

# Pathways to Petroleum Development

Public Engagement Report  
for the NWT Oil and Gas Strategy

September 2015



# MINISTER'S MESSAGE

The 17th Legislative Assembly of the Northwest Territories put forth a clear vision of a territory where strong individuals, families and communities share in the benefits and responsibilities of a unified, environmentally sustainable and prosperous territory.

To this end, the Department of Industry, Tourism and Investment (ITI), through its Petroleum Resources Division is working to “promote economic self-sufficiency through the responsible management and development of NWT petroleum resources to create a prosperous, diverse and sustainable economy for the benefit of all NWT residents.”

The time is right for the Government of the Northwest Territories (GNWT) to take a lead in creating the conditions needed to attract and sustain oil and gas activity and to do so in a way that ensures the residents and communities of this territory benefit fully – from exploration, to development, to production and the transportation of our resources to market.

The public engagement highlighted in this report represents the important first step in this work. It will serve to guide and inform the development of an oil and gas strategy for the NWT.

More importantly, it is already working to ensure the sustainable and responsible development of our territory’s oil and gas resources: to create jobs for residents, opportunities for businesses, sources of public revenue – and to build a self-sufficient economy that enables robust territorial public programs and services into the future.

Hon. David Ramsay  
Minister of Industry, Tourism and Investment  
Government of the Northwest Territories



# EXECUTIVE SUMMARY

The NWT has tremendous proven and potential oil and gas reserves, but despite a long history of oil and gas exploration in the NWT, full scale development and production of these valuable resources has not yet occurred.

With the realization of an agreement on the devolution of federal authorities over lands, water and natural resources in 2014, the Government of the Northwest Territories (GNWT) began its work to advance the development of an oil and gas strategy for the NWT.

From November 2014 to April 2015, the Department of Industry, Tourism and Investment (ITI) completed an extensive public consultation and engagement with residents, Aboriginal organizations, municipal and territorial organizations, business and industry to serve as the foundation for this strategy development.

## This is what we heard:

### **Addressing Northern Realities and Challenges**

The NWT experiences a unique combination of circumstances that can attract, but also complicate oil and gas investment. There are challenges to exploring and developing these frontier resources, not the least of which are commodity prices and market dynamics, lack of transportation infrastructure, and a higher cost of doing business compared to other jurisdictions. The GNWT can take the lead in mitigating these challenges by bringing to bear its assets, namely its people, resources and institutions.

### **Supporting Informed Dialogue and Decision-Making**

Good management and strong leadership depend upon timely, reliable information and informed dialogue. The GNWT is now in a unique leadership position to help all partners to access, trust and use the best available information related to managing and monitoring territorial oil and gas resources and activities.

### **Improving Regulatory Clarity, Efficiency and Effectiveness**

Regulatory complexity and uncertainty are frequently cited as impediments to attracting investment in natural resource development in the NWT. The GNWT must continue to work collaboratively with regulators, Aboriginal and federal governments and industry to achieve regulatory improvements that enhance efficient, timely and transparent processes, while maintaining high standards for environmental protection and respect for northern values.

### **Supporting Territorial Readiness**

Readiness means being in a position to take advantage of opportunities when they come along. To support NWT readiness, the GNWT will need to show leadership in guiding development, building partnerships, and providing incentives for economic growth. The GNWT is already moving towards this goal on a number of fronts, through policies, strategies and programs that are being developed in several departments. This approach will be particularly important to facilitate future oil and gas development in the territory.

**These themes and priorities will serve to describe the vision and principles of the GNWT's proposed oil and gas strategy and will ultimately help to shape its actions.**

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# INTRODUCTION

**A strong oil and gas sector does more than promote economic diversification, jobs and business opportunities. Associated tax and royalty revenues offer the very real potential for greater self-reliance and strategic investment by the GNWT and Aboriginal governments in the priorities of NWT residents. The NWT's oil and gas resources are further viewed as an opportunity with which to provide residents with local supplies of energy and reduce reliance on imported fuel.**

But despite a long history of oil and gas exploration in the NWT, full scale development and production of these valuable resources has not yet occurred – and in recent years the territory has not been able to attract significant new investment in this sector.

In 2013, the *NWT Economic Opportunities Strategy* recommended the development of a territorial oil and gas strategy to guide the actions of the Government of the Northwest Territories (GNWT) in its work to promote and enable the sustainable, responsible development of the NWT's oil and gas resources.

With the devolution, in 2014, of federal authorities over lands, water and natural resources – including management of onshore oil and gas rights – the Government of the Northwest Territories (GNWT) now has a greater ability to shape how the territory is perceived by the oil

and gas industry and to promote and encourage investment and activity in this important sector.

The GNWT believes that demand for oil and gas will continue to grow in international and domestic markets – and in the coming decades, intends to ensure that the NWT is prepared to take advantage of the opportunities that they will bring.

This report compiles the various perspectives and suggestions offered by a wide range of invested stakeholders in the interest of making our territory more attractive to industry investment, less vulnerable to outside factors and positioning individuals and communities to share fully in the benefits and responsibilities of a fully realized oil and gas sector.

It will serve as the foundation of a territorial strategy to guide the development and implementation of actions over the next decade and more.

# OIL AND GAS IN A NORTHWEST TERRITORIES CONTEXT

Oil and gas activity has been carried out in the Northwest Territories for decades. The NWT's large reserves of oil and natural gas, however, remain largely undeveloped and the territory is still seen as a frontier area for oil and gas exploration.

The National Energy Board of Canada estimates as much as 37 percent of Canada's marketable light crude oil and 35 percent of its marketable natural gas is located within the NWT.

Discovered and recoverable potential for the NWT and Arctic offshore is estimated around 1.3 billion barrels (bbl) of conventional oil and 16.4 trillion cubic feet (Tcf) of conventional natural gas. Ultimate conventional potential is estimated to be around five times this figure. These estimates do not account for possible reserves in the deeper water portion of the Beaufort Sea.

While significant to the entire territory, the NWT's oil and gas resources are concentrated in sedimentary rocks in the Beaufort Delta, Sahtu and Dehcho regions.

The Central Mackenzie Valley in the Sahtu region has more than 1.2 million acres of land available for petroleum exploration and development.

There is significant potential for unconventional or low-permeability shale or tight oil and gas resources in the NWT. The Canol and Bluefish shales in the Central Mackenzie Valley are estimated to hold 191 billion barrels of oil-in-place.

Additional gas resources in the southwest corner of the NWT are suitably located to provide supply to the proposed Liquefied Natural Gas (LNG) export terminals on the British Columbia coast.

In contrast, however, there is very limited exploration and development. The NWT environment offers a unique combination of circumstances that can attract, but also complicate oil and gas investment. Challenges include seasonal timing constraints, limited transportation infrastructure, the availability of local labour and the higher cost of doing business compared to other jurisdictions.

## Onshore vs. Offshore

'Onshore' and 'offshore' are terms that are defined in legislation, and the oil and gas resources that occur in each area are regulated separately.

In the *Northwest Territories Act*, the 'onshore' is any area that is landward of the low water mark of the seacoast or any naturally occurring permanent island.

This definition is modified slightly in the Inuvialuit Settlement Region, where 'onshore' means landward of the ordinary high water mark.

'Offshore' in the NWT is defined in the *Oil and Gas Operations Act* as that part of the Inuvialuit Settlement Region that is not in the onshore.

Companies that have been able to pursue exploration and development projects have realized tantalizing returns.

Between 2011 and 2013, five companies were awarded 13 exploration licences in the Canol shale in the Central Mackenzie Valley, resulting in commitments of \$626 million in exploration spending.

More than 1,300 onshore wells have been drilled in the NWT – but while the majority of these are exploration wells and have helped build an understanding of the resources, they are not producing.

There are currently eight pools or regions that are producing, or have produced, oil or natural gas. They are: Norman Wells, Ikhil, Cameron Hills, Pointed Mountain, and four pools in the Fort Liard area. Today, only Norman Wells with its direct access to a pipeline and markets is producing. Production was recently halted at Cameron Hills because of low commodity prices and challenges with road access. The Ikhil gas wells near Inuvik are almost depleted.

The devolution of federal authorities over lands, water and natural resources – including management of onshore oil and gas rights – has strengthened the GNWT's ability to attract and manage oil and gas development, including:

- The creation of the Department of Lands and expanded roles and responsibilities for the Departments of ITI and Environment and Natural Resources (ENR).
- GNWT control over legislation that governs resource development and land use in the NWT, including the *Oil and Gas Operations Act* (OGOA) and regulations, and the *Petroleum Resources Act* (PRA) and regulations.
- Regulation of oil and gas activity from within the territory by the Office of the Regulator of Oil and Gas Operations (OROGO), an arm's-length body that oversees oil and gas operations to ensure that they are conducted in a safe and environmentally responsible manner that conserves oil and gas resources.
- The additional staff, systems and tools to support and manage oil and gas activity.

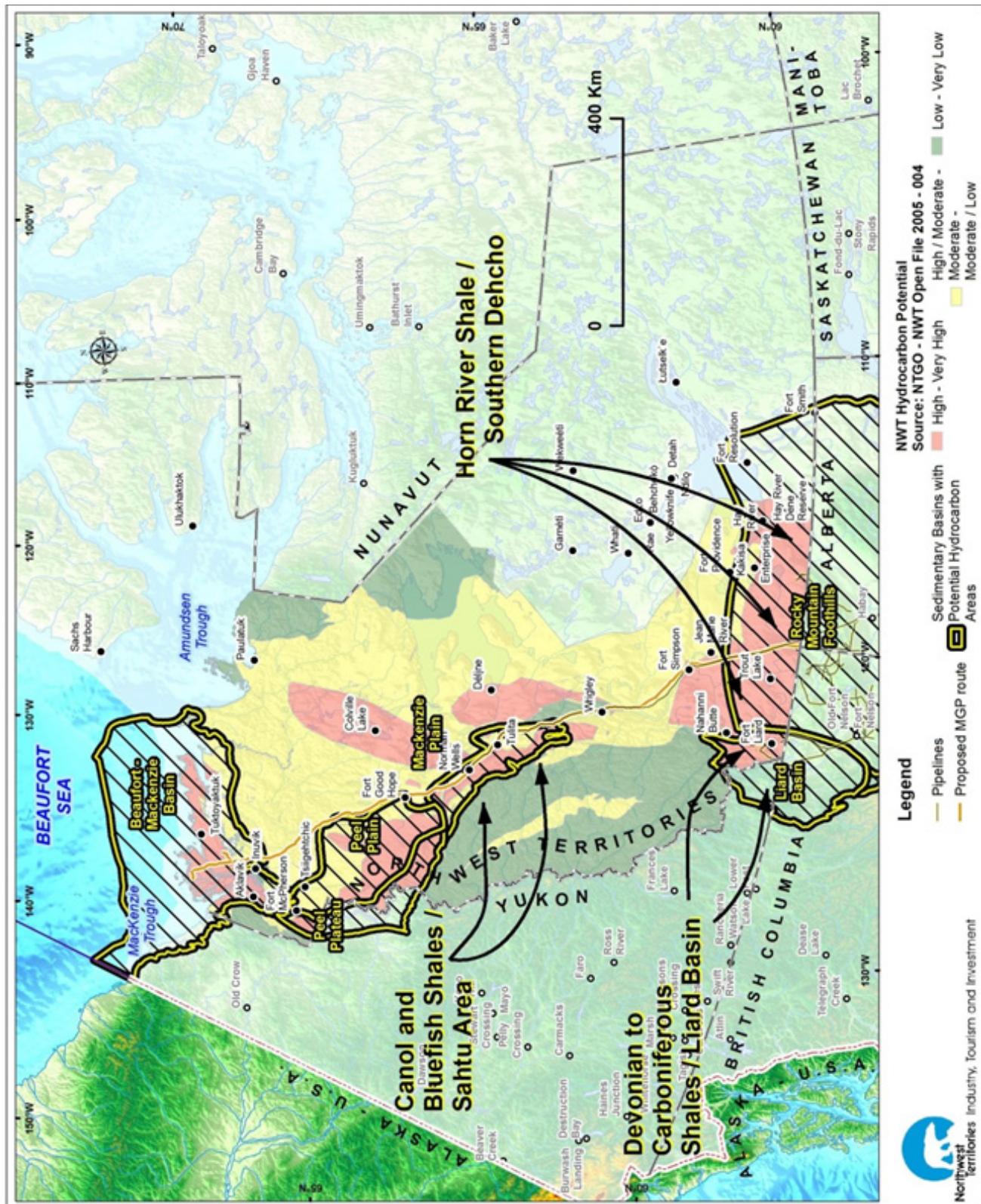
"Frontier lands mean there is a risk but also an advantage – to be the first one to the prize."

- The opportunity to strengthen relationships with Aboriginal groups, industry, potential investors, non-governmental organizations, communities and residents.

As the primary decision-maker on matters related to public land, water and resources, the GNWT now manages a number of distinct roles with respect to oil and gas activities. These include:

- Attracting investment;
- Managing land and administering land management instruments;
- Protecting the environment;
- Regulating activity through the Office of the Regulator of Oil and Gas Operations (OROGO);
- Working with Aboriginal and community governments, organizations and businesses; and
- Advocating for the interests of NWT communities and businesses.

## FIGURE 1: NWT HYDROCARBON POTENTIAL



# METHODOLOGY

The GNWT's development of an Oil and Gas Strategy for the NWT will be guided, in part, by an extensive engagement with communities, territorial stakeholders, leaders, subject-matter experts, Aboriginal groups, industry and the general public.

Between November 2014 and January 2015, over 30 interviews were held with representatives of government, industry, Aboriginal organizations and stakeholders with direct and extensive experience in the oil and gas sector.

Additional interviews were conducted with a range of individuals working in and with the oil and gas industry in Alberta, and with GNWT employees in a number of affiliated departments.

In early 2015, a series of eight focus groups were held in NWT regional centres: two each in Inuvik, Norman Wells, and Yellowknife, and one each in Fort Simpson and Hay River.

Between March and April 2015, a heavily-publicized online public survey solicited the input of the general public and a broad database of interested groups and individuals.

Oil and gas sector stakeholders, in particular, were asked to assess the NWT as a location for increased oil and gas activity and investment. Individuals were asked to contribute insights and recommendations – including perceived gaps or barriers – for consideration by the GNWT in its planned development of an oil and gas strategy for the NWT.

In all cases, participants described what they saw as opportunities, risks, concerns and key obstacles – as well as the conditions that they felt must be in place to successfully bridge the gap between the way things are today and the GNWT's goal of realizing increased petroleum investment and development.

**This report captures the results of this consultation and engagement. Specific findings have been compiled and reported in four themes:**

- ***Addressing northern realities and challenges***
- ***Supporting informed dialogue and decision-making***
- ***Improving regulatory clarity, efficiency and effectiveness***
- ***Supporting NWT readiness***

“Be surgical with the strategy - avoid platitudes and clichés - isolate and focus on the areas where you can make changes that demonstrate benefits.”

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“The existing Norman Wells pipeline is a valuable asset - currently under capacity - at the present time this is the only potentially economic opportunity in the territory.”

## Addressing northern realities and challenges

### What was heard

**There is a clear link between limited oil and gas production in the NWT and its limited infrastructure, particularly transportation. This was seen as the greatest impediment to development.**

- Improvements to infrastructure and the transportation system would open areas for exploration and lower costs, not just for businesses but also for residents and governments. Infrastructure projects could also build capacity, local expertise and local businesses - e.g., restaurants, gas stations, and craft shops.
- Participants were unanimous in their support for completing the Mackenzie Valley Highway and in the potential of a Mackenzie Valley transportation corridor. This was tempered by the recognition that such large and expensive investments would take place incrementally. These improvements were also supported for their long-term contribution to the general good, such as increasing community connectivity and decreasing transport, food and energy costs, and not just their value to industry.

**Unsettled land claims seriously impact the NWT’s ability to attract oil and gas investment and particularly to ship the product to market.**

- Numerous participants said settling the remaining land claims in the southern NWT should be a government priority. This would provide both industry and Aboriginal governments with increased certainty and help level the playing field across the territory.

- Participants saw the Inuvialuit claim as working well, and experiences in the Beaufort Delta were identified as an NWT source of best practices.
- The fact that the Dehcho comprehensive land claim remains unresolved was seen as causing fragmentation and discouraging business investment in a region with very high oil and gas potential. Still, participants noted that divisions also exist within the Sahtu (e.g. over hydraulic fracturing and sharing benefits of development among communities), which shows that settled land claims do not guarantee smooth sailing.
- Until claims are settled, the GNWT and partners should not stand idle. Rather, participants suggested there are opportunities to develop relationships and business agreements to create opportunities that help diversify the NWT economy and benefit residents.

“It would be good to know what the GNWT wants from us to support the Strategy. What can we do to help? What would be our role?”

### **More needs to be done to help NWT communities and regions see how they could benefit from oil and gas activity.**

- There is a widely held view that the short- and long-term benefits of development tend to flow south. On one hand, participants said more needs to be done to retain and share the benefits of oil and gas activity with NWT regions and communities. On the other hand, participants noted more could be done to explain what the potential local benefits flowing from oil and gas development could be. Currently, with the limited experience most communities have had with oil and gas, it is difficult to quantify ancillary benefits from oil and gas development, such as service contracts and new infrastructure. In addition, there are negative perceptions of oil and gas, linked in part to inaccurate information sources and poor communication, as well as accurate perceptions of the real impact the use of hydrocarbons has on climate change.
- Some participants expressed frustration that the NWT continues to rely so heavily on imported diesel fuel despite the potential of developing small-scale oil or gas projects using local resources. Such projects are often assumed to be uneconomic, and probably are for large companies operating on the scale of the Mackenzie Gas Project. However, there are technologies emerging that may bring small scale projects within economic reach which the GNWT may want to investigate.

# Supporting informed dialogue and decision-making

## What was heard

### Information is required to support better decision-making by all parties

- Participants noted that environmental protection was important and must go hand-in-hand with development. All pertinent information should be considered when deciding if exploration and development are suitable for a region and how it should be done. Ideally, this should be captured in land use planning and economic development planning, and requires a close working relationship between ITI, ENR, Lands, Aboriginal governments/organizations, and the regional land use planning boards.
- ITI should collect and share information of interest with oil and gas investors and industry to inform their planning and help them respond to northern and regional realities, navigate the regulatory process, and adopt best practices when working with communities.

### There is a need to provide a balanced view of the industry

- Participants indicated that the perception people have of the oil and gas industry can be as important an impediment to development as the actual environmental effects. For example, some suggested that negative perception of pipelines and activities such as hydraulic fracturing are often based on experiences in different environments and jurisdictions, or the ideological positions of special interest groups.

“People who are in any job related to economic development or resource development need to be in the same room together to connect, perhaps once a year, because people are the real resource.”

“GNWT needs to walk that line between development and protection. Both are important.”



## **Balanced, factual and reliable information is not easily accessible to the public, especially on unconventional development and technologies such as hydraulic fracturing**

- Participants in many communities said they feel it is difficult to get clear, complete and unbiased information on oil and gas activities. This likely impacts whether they trust the messages conveyed by industry and government about how safe these activities are for human health and the environment.
- It was noted, however, that there are many regional and territorial platforms for disseminating research data and information on monitoring cumulative effects. Several positive examples were suggested, including the Beaufort Region Environmental Assessment (BREA) funded research, regional information tours by ITI, the NWT Geological Survey (formerly the NTGO), the Geoscience Forum and online sources such as the Canadian Energy Pipeline Association (CEPA) website. These could be better employed for sharing information on NWT oil and gas activities and how their potential effects are managed.
- Part of creating better relationships is being transparent and honest in dealing with sensitive issues. For example, one focus group suggested that the GNWT acknowledge negative perceptions and engage in a factual and balanced discussion, rather than “sugar coating them”.
- Others suggested cultivating a more positive relationship with media, and using workshops and community events, in partnership with local groups, to get reliable, factual information to the average NWT resident.
- Some participants felt that the GNWT had not been playing a strong enough leadership role and cautioned that industry must not be the only voice heard by communities. Others noted the environmentalist lobby is out in front of government in communicating its perspective to communities and using social media tools effectively to do so.
- Some participants suggested that the oil and gas sector “needs to understand how the north does business,” while others felt NWT residents have a relatively poor understanding of the oil and gas industry, particularly in Yellowknife, due in part to a history of working almost exclusively with the mining sector.

## **Existing tools such as land use planning could be better used**

- Ideally, regional planning would be the platform for discussions and decisions about the suitability of all types of economic activity in a region. With good information, community engagement, and sound economic analysis, a plan can be put forward that enables good projects to proceed with the appropriate level of environmental assessment and community support. Information that supports this type of planning is currently held by a variety of bodies in the NWT, from GNWT departments like ITI, ENR and Lands, to regional land use planning boards.
- Some suggested that, given the various processes that can impact the status and availability of land for development, GNWT departments and their partners should look at integrating the preservation of oil and gas development potential with protected area planning in regional land use planning initiatives.

# Improving regulatory clarity, efficiency and effectiveness

## What was heard

### **Regulatory processes in the NWT are generally perceived as too complicated**

- Some participants pointed to the prolonged, multi-year consultation and review process for the Mackenzie Gas Project (MGP) as responsible, in part, for discouraging oil and gas development in the territory. Others stated that the regulatory system is actually in reasonable condition, but sometimes is unwieldy or too open to interpretation.
- Under the *Mackenzie Valley Resource Management Act* (MVRMA), a regulatory body that conducts a preliminary screening can refer projects to Environmental Assessment even at the exploration stage when environmental risks and impacts will be minimal, for the reason that it “might be a cause of public concern”. This is perceived as a broad and ill-defined criterion that is easily triggered and creates uncertainty for investors and operators. When a community or group has an underlying problem that is not being addressed, this can create a “significant public concern”.
- On the plus side, it is clear that understanding of the regulatory system has improved over the past decade. Participants noted that several regional land use plans are now complete, environmental assessment and regulatory boards are experienced, and a surface rights board is in place, which may help improve clarity.

“In the absence of an economic driver – a mine, pipeline, oil field – this picture of limited participation in the wage economy and widespread hardship will not change.”

## Regulatory improvement should focus on predictability and certainty

- There were some participants who welcomed regulatory improvement, emphasizing predictability and certainty of process more than shorter timelines.
- There were strong comments from industry that the regulatory system needs to recognize the role of exploration in determining the economic and engineering feasibility of a potential project and adapt its timelines and requirements to the scale of the activity and its potential impacts. Overly burdensome regulatory requirements early in the exploration phase scare away potential investors and project proponents.
- Participants saw a role for the GNWT in helping industry navigate the regulatory system. There was an expressed desire for the GNWT to provide and update guidance documents for developers. Such timely information would assist industry, NWT businesses, and municipal governments in planning.

## Supporting NWT readiness

### What was heard

#### Using financial tools to stimulate oil and gas development in line with NWT priorities

- The NWT can build on its existing history. Interviews indicated that aspects of the current system were working well. For example, the royalty system and securities are seen as favourable and have clear processes. Participants suggested creating incentives to encourage local and regional investment through seed money, tax incentives, royalty regimes, and tariff-free zones. Financial tools are one way of stimulating oil and gas development on territorially-set terms.
- Some business participants stated that it is very difficult to enter into joint ventures with the GNWT. The GNWT should consider investment and partnership opportunities to advance oil and gas development, including opportunities to provide NWT communities with local oil and gas supplies for energy needs.

“People need to know quickly to go or not to go on development. Often by the time there is approval, the market has moved on.”

## Understanding and improving the NWT Labour Market

- Consistent with the *NWT Economic Opportunities Strategy* (2013), participants pointed to a general lack of skilled workers in the NWT as an impediment to oil and gas development. Labour market issues were mentioned in all of the regions, as was the limited NWT labour data (e.g. how many workers or assets are in each community). One business participant explained that the issue was not so much with the lack of data, but the ability to bring it together coherently into one place.
- It was suggested that the GNWT should continue to address long-term labour market issues, including residency incentives.
- Many participants mentioned the need for relevant worker training and, more specifically, for broad skills training with an emphasis on transferrable skills. Others discussed the possibility of creating legacy projects or programs that could create sustainable labour capacity. The programs offered by the Mine Training Society were cited as successes that could serve as a model. Finally, there may be an opportunity to align the *NWT Oil and Gas Strategy* with recent initiatives at Education, Culture and Employment (ECE) on labour market and skills training.

## Bringing people together, promoting a partnership approach

- Northern participants talked about approaches to mobilize territorial assets and leverage partnerships, often pointing to the need for better understanding and coordination. To promote the oil and gas economy, they said parties must understand each other's needs and concerns. A number of participants underscored a need for developers to obtain public acceptance before committing to oil and gas development. Likewise, NWT communities need to understand that there are many factors that go into how, when and why business decisions are made, and how industry prioritizes investments among competing jurisdictions where petroleum resources are found around the world.
- Facilitating and coordinating relationships and partnerships was seen as a legitimate role for the GNWT and an opportunity to show leadership.

“Many of the likely partnerships and opportunities for collaboration already exist. They need to be renewed, nourished, and exercised.”

“Aboriginal communities and businesses need skin in the game - partnerships are essential to achieving this.”

“Modify the revenue-sharing arrangements to encourage development - put in place a sliding scale of royalties that allows companies to recoup their higher costs in early stages of development.”

- While examples of collaboration and partnership already exist in the territory, the new powers taken on by the GNWT through devolution have created an opportunity and a responsibility for the GNWT to renew and redefine these relationships.

### **Develop better business and working relationships with Aboriginal groups**

- Some participants encouraged the GNWT to consider entering into joint ventures or business partnerships with Aboriginal groups, or to help Aboriginal groups form such business partnerships with suitable parties.
- Several participants commended the approach used at the time of the Mackenzie Gas Project, where the Aboriginal Pipeline Group became an equity partner, and encouraged that type of innovative thinking and action.

### **More involvement of communities**

- Comments from participants in communities indicate that there is still a perception that the various players at the community and regional level are not meaningfully involved in the decision-making processes related to oil and gas development. This points to a need to encourage more consistent and meaningful involvement in existing consultation and engagement opportunities that are already available in the regulatory process, as well as policy and legislative initiatives.

“A connection to the land doesn’t necessarily equate to a park.”

### **Demonstrating the GNWT’s commitment to environmental protection and sound land management**

- Many participants acknowledged that oil and gas activity has risks and potential negative impacts, but none indicated that these were insurmountable, particularly with strong regulatory mechanisms in place. Participants noted that environmental protection and economic development go hand-in-hand. There is a need to show how the GNWT is effectively managing its stated economic and environmental priorities in an integrated and coordinated way.
- Participants also suggested that assumptions and perceptions about the oil and gas industry are as much of an issue as the actual environmental effects. Therefore the GNWT has an important role to play in facilitating a more informed discussion about the full range of options for monitoring and protecting the environment, and what work is being done in this regard.

# CONCLUSION

The prosperity of the NWT is tied to its capacity to maximize the economic benefits of its abundant natural resource base. But for NWT residents and their businesses to benefit from the rich oil and gas potential that exists, these resources must be discovered, developed and produced.

It is the role of government to both support and advance an investment climate in which industry will advance this needed development; and to ensure that it is realized carefully and responsibly alongside wise saving and the investment of wealth for the future.

Inherent in the process of public engagement and consultation highlighted by this document are recommendations and directions to the GNWT to stimulate and expand the NWT's oil and gas sector and to make it a foundational contributor to NWT economic diversification and prosperity.



In general terms, the findings of this process recommend the following:

### **BE A LEADER.**

- Be the owner now. Manage territorial assets. Advocate for the territorial interest.
- Be proactive – anticipate opportunities and get in front of them.
- Manage risks and manage expectations.

### **BE INFORMED.**

- Study best practices – e.g., successful partnerships in the Beaufort Delta; hydraulic fracturing regulations
- Study lessons learned – e.g., conduct an assessment of the slowdown of exploration in the Sahtu and see what can be done to revitalize activity.

### **BE A PARTNER.**

- Involve communities and Aboriginal groups.
- Engage partners and residents effectively.
- Keep documents simple, commit to follow up actions, be flexible, and avoid prescriptive approaches.

In more specific terms, the following recommendations have also been made:

- Enhance NWT Transportation Infrastructure (particularly build the Mackenzie Valley Highway)
- Use Financial and Investment Tools
- Improve Regulatory Clarity and Certainty
- Understand and Improve the NWT Labour Market
- Create Strong Partnerships
- Undertake Communication, Education and Outreach
- Settle Land Claims
- Understand and Share Oil and Gas Benefits
- Limit Negative Effects of Development

These themes and priorities, now clearly identified, will serve to describe the vision and principles of the GNWT's proposed oil and gas strategy and will ultimately help to shape its actions.

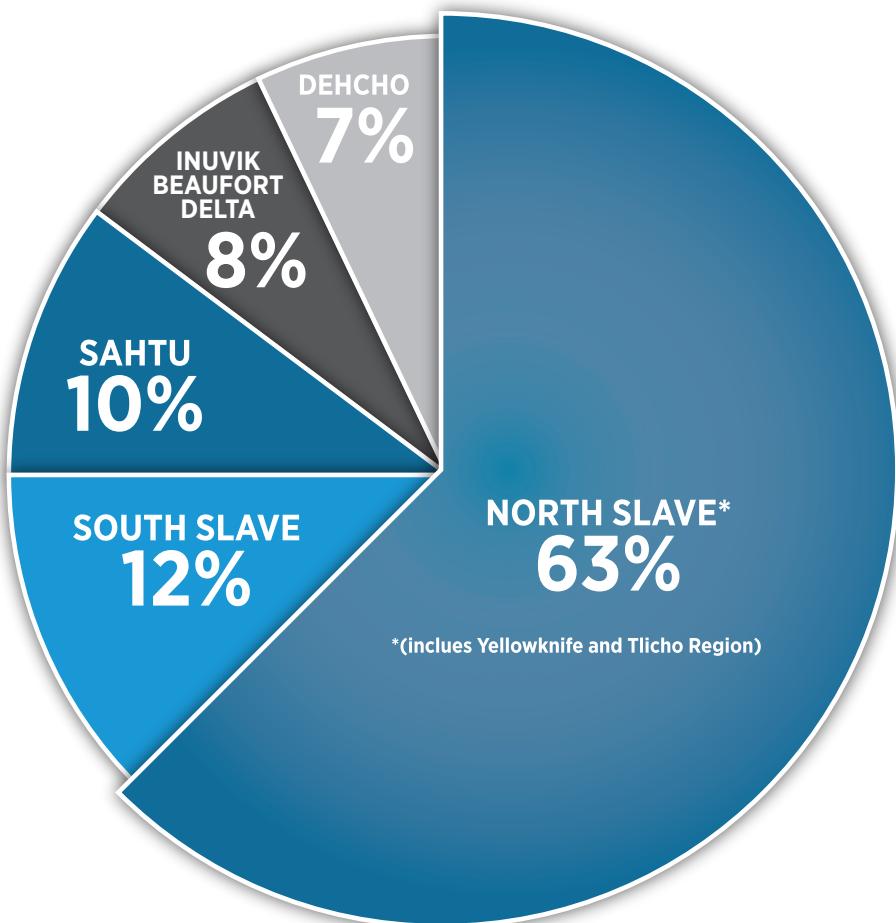
# APPENDIX A: ONLINE SURVEY RESULTS

In addition to interviews with stakeholders and community focus groups, northerners were invited to share their thoughts on oil and gas development in an online public survey. The survey was structured to register priorities in developing territorial petroleum resources and to indicate concerns. It was conducted in both English and French, and a total of 169 responses were received.

## Demographics

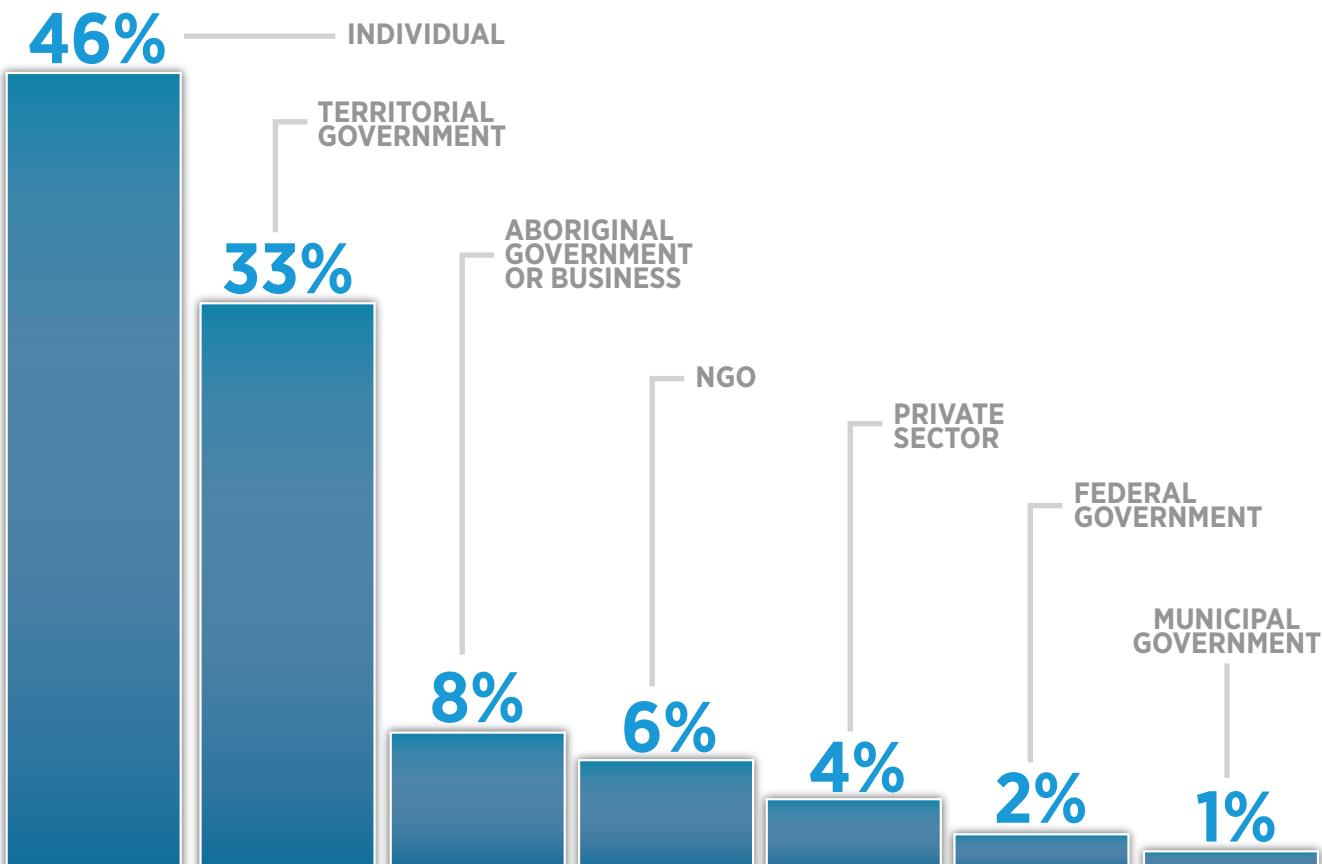
The majority of responses (63%) were from the North Slave region, which included Yellowknife (see Figure 1). Roughly equal participation occurred in other regions, ranging from 7 to 12%. Survey responses were nearly equally divided between women (52%) and men (48%), based on the 122 respondents that chose to identify their gender. Seventy-four percent (74%) of respondents were between the ages of 35 years and 65 years old. Twenty-three percent (23%) of respondents were between the ages of 18 years old and 35 years old. Only 3 percent of respondents were over the age of 65.

FIGURE 1: RESPONDENTS BY REGION (N=124)



Most responses were made by individuals or by people within the GNWT (see Figure 2). Smaller numbers identified as being affiliated with Aboriginal groups, NGOs, the private sector, or other branches of government. A slim majority (56%) of 129 respondents indicated that they and their immediate family members had never worked in or with the oil and gas industry.

FIGURE 2: AFFILIATION OF SURVEY PARTICIPANTS (N=125)



## Pillar I: Northern realities

Forty-four percent (44%) of respondents listed commodity prices as the number one factor in determining whether or not oil and gas activity happens in the NWT (see Figure 3). This was followed by concerns about environmental impacts (22%), Aboriginal land claims (13%), and the cost of transportation including costs due to availability of highways and pipelines (10%).

Respondents had the option to identify other factors that may influence oil and gas development in the NWT not listed as an answer option. Other factors identified by respondents include: royalty regime, Indigenous people's consent, access and benefit agreements, corporate greed, level of government subsidies, NEB and GNWT security bonds, and red tape. Although concern about environmental impacts was a potential response choice, several respondents indicated more specific environmental issues such as climate change and water impacts.

## Pillar II: Informed decisions

Fifty four percent (54%) of respondents indicated that media, including TV, radio, and newspapers, was their primary source of information on oil and gas activity (see Figure 4). Other primary sources cited by respondents include: personal work experience (15%), government (10%), other organizations (9%), social media (6%), word of mouth (4%), and scientific journals (<1%).

FIGURE 3: ISSUE BELIEVED TO HAVE GREATEST IMPACT ON WHETHER OIL AND GAS ACTIVITY HAPPENS IN THE NWT (N=133)

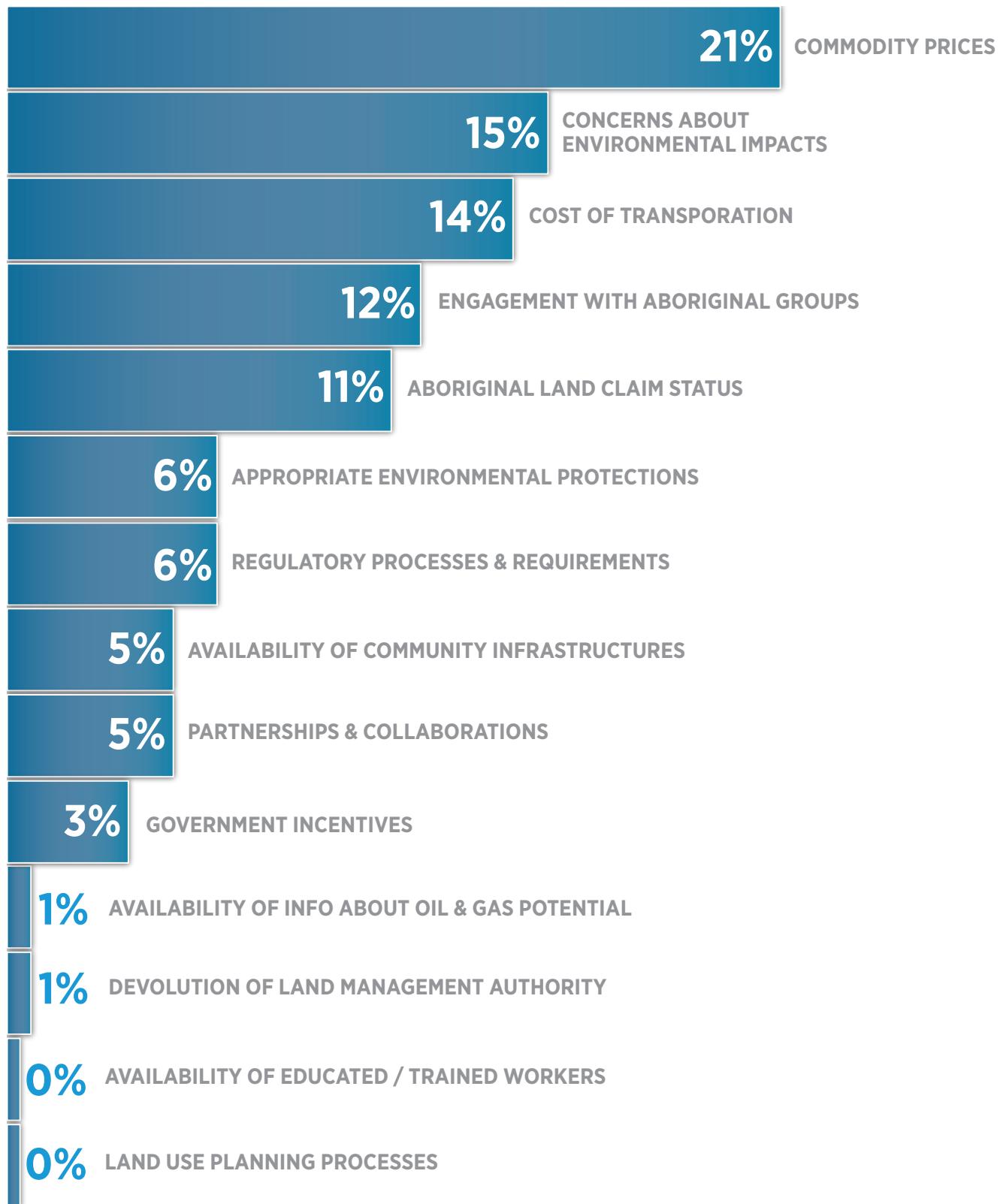
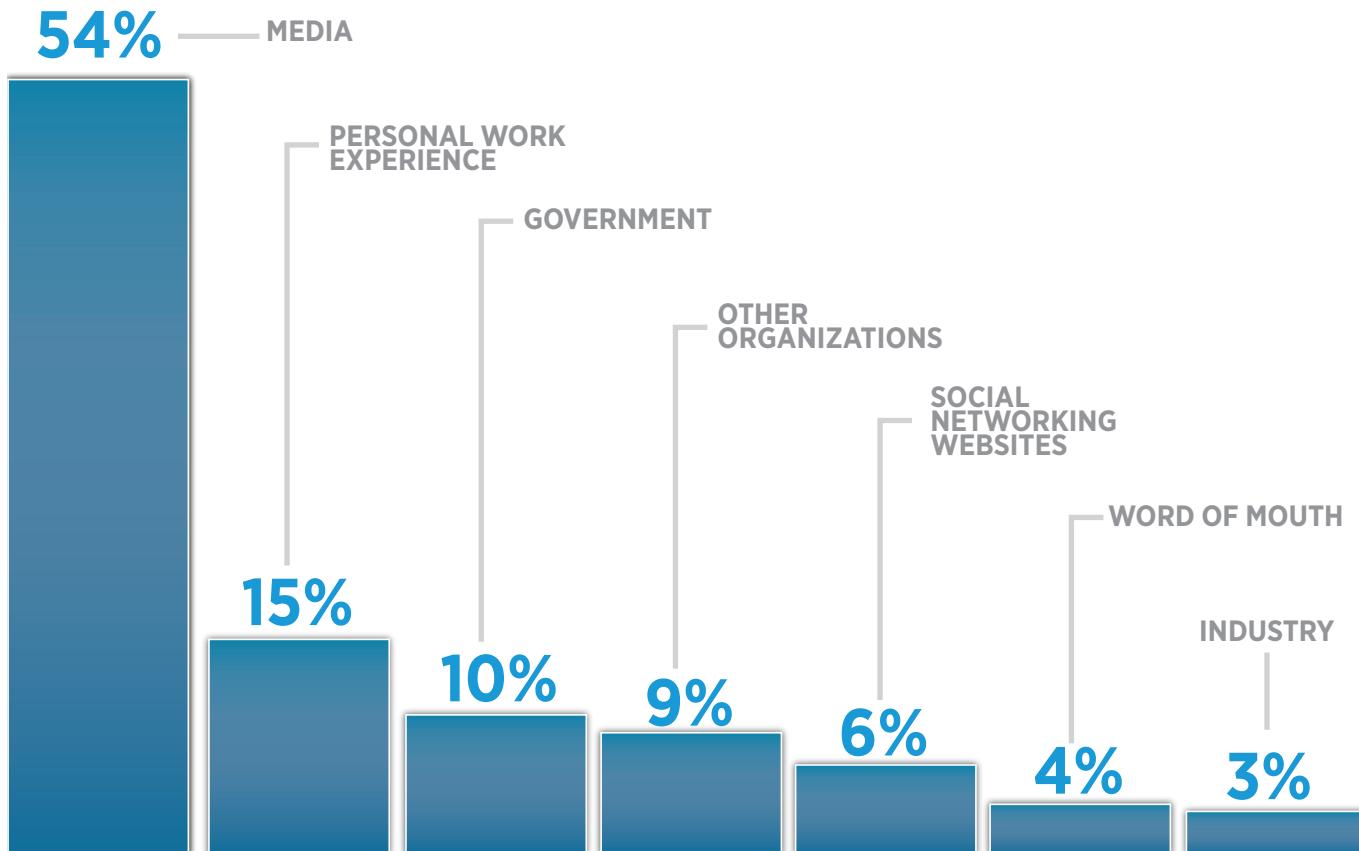
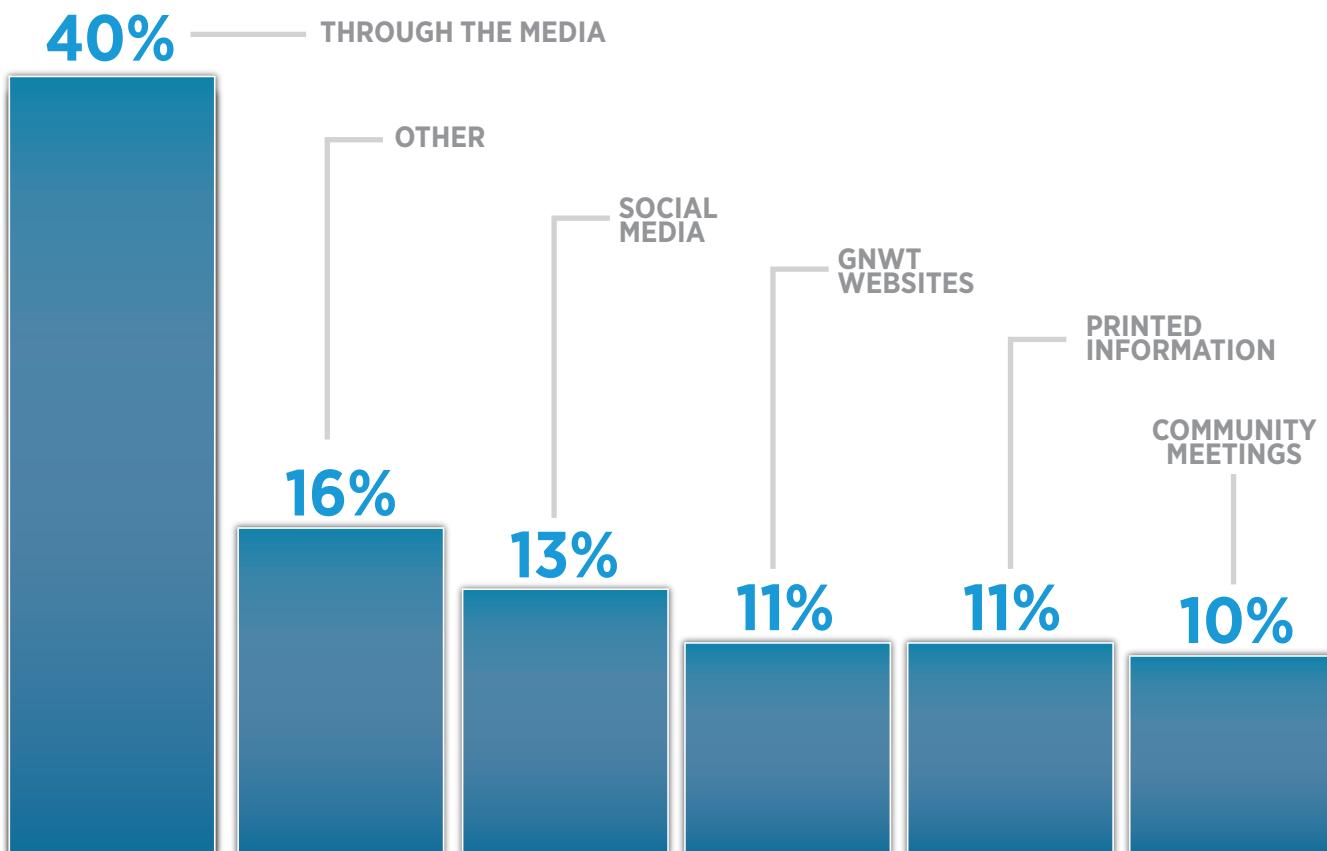


FIGURE 4: SOURCES OF INFORMATION ON OIL AND GAS ACTIVITY (N=150)



Forty percent (40%) of respondents indicated that the best way for them to get information about oil and gas activity is through media such as newspapers, television, and radio (see Figure 5). This was followed by social media (13%), GNWT websites (11%), printed information such as handouts and brochures (10%), and community meetings (10%). Ten percent (10%) of respondents preferred other sources. Answers cited in the other category included email, citizen groups, non-governmental organizations and academic information.

FIGURE 5: BEST WAY TO GET INFORMATION ABOUT OIL AND GAS ACTIVITY IN THE NWT (N=152)



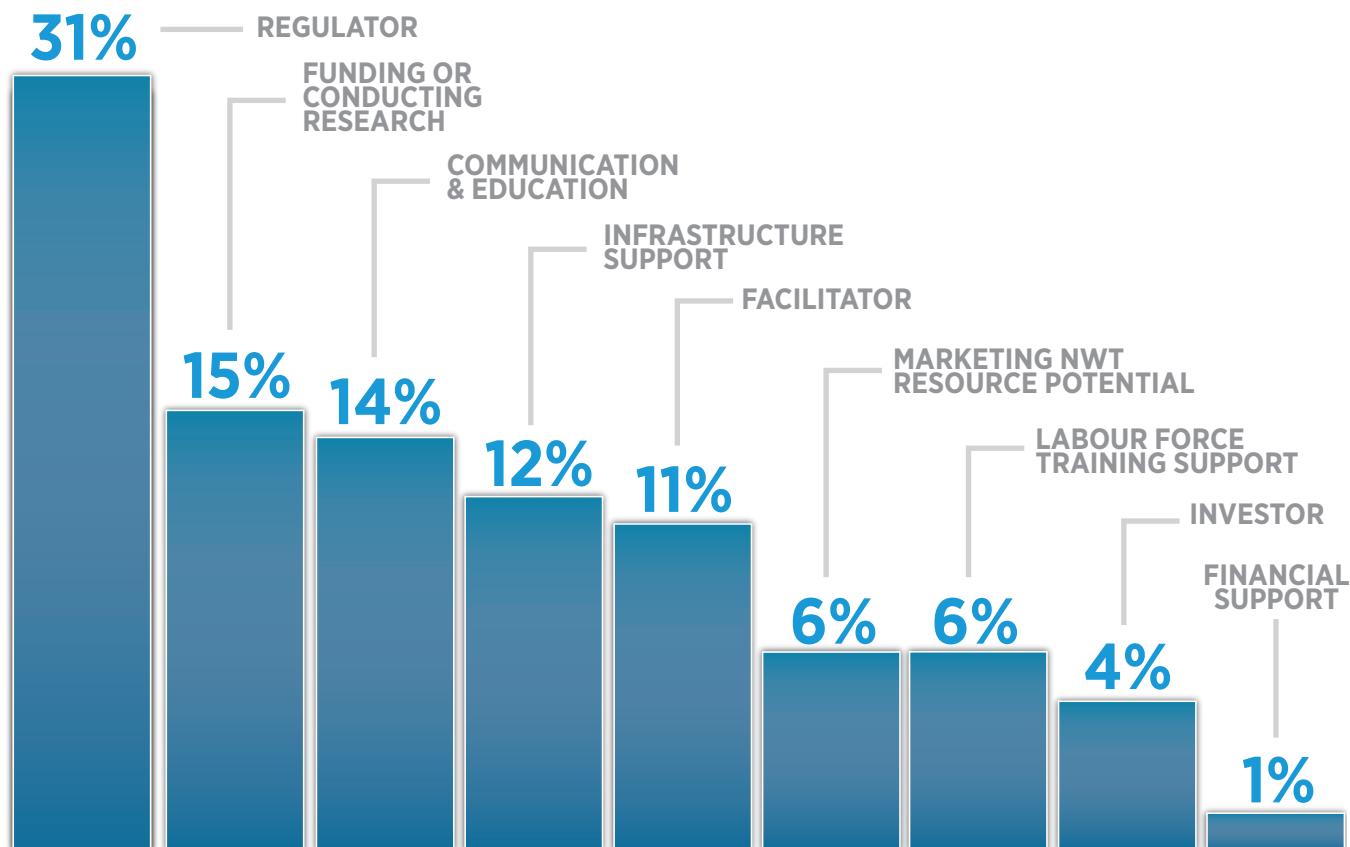
### Pillar III: Regulatory effectiveness

Comments were received throughout the survey that indicated very different views by northerners on the regulatory system. Some portrayed it as a necessary tool for protecting community and environmental values. Others indicated that the regulatory system consisted of excessive red tape that caused delays and uncertainty for industry.

### Pillar IV: Supporting NWT readiness

A number of respondents (31%) acknowledged the GNWT as having a prominent role as a regulator (see Figure 6). This was indicated as its most important role in developing its oil and gas resources. This was followed by providing funding or conducting research and collecting information (15%) and communication and education (14%).

FIGURE 6: MOST IMPORTANT ROLE OF THE GNWT IN DEVELOPING ITS OIL AND GAS RESOURCES (N=120)



Participants were asked to rank the best ways for the NWT to support oil and gas development (see Table 1). Thirty one percent (31%) of participants indicated that their first priority was for it to ensure that the regulatory process was clear and effective. Twenty three percent (23%) stated that the first priority was to open access to markets for NWT oil and gas products, primarily through investing in infrastructure. Twenty one percent (21%) said that the first priority was to provide good quality information to residents and to inform their understanding of development activity. Table 1 shows the rankings from the survey of the top three preferences for the NWT to support development. Some survey participants said in comments that they preferred to see little or no oil and gas development.

There were also a number of specific suggestions for GNWT to improve its involvement in oil and gas development. These included completing land use plans, settling land claims, conducting regional environmental assessments associated with potential oil and gas activity, and better understanding territorial resources and assets. However, a number of participants were cautious about oil and gas development, with some opposed to any activity on health and/or environmental concerns. Others took a view that acknowledged the potential contribution of oil and gas activity to the territorial economy, on the condition that development is conducted safely.

**TABLE 1: BEST WAYS FOR NWT TO SUPPORT OIL AND GAS DEVELOPMENT (N=114)**

	RANKED 1ST	RANKED 2ND	RANKED 3RD
Ensuring that the regulatory process is clear, effective, efficient and followed	33%	21%	13%
Opening access to NWT resources and international markets by facilitating construction of transportation infrastructure (e.g. highways, pipelines, port)	23%	5%	6%
Providing good quality information to residents to increase awareness and understanding of the oil and gas industry and what activities are taking place in the NWT	21%	13%	22%
Collecting and coordinating the sharing of research results from governments and industry	10%	14%	16%
Acting as a liaison between communities, regions and governments	9%	12%	9%
Help build communities' capacity to participate in oil and gas projects through support for workforce training programs and small business development	7%	20%	9%
Getting directly involved in developing oil and gas resources	6%	7%	5%
Acting as a facilitator in connecting businesses and investors	3%	4%	4%
Providing incentives for industry and businesses	1%	3%	6%

## Concerns Raised

Comments received during the survey indicated that many northerners want accurate, unbiased and useful information on oil and gas development (see Figure 7). Some indicated that this was needed for regulatory processes, but also for the general public. Eighty-four percent (84%) of respondents wanted to know more about unconventional oil and gas extraction methods (e.g. hydraulic fracturing) followed by environmental impacts and management (75%), offshore oil and gas (60%), oil and gas transportation (58%) and socio-economic benefits (49%).

Access to good information was portrayed by some as a way to address particular concerns about oil and gas activity. Participants were quite vocal when asked to identify the potential risks associated with oil and gas development that were of personal concern. The comments were analyzed and broken into five major themes (see Table 2). The specific concerns of respondents are shown in Tables 3 to 6 below.

FIGURE 6: MOST IMPORTANT ROLE OF THE GNWT IN DEVELOPING ITS OIL AND GAS RESOURCES (N=120)

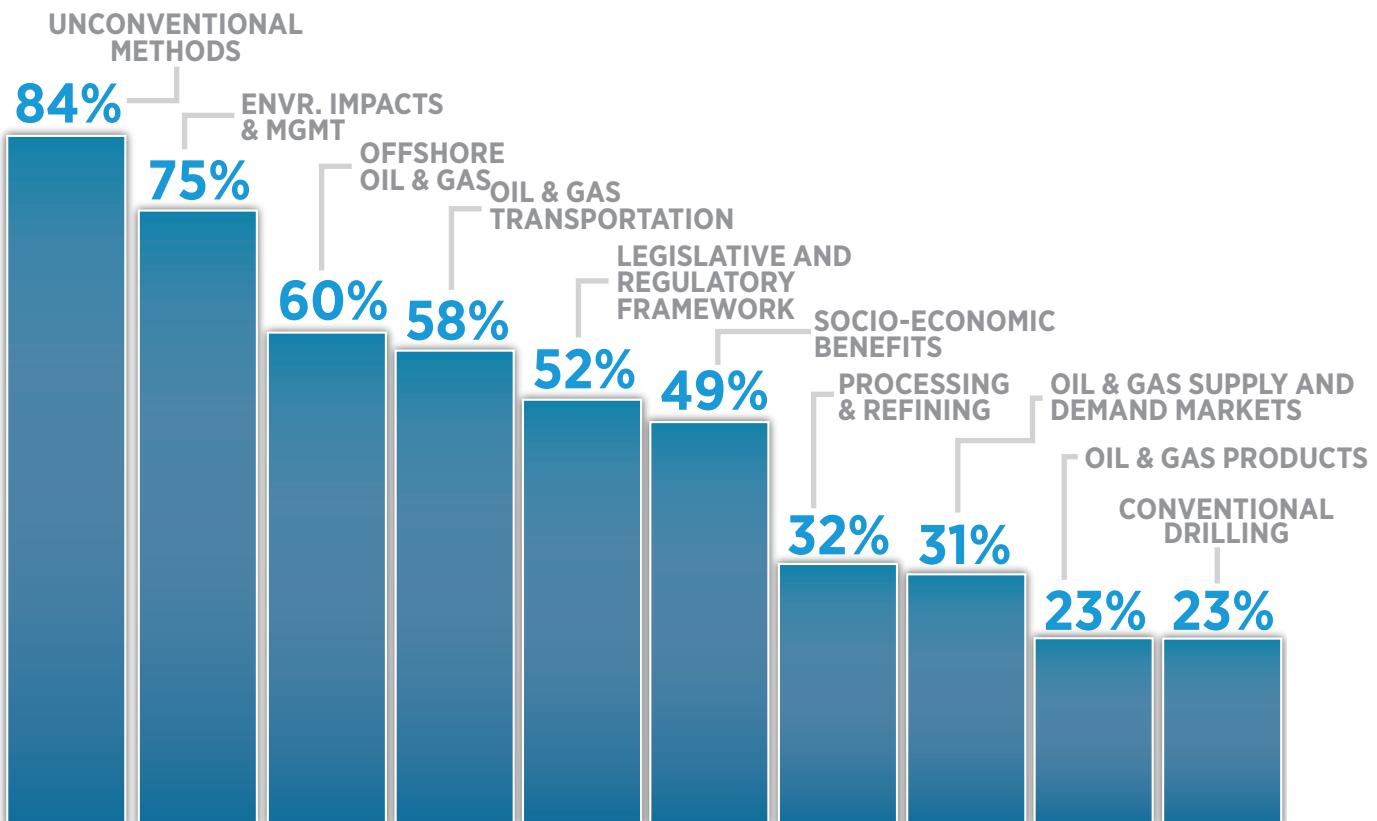


TABLE 2: AREAS OF CONCERN REGARDING OIL AND GAS DEVELOPMENT (RESPONDENTS N=193)

TOPIC AREA	NUMBER OF PEOPLE WHO MENTIONED TOPIC	OVERALL
Environmental	107	55.4%
Economic	45	23.3%
Social/Cultural	15	7.8%
Other	26	13.5%
<b>TOTAL</b>	<b>193</b>	<b>100.0%</b>

**Environmental concerns** dominated the list of issues raised in the survey, with comments received from over half of the survey participants (55.4%). These are already addressed in legislation such as the MVRMA and in a number of other territorial strategies (like the *NWT Water Stewardship Strategy* and the *NWT Greenhouse Gas Strategy*). As a result, many of these concerns fall under Pillar I of this report, such as the coordination of land, water and environmental processes, and some under Pillar III.

**TABLE 3: ENVIRONMENTAL CONCERNs REGARDING OIL AND GAS DEVELOPMENT**

TOPIC AREA	NO. OF INDIVIDUAL COMMENTS
Individual Comments (Environmental)	225
Water	56
Hydraulic fracturing	40
Pollution, including spills	23
Climate change/greenhouse gas emissions	19
Wildlife	18
Ecosystems/habitat	15
Offshore/Arctic areas	14
Remediation/reclamation	11
Human health	7
Air	6
Pipelines	4
Maintain pristine quality of environment	4
Monitoring	3
Cumulative effects	2
Environmental risks are exaggerated	1
Noise pollution	1
Protected areas	1

The next largest number of issues raised was in regards to **economic concerns**. Respondents raised issues ranging from the long-term viability of the oil and gas sector, its stability, and costs related to environmental, legal and social issues. These have been addressed under all pillars in this report, as well as by other GNWT initiatives such as the *NWT Economic Opportunities Strategy*.

**TABLE 4: ECONOMIC CONCERNS REGARDING OIL AND GAS DEVELOPMENT**

TOPIC AREA	NO. OF INDIVIDUAL COMMENTS
Individual Comments (Economic)	69
Sustainability and duration of benefits	13
More emphasis on renewable energy	9
Oil and gas seen as declining industry	6
Responsibility for clean up	6
NWT too focused on resource extraction	5
Costs of clean up	4
Training	4
Wealth distribution in NWT	4
Adequate compensation for Aboriginal groups	3
Adequate heritage fund	3
NWT needs oil and gas activity	3
Develop local processing (e.g., refining)	2
Maintain domestic supply of oil and gas	2
Competitiveness of NWT business	1
Housing	1
More emphasis on local benefits	1
Potential community impacts (economic)	1
Want more economic alternatives	1

A small number of **social and cultural concerns** were also noted by participants. These included potential impacts on NWT communities, treaty rights, and the ability to pursue traditional activities. These issues are addressed chiefly by Pillars I and III in this report.

**TABLE 5: SOCIAL/CULTURAL CONCERNs REGARDING OIL AND GAS DEVELOPMENT**

TOPIC AREA	NO. OF INDIVIDUAL COMMENTS
Individual Comments (Social/Cultural)	19
Potential community impacts (social)	8
Consultation/Aboriginal rights	4
Maintaining traditional way of life	5
Maintaining access to land by northerners	1
More emphasis on local benefits	1

Finally, a number of **other concerns** were expressed. Some participants expressed difficulty in trusting government and industry to manage territorial resources, mostly related to environmental issues. In general, these comments underscored a desire to establish effective dialogue between northern residents, decision makers, Aboriginal groups, and industry. These concerns cover a wide range and are addressed in all four pillars of this report, though the issues related to building communication and trust are covered under Pillar II.

**TABLE 6: OTHER CONCERNs REGARDING OIL AND GAS DEVELOPMENT**

TOPIC AREA	NO. OF INDIVIDUAL COMMENTS
Individual Comments (Other)	39
Lack of trust in decision makers	7
Need more public and community dialogue	7
Opposed to oil & gas development	6
No concerns at all	5
Better relationships between GNWT and partners	3
Improve or maintain environmental management system	3
Improve baseline knowledge	2
Lack of trust in industry	2
Improve limited infrastructure	1
Need better coordination in GNWT	1
Public needs more/better info	1
Need to focus on Aboriginal participation	1



# APPENDIX B FOCUS GROUP QUESTIONS

1. When we say that the GNWT is developing an Oil and Gas Strategy what are the most important ideas that come to mind about what it needs to include or accomplish?
2. There are some factors, like oil and gas prices, that the Northwest Territories does not control. Some things we can influence or control. What types of tools or levers do we have in the NWT, and particularly in the GNWT, to help encourage oil and gas development? (e.g., are there things we can do now in the area of infrastructure, regulation, research or training?)
3. Do you think there is a good understanding of oil and gas development in the NWT, or are there misperceptions that might make it harder for development to happen? Can you recommend ways to increase our understanding of oil and gas, particularly in your community?
4. What barriers or gaps could affect the success of an oil and gas strategy in the NWT? Put another way, what pieces of the puzzle are missing to make a strategy of this sort work?
5. Do you see opportunities for partnering or cooperation between organizations that could benefit the NWT oil and gas industry? What kinds of partnerships are needed and with whom? Are there good examples of collaboration or best practices in the NWT that could be used in the NWT oil and gas strategy?
6. Finally, do you have any advice to us about how we develop an NWT oil and gas strategy?

