  for sale outside the community?

15. a) If you go out on the land, do you have your own equipment to use?      1  Yes  
2  Somewhat  
3  No

- b) If you do not have your own equipment, how easy is it for you to access the necessary equipment?  
1  Easy  
2  Not that easy  
3  Hard

**C. Sustainable Development in the Mackenzie Gas Project Questions**

16. Are you interested in the Mackenzie Gas Project?      1  Yes  
2  Somewhat  
3  No

17. a) How do you think the Mackenzie Gas Project would affect your life?  
1  Make it better  
2  Make it worse  
3  Both good & bad effects  
4  No effect  
5  I do not know

- b) How do you think the Mackenzie Gas Project would affect your children's life?  
1  Make it better  
2  Make it worse  
3  Both good & bad effects  
4  No effect  
5  I do not know

- c) How do you think the Mackenzie Gas Project would affect the life of the Inuvialuit in your community?  
1  Make it better  
2  Make it worse  
3  Both good & bad effects  
4  No effect  
5  I do not know

- d) How do you think the Mackenzie Gas Project would affect the life of the non-Inuvialuit in your community?  
1  Make it better  
2  Make it worse  
3  Both good & bad effects  
4  No effect  
5  I do not know

- 18. a)** In your opinion, who will benefit from the Project? 1  I personally  
 (you can select all appropriate answers) 2  People and the communities of the ISR  
 3  IRC & IDC  
 4  People and communities of the NWT  
 5  Government of the NWT  
 6  Government of Canada  
 7  Canadians and Americans  
 8  Multinational oil and gas companies  
 9  Other,  
 specify \_\_\_\_\_  
 10  Not sure / I do not know

Socio-economic Impacts

- 19. a)** Do you think that the Project will have social, economic and cultural impacts?

- 1  Yes  
 2  No  
 3  I do not know

- b) If yes, what kind of social, economic and cultural impacts do you think that the Project will have on the Inuvialuit in the ISR. Will these impacts be 1. greater or smaller due to the project and are these impacts 2. positive, neutral, negative or both positive and negative? (select all appropriate answers)

	greater / more	smaller / less	no change	positive	neutral	negative	positive & negative	
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Employment opportunities
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Education opportunities
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Financial benefits
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Infrastructure (roads, utilities, communication, buildings)
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New oil and gas development
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New natural resources development (e.g. mining)
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New business opportunities
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influx of people (more people moving from the South to the ISR)
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Costs of living (rent, food)
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Substance abuse (drugs, alcohol, violence)
11				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Health of the people
12				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community well-being
13				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impacts on the culture
14				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traditional lifestyle
15				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Management of money
16							<input type="checkbox"/>	Other, specify

20. a) Do you think that the Project will have environmental impacts (impacts on the land, water, air...) in the ISR?

- 1  Yes  
2  No  
3  I do not know

b) If yes, how concerned are you about those impacts? (select all appropriate answers)

	very concerned	concerned	not concerned	
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Land (permafrost, soil, vegetation)
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water (lakes, rivers, sea)
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air (air pollution, dust)
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wildlife and wildlife habitat
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Noise (from traffic, construction activities, compressor stations)
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Garbage (from camps, construction activities, influx of people)
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spills
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Climate Change
9				Other, specify

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21. a) Are you interested in how the environmental impact assessment and the socio-economic assessment of the Project work?

- 1  Yes  
2  Somewhat  
3  No

b) Do you know how the environmental impact assessment and the socio-economic assessment of the Project work?

- 1  Yes  
2  Somewhat  
3  No

c) Are you accessing information on the environmental and socio-economic impact of the Project?

- 1  Yes, if yes, where do you get it from?  
(you can select all appropriate answers)  
2  No

- a  Inuvialuit  
b  MVEIRB  
c  Northern Gas Project Secretariat  
d  MGP  
e  Gas companies  
f  Government of NWT  
g  Government of Canada  
h  Other, specify
- 
-

d) Do you feel that you have a say on how the cultural, economic, environmental and social issues related to the Project are dealt with?

- 1  Yes  
2  Somewhat  
3  No. If no, why not?
- 
- 

22. Have you attended public meetings concerning the Project? 1  Yes

2  No

23. Is there not enough/enough/too much public consulting related to the Project?

- 1  Not enough  
2  Enough  
3  Too much  
4  I do not know

24. a) In your opinion is your community ready for the Mackenzie Gas Project?

- 1  Yes  
2  No  
3  Yes & No  
4  I do not know

b) What are the reasons for your opinion? (you can select all appropriate answers)

- a  Our land claim is settled and we are able to influence decision making in the Project  
b  Inuvialuit are partners in the Aboriginal Pipeline Group (APG)  
c  Gas companies take local peoples (the people of ISR) opinions into account  
d  Canadian Government takes local peoples (the people of ISR) opinions into account  
e  Negative social, environmental and cultural impacts  
f  I don't trust the gas companies  
g  I don't trust the Canadian Government  
h  other, specify \_\_\_\_\_

25. Do you think that the proposed Mackenzie Gas Project will go through now (the next 2 yrs)?

- 1  Yes  
2  No, if no, when do you think that it will begin operating? a  in the next 15 years  
3  I do not know b  in the next 30 years  
c  in the next 50 years

26. Do you want the proposed Mackenzie Gas Project to go through now (the next 2 yrs)?

- 1  Yes  
2  No, if no, when would you like it to go through? a  in the next 15 years  
3  I do not know b  in the next 30 years  
c  in the next 50 years  
d  never



**D. Recommendations** (You can continue your answer on the other side of the paper.)

**27.** Do you have any other comments or suggestions related to the Mackenzie Gas Project?

**28.** Do you have any comments or questions about this interview?

**29.** Is there information that I should have asked but didn't?

**Thank you**

Thank you very much for your time. If you have any other questions or comments, feel free to come talk to Raila or Rebecca at the Aurora Research Institute, Inuvik, phone: 777-4628.

**Appendix 4. Consent Form**

## **Sustainable Development in the Mackenzie Gas Project; Views of Inuvialuit Adults in the Inuvialuit Settlement Region**

### **Consent Form**

You are invited to participate in an interview with Raila Salokangas. The research focuses on the possibilities of sustainable development in the Mackenzie Gas Project, with a special focus on Inuvialuit adults' opinions on the Project.

These interview responses may be used by Raila Salokangas in her final thesis for Tampere Polytechnic, Finland and Aurora Research Institute, NWT, Canada.

### ***What would I be asked to do?***

Your participation in this interview is voluntary. You may answer as many or as few questions as you have time or interest for. You may withdraw from the interview for any reason, at any time. If you withdraw from the interview, you may request that any data that you have contributed be returned or destroyed.

### ***Option of Anonymity / Confidentiality***

You have the option of remaining an anonymous participant in the interview, or of having your name/organization identified as the respondent. If you wish to remain anonymous you will not be identified by name, and every effort will be made to insure that specific remarks will not be identifiably linked with specific survey respondents. You may be asked to have your interview recorded in order to fully document all information. It is your decision whether or not to have your interview recorded, and no names will appear on transcripts or the audio tapes if you wish to remain anonymous.

- I agree to have my name/organization identified or
  
- I wish to remain an anonymous participant in this interview.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant's name

\_\_\_\_\_  
Signature of Participant

- Raila Salokangas agrees to use the information provided according to the terms outlined above.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher's name

\_\_\_\_\_  
Signature of Researcher