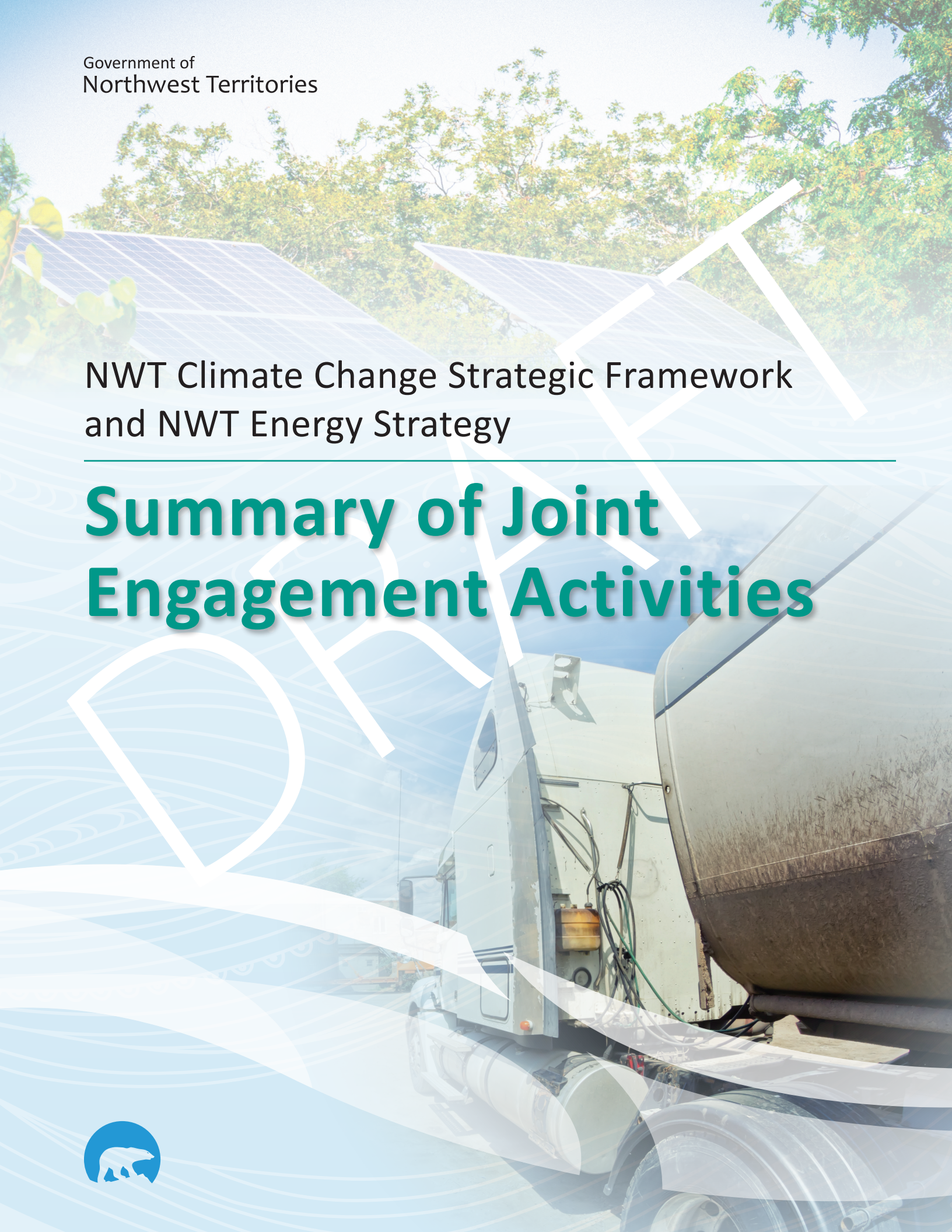
Government of
Northwest Territories

NWT Climate Change Strategic Framework
and NWT Energy Strategy

Summary of Joint Engagement Activities



EXECUTIVE SUMMARY

The Department of Environment and Natural Resources (ENR) is leading the development of the NWT Climate Change Strategic Framework and the Department of Infrastructure (INF) is leading the development of the NWT Energy Strategy.

Given the key linkages between these two initiatives, ENR and INF worked together to gather public input through the completion of a survey and six regional engagement workshops. This work was undertaken from August 2016 to March 2017.

The survey and the six workshops focused on key energy and climate change-related themes. Overall, the results from the survey and the workshops were generally consistent. Specific results are summarized below:

Energy Efficiency and Conservation

Energy efficiency and conservation are understood to be the first actions that can be taken to reduce energy use and emissions. Participants were interested in receiving more information on available programs and felt strongly that access to existing programs should be expanded to ensure maximum flexibility and availability to all communities.

One specific area of focus brought up in most workshops involved finding ways to incent landlords and support renters to improve energy efficiency in rental housing and to work with the Housing Corporation to improve energy efficiency in public housing. The use of community energy plans was also suggested to ensure that energy efficiency improvements work in conjunction with renewable energy to create real change at the community level.

Renewable and Alternative Energy Development

There was a strong desire to better utilize local renewable and alternative energy resources. Local renewable and alternative energy options of interest included biomass for space heating, wind, solar and hydro for power generation and natural gas for space heating and power generation.

All regions highlighted the importance of community led energy projects. It was also felt that the economic cost, environmental impacts and social benefits to the community should be taken into account when considering energy projects.

Long-Term Energy and Emissions Vision

There is widespread support and interest in reducing diesel fuel use, particularly for space heating and power generation in communities, and by industry. Communities are interested in developing local renewable energy resources including biomass, wind, solar and natural gas.

There is also general support for run-of-river hydro-electric projects but there are definite concerns about potential environmental impacts.

There was general agreement that the NWT should set greenhouse gas emissions targets, either at a territorial level and/or by sectors, which would include industry. A few participants were of the view that the NWT's emissions are so small that it isn't necessary to set targets, particularly if this could potentially increase the cost of living in communities.

Carbon Pricing

There were mixed views on carbon pricing. There was a reasonable amount of support for the need to put a price on carbon, however, some regions were not in favour due to concerns about energy costs and potential increases in the cost of living. Four main suggestions were put forth on how carbon tax revenues should be used: to protect low-income families and individuals; to invest in energy efficiency or renewable energy projects; to provide some of the revenues back to industry to help reduce reliance on fossil fuels; and reduce emissions and to help fund NWT efforts to build resilience and adapt to a changing climate, particularly at the community level.

Climate Change Impacts, Knowledge and Monitoring

Participants expressed numerous concerns about the impacts of climate change including thawing permafrost, changing ice conditions and increased risks to human safety, impacts on water quality and quantity, impacts on forest, habitat and wildlife, invasive species, food security and decreased access to country foods and loss of culturally significant sites and artifacts (due to permafrost thaw slumps).

Suggestions on how to deal with ongoing climate change impacts included increased research and monitoring efforts and better distribution and availability of research and monitoring results. In particular, communities want to be much more involved in the identification, planning and completion of research and monitoring projects and felt that there should be more reliance on traditional knowledge to understand what is happening with climate change.

Climate Change Resilience and Adaptation

Participants' priorities for climate resilience and adaptation action fell into three areas: ecosystem management; infrastructure; and, human health, safety and culture.

Key issues to address include risk management of forest fires, the potential impact of invasive species, better planning and use of new technology to protect existing buildings and infrastructure, food security, air and water quality and maintaining Indigenous culture.

NWT CLIMATE CHANGE STRATEGIC FRAMEWORK & NWT ENERGY STRATEGY

SUMMARY OF JOINT ENGAGEMENT ACTIVITIES

1.0 PURPOSE OF DOCUMENT

The Department of Environment and Natural Resources (ENR) is leading the development of the NWT Climate Change Strategic Framework and the Department of Infrastructure (INF – previously Public Works and Services) is leading the development of the NWT Energy Strategy.

Given the key linkages between these two initiatives, ENR and INF worked together to gather input on a range of energy and climate change-related topics. From August 2016 to March 2017, ENR and INF collaborated to complete a public survey and six regional workshops.

This document presents a summary of the results obtained from these engagement activities.

2.0 DESCRIPTION OF ENGAGEMENT ACTIVITIES

2.1 Public Survey

A public survey, comprising ten (10) energy and climate change-related questions, was conducted between August 23, 2016 and January 16, 2017. The survey was promoted in newspaper and Facebook advertisements and during the regional workshops.

In total, 201 responses were received – 194 were completed and 16 were partially completed. There were survey respondents from 17 of the 33 NWT communities. In total 66% of the respondents identified as being from Yellowknife, 31% identified as being from another NWT community and 3% identified as being from outside of the NWT. There were no respondents from 16 NWT communities.

2.2 Regional Engagement Workshops

The Government of the Northwest Territories (GNWT) recognizes that energy and climate change are important issues of concern in the NWT. Due to time constraints, it was not possible for engagement meetings to be held in all NWT communities.

To gather the most input possible in the time available, ENR and INF decided to hold six regional workshops between November 2016 and March 2017. Each workshop was two days – the first day focused on energy and the second day focused on climate change.

In each region, invitations were sent to all relevant regional and local governments, Aboriginal organizations, regulatory or co-management boards and local Chambers of Commerce. A two-hour public session, advertised locally, was also held during the evening of the first day to gather input from residents.

The workshop locations, dates and total participants are noted below:

- Inuvik – held November 1-2, 2016 at the Ingamo Hall (49 participants)
- Norman Wells – held November 15-16, 2016 at the Legion Hall (45 participants)
- Fort Smith – held November 22-23, 2016 at the Roaring Rapids Hall (42 participants)
- Yellowknife – held December 5-6, 2016 at the Explorer Hotel (60 participants)
- Fort Simpson – held February 14-15, 2017 at the Recreation Centre (28 participants)
- Hay River – held March 8-9, 2017 at the Ptarmigan Inn (33 participants)

A Summary Report was prepared for each workshop. These reports are available online – see Appendix B.

3.0 SUMMARY OF ENGAGEMENT RESULTS

3.1 Survey Results

There was strong support throughout the survey for renewable energy projects across the NWT and for improving programs that allow communities or individuals to access funding for their own renewable or conservation projects – such as those provided by the Arctic Energy Alliance. Most respondents also felt a greenhouse gas (GHG) target for the NWT was important.

Respondents were concerned with climate change and the impacts that it would have on the NWT, many of which were already being experienced by respondents. Most respondents were also **unaware if climate change adaptation plans exist** for their communities or regions, suggesting that much work is needed to properly identify the local impacts and adaptation actions that could limit these impacts.

There was also support for investments in actions that can build resilience to the changing climate or help adapt where changes are becoming inevitable.

Respondents were divided about **carbon pricing**, though more were in favour of carbon pricing than opposed. In the written responses, respondents noted that a carbon tax:

- Could be reinvested to support more renewable energy, energy efficiency or conservation projects;
- Will increase the already high cost of living, driving people away from the NWT; and,
- Should consider industry in its design, both to prevent unnecessary impacts on the economy and to pressure mining, oil and gas to reduce greenhouse gas emissions;

3.2 Regional Workshop Results

The six regional workshops were organized around five themes. Carbon pricing was also a significant topic of interest to participants. The results from all six workshops are summarized below:

3.2.1 Energy Efficiency and Conservation

Workshop participants in all the regions expressed a need for an increase in education, awareness and communication surrounding energy and climate change issues. Participants requested and suggested improvements to energy efficiency and conservation programs at an individual and community level.

For housing, participants suggested finding ways to incent landlords and support renters to undertake energy efficiency upgrades. Energy use in rental and public housing should be addressed by collaborating with the NWT Housing Corporation, building energy efficient homes and upgrading existing units.

It was suggested that existing energy **efficiency and conservation programs could be improved** through increased partnerships between government and industry. Participants proposed that programs should target larger population centres to help reduce greenhouse gas emissions.

There was widespread support for **increasing access to existing energy efficiency programs** to ensure they were flexible and available to all communities. Incentive programs, like those offered by the Arctic Energy Alliance, were well received and could be expanded. It was also noted that energy efficiency projects need to consider local socio-economic and cultural values during the planning and implementation.

Community energy plans were proposed as a method of outlining goals and actions of communities and regions. These plans ensure that energy efficiency improvements work in hand with renewables to create real change at the community level. Participants suggested planning at a community level to encourage changes to building codes and zoning laws, support district heating projects and allow other energy efficiency undertakings.

3.2.2 Renewable and Alternative Energy Development

There was a strong desire to better utilize local energy resources. Participants recognized that the feasibility of renewable and alternative energy sources should be explored and that different options exist in different regions and communities.

Local renewable and alternative energy options of interest included biomass for space heating, wind, solar and hydro for power generation and natural gas for space heating and power generation. Other options that were discussed included geothermal, high efficiency diesel and waste-to-energy.

Regardless of the specific energy source or type, there was overall recognition that the economic cost, environmental impacts and social benefits to the community should be taken into account when considering energy projects. Most participants were open to investigating new technologies and testing demonstration projects in the north.

All regions highlighted the importance of **community led energy projects**. Participants stressed that such projects need to:

- Incorporate traditional knowledge in a meaningful and respectful way;
- Consider community input;
- Have local support and buy-in;
- Include funding for local capacity;
- Involve Aboriginal organizations, governments and communities in the program development; and,
- Offer multi-year funding to enable flexibility.

There was clear recognition that all levels of government need to work collaboratively to plan viable energy projects. Groups identified the need for the territorial and federal governments to increase partnerships and communication with Aboriginal governments and communities.

3.2.3 Long-Term Energy and Emissions Vision

Of the NWT's 33 communities, 25 are remote and rely on imported diesel fuel for electricity and heating. Over the long-term, it is anticipated that this system will likely be replaced to make the NWT energy sector more sustainable.

In general, participants felt that fossil fuel use by industry, for space heating and in thermal communities were priority areas to focus on. There was strong support for the **development of the NWT's regional or local renewable energy resources**. Specific opportunities of interest included:

- Continuing to convert residential, commercial and government buildings to biomass heating;
- Applying the Colville Lake hybrid solar/diesel/battery model to other diesel communities;

- Wind energy development in Inuvik (as long as potential environmental impacts are assessed); and,
- Hydro development – there was general support for run-of-river hydro projects, although some participants expressed concerns about potential cultural or environmental impacts. There was also considerable concern expressed about the potential downstream effects from Taltson and other hydro projects in British Columbia and Alberta.

There was general agreement that the **NWT should set greenhouse gas emissions targets** to demonstrate its intention to address climate change. It was also felt that having emissions targets could be used as leverage to get more funding from the federal government. Those participants in favour of targets generally agreed that industry needs to be included as this sector is the largest source of GHG emissions in the NWT. Some workshop participants argued against the use of emissions targets, either because of potential impacts on the cost of living or because the NWT's annual emissions are a very small percentage (i.e., about two-tenths of one percent) of Canada's annual emissions.

3.2.4 Carbon Pricing

As noted in section 3.1 above, the survey respondents had mixed views on carbon pricing. This was also the case for the workshop participants.

On one hand, there was a reasonable amount of support and understanding for the need to put a price on carbon in order to make meaningful reductions in fossil fuel use and GHG emissions.

Ideas on how the GNWT should use **carbon tax revenues** included:

- Protecting low-income families and residents from higher energy bills;
- Making investments in energy efficiency or renewable energy projects or programs (with some suggestions that such efforts be targeted towards communities that are reliant on diesel fuel for heating and power generation);
- Using some of the revenue received from industry to help industry reduce its reliance on diesel fuel, either through an incentive program or funding for energy efficiency or renewable energy projects; and,
- Making investments in adaptation planning and actions to build resilience to climate change impacts or adapt when changes are unavoidable.

Some participants, particularly in Inuvik and Norman Wells, were generally not in favour of a carbon tax as they are already struggling with very high costs of living. Another concern expressed in several workshops was the perception that there are few options available in most small communities to allow energy users to transition away from using fossil fuels.

3.2.5 Climate Change Impacts, Knowledge and Monitoring

Workshop participants were given the opportunity to express their concerns regarding climate change impacts and identify research and monitoring priorities for adapting to climate change. The impacts that were of most concern included:

- Safety of communities and residents;
- Permafrost thaw, and resulting land slumps and river erosion;
- Loss of culturally significant sites and artifacts due to thaw slumps;
- Deceasing water quality and quantity in the region;
- Changes in wildlife behaviour and invasive animals moving into the area;
- Food security and changes in the accessibility of country foods and increasing contamination of these foods (e.g., increased mercury in fish);
- Changes in ice conditions impacting the safety of land users;
- Changes in vegetation in the area; and,
- Increasing numbers of forest fires due to drought, and associated impacts such as damage to infrastructure and reduced animal habitat.

In order to deal with climate change impacts, participants indicated that the **information management and knowledge** about climate change needs to be improved. As information is not easily available to communities or the public, participants suggested the GNWT improve its collection and dissemination of research data and monitoring results.

Additionally, participants suggested that research and monitoring efforts need to be increased. They believed that communities should be much more involved in the identification, planning and completion of research and monitoring projects, and that industry has a role to play in monitoring. Participants described the following **research priorities:**

- Improve baseline data, as it is insufficient in some areas;
- Support community-based monitoring;
- Improve partnerships between communities and researchers;
- Improve communication and outreach on findings and results; and,
- Build community capacity and increase the use of traditional knowledge in research.

Participants noted the importance of using **traditional knowledge** to understand climate change but that this work must be done in a respectful and appropriate manner. Elders should be appropriately recognized for sharing traditional knowledge and policies should be developed for how traditional knowledge is used.

3.2.6 Climate Change Resilience and Adaptation

Participants were asked to prioritize areas of climate resilience and adaptation action, describe opportunities that climate change could bring to their regions and identify barriers to adaptation planning.

Participants' priorities for climate resilience and adaptation action fell into three key areas:

- **Ecosystem management***:* Ecosystem *c*omponents need to be considered in a holistic way and not compartmentalized; planning and risk management for forest fires is required; and, the interaction between invasive species and native species needs to be understood.
- **Infrastructure:** Better planning for infrastructure is needed; winter road access is being impacted by climate change and needs to be addressed; and, technology should be used to protect existing buildings and infrastructure.
- **Human health, safety and culture:** Further work needs to be done to address issues of food security, air and water quality, access to the land as ice conditions change, loss of culturally significant sites and artifacts due to permafrost thaw and emergency preparedness; and, continuing to practice subsistence harvesting while adapting to changes on the land will help maintain Indigenous culture.

Participants did not bring up many examples of existing regional or community climate change adaptation plans. Aboriginal and community governments identified that they require support and funding to develop and implement their own adaptation plans.

Participants identified only a few opportunities associated with climate change, as most impacts were considered to be negative. Some positive opportunities were identified for agriculture and local food production due to longer growing seasons, which could also lead to employment opportunities. New species could be harvested as the ecosystem changes, and increased tourism opportunities could emerge due to improved accessibility in some areas. The increased focus on research in climate change was also considered to be positive.

Several barriers to adaptation planning and action were identified, with one of the greatest barriers being the fact that the climate keeps changing. Other barriers include a lack of funding to address climate change, lack of continuity in community and indigenous leadership and poor sharing, evaluation and accessibility of data and information. Suggestions for overcoming some barriers to adaptation planning included providing information on, and easy access to, funding sources and increasing education about climate change.

APPENDIX A: PUBLIC SURVEY RESULTS

NWT CLIMATE CHANGE STRATEGIC FRAMEWORK
&
NWT ENERGY STRATEGY

Online Survey Results Report

Collected August 23, 2016 – January 16, 2017

Executive Summary

The Department of Environment and Natural Resources (ENR) is leading the development of the NWT Climate Change Strategic Framework, and the Department of Public Works and Services (PWS) is leading the development of the NWT Energy Strategy. In conjunction with other engagement initiatives, an online survey was launched on August 23, 2016, asking survey respondents to supply their thoughts on climate change and energy in the Northwest Territories (NWT) through a series of multiple choice and open format questions.

There were 210 respondents to the climate change and energy survey throughout the 114 days that the survey was open to the public, between August 23, 2016 and January 16, 2017. Of these 210 surveys, 194 were completed and 16 were partially completed.

The survey was promoted in newspaper and Facebook advertisements directed at participants in the NWT. In addition, posters were handed out during regional workshops in Inuvik, Norman Wells, Fort Smith, and Yellowknife, and workshop participants were encouraged to complete the survey and also place the posters in visible, public spaces in their communities.

There were survey respondents from 16 of the 33 NWT communities (however, Hay River and the Hay River Reserve were not represented accurately as two separate communities in the survey). The majority of respondents (66%) identified as being from Yellowknife, and the remainder (31%) selected another NWT community or were located outside of the NWT (3%). There were no respondents from 16 NWT communities.

There was strong support throughout the survey for renewable energy projects across the NWT and for improving programs that allow communities or individuals to access funding for their own renewable or conservation projects – such as those provided by the Arctic Energy Alliance. Most respondents also felt a greenhouse gas target for the NWT was important.

Respondents were concerned with climate change and the impacts that it would have on the NWT, many of which were already being experienced by respondents. Most respondents were also unaware of climate change adaptation plans available for their communities or regions, suggesting that much work is needed to properly identify the local impacts and adaptation actions that could limit these impacts.

Respondents were divided about carbon pricing, though more were in favour of carbon pricing than opposed. In the open-ended questions, respondents noted that a carbon tax could be reinvested to allow more renewable energy, energy efficiency or conservation projects; will increase the already high cost of living, driving people away from the NWT; and should consider industry in its design, both to prevent unnecessary impacts on the economy and to pressure mining, oil and gas to reduce greenhouse gas emissions.

Further results from the survey are presented in detail below.

Contents

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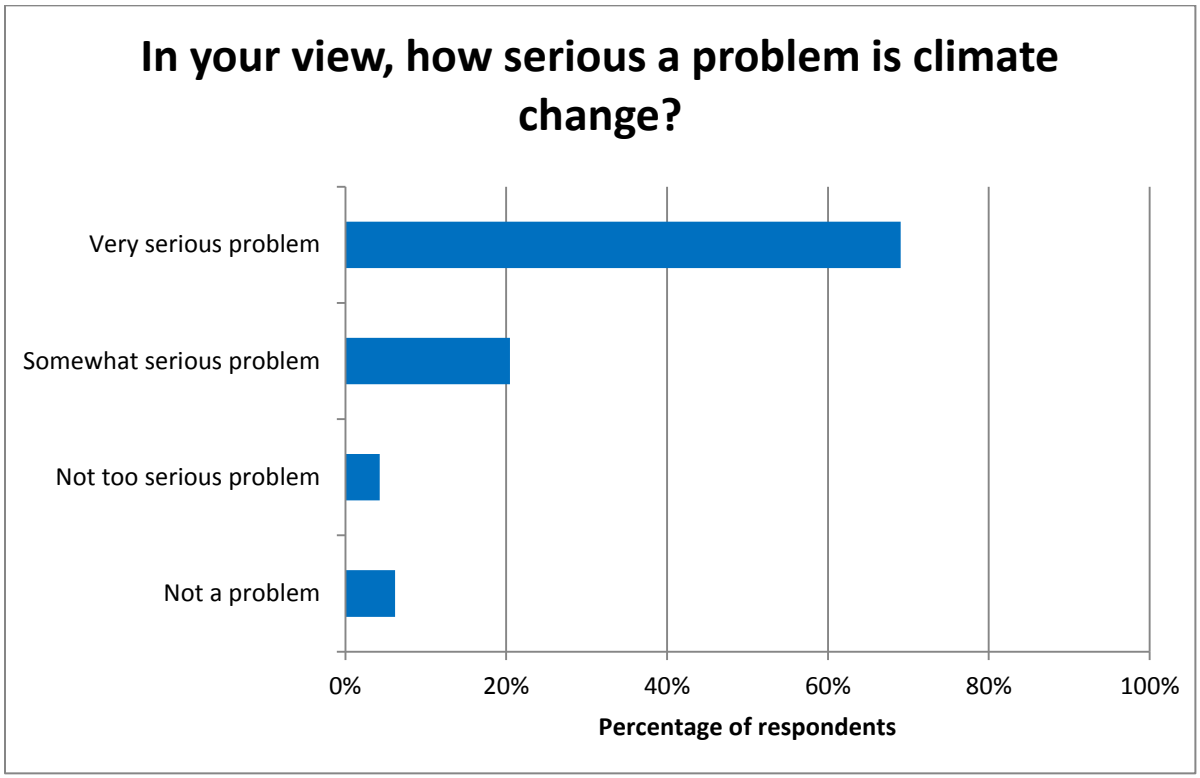
Question 1:

Climate change may be described as long term shifts in the Earth's weather patterns. In your view, climate change in the NWT is a …



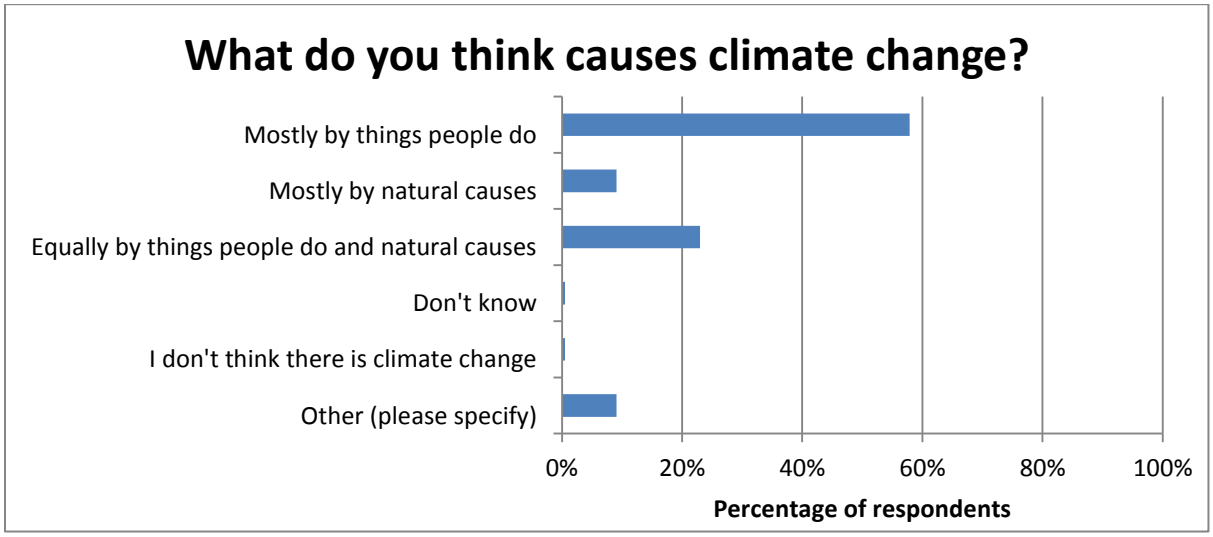
The largest proportion of respondents felt that climate change was a '*very serious problem*' (145 respondents, 69%), while the second largest proportion (43 respondents, 20%) felt that climate change was a '*somewhat serious problem*'. These two categories indicated concern about climate change and accounted for the large majority of respondents (188 respondents, 90%).

The remaining two categories ('*not too serious problem*' and '*not a problem'*) indicated lower concerns about climate change and accounted for the remaining responses (22 respondents, 10%).

In total, 210 respondents completed this survey question.

Question 2:

What do you think causes climate change?



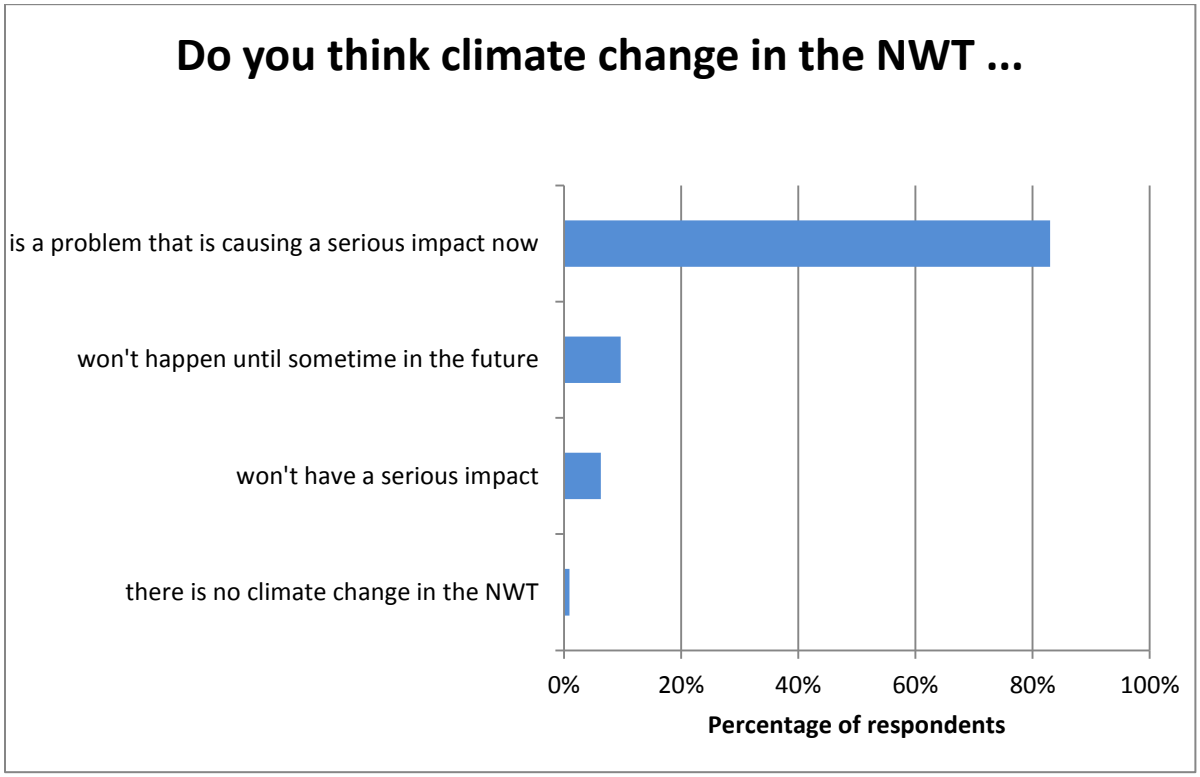
In response to the causes of climate change, the majority of respondent's identified human sources as the main cause (121 respondents, 58%). The second largest group of respondents selected human actions in conjunction with natural causes as being the cause of climate change (48 respondents, 23%). The number of respondents who thought that climate change was being driven by natural forces was much lower than these two categories (19 respondents, 9%).

A large number of the '*other (please specify)*' respondents went into greater detail on the causes and the majority identified man-made emissions as causes or accelerators of climate change, indicating a greater level of understanding of the nuances of climate change or a dissatisfaction with the available question responses.

In total, 209 respondents completed this survey question.

Question 3:

Do you think climate change in the NWT …?



These results indicate that that vast majority of respondents feel that climate change is occurring in the NWT right now (171 respondents, 83%). This number is slightly larger than the combined respondents from question 1 who felt climate change was a '*very serious problem*' and '*somewhat serious problem*', suggesting that most of the participants who thought climate change was a problem, also thought that it was occurring now.

The second largest proportion (20 respondents, 10%) felt that climate change '*won't happen until sometime in the future*'. Respondents who felt that climate change '*won't have a serious impact*' (13 respondents, 6%) or that 'there is no climate change in the NWT' (2 respondents, 1%) made the remainder of the respondents. These results seem to indicate that the vast majority of respondents feel that climate change is occurring in the NWT right now.

In total, 206 respondents completed this survey question.

Question 1 and 3:

A heat map of the responses to question 1 and 3:

	There is no climate change in the NWT	Climate change impacts will not be serious	Climate change impacts could happen in the future	Climate change impacts are serious and occurring now
Climate change is not a problem	1.0%	2.9%	2.4%	
Climate change is not too serious a problem		2.4%	1.0%	
Climate change is a somewhat serious problem		1.0%	5.3%	14.1%
Climate change is a very serious problem			1.0%	68.9%

Table 1.1 presents a heat map of the results from the first two questions. Respondents who felt climate change was a very serious problem and who thought that climate change was already causing a serious impact in the NWT were the most common respondents (69%). Respondents who felt that climate change was a somewhat serious problem that was already causing a serious impact in the NWT or would have an impact in the future were the second and third most common (14% and 5% respectively).

Question 4:

In your community, are you seeing any of the following climate change impacts (please select all that apply):

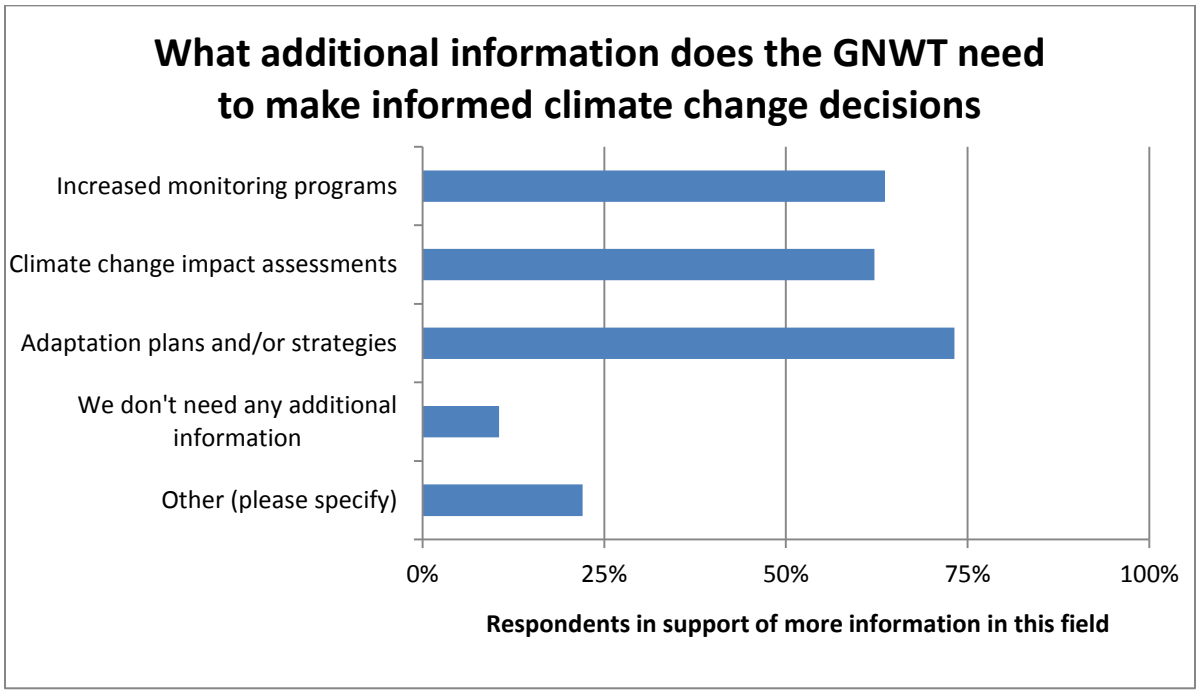
This multiple answer question solicited a large response, with the majority of respondents (>50%) indicating that they had noticed changes in ice conditions, precipitation patterns, wildlife, permafrost and ecosystems. Impacts to traditional activities, human health, coastal areas and natural disasters were less noticeable to respondents.

The 'o*ther (please specify)*' long answer option allowed respondents to indicate some of the impacts they had experienced. These responses included: an increased gardening season, movement of pests and diseases, unpredictable and more extreme weather shifts, impacts on heritage sites, lower water levels, increasing fog events, and no significant impacts at all.

In total, 197 respondents completed this survey question and 40 provided additional comments through the '*other (please specify)'* response.

Question 5:

What additional information does the GNWT need to make informed decisions about climate change impacts (please select all that apply):



Respondents felt strongly that the GNWT needed more information in all of the areas offered as options, including '*increased monitoring programs'* (64%), *'climate change impact assessments'* (62%), and *'adaptation plans and/or strategies'* (73%). A portion of respondents felt that there was no need for additional information (11%).

Many of the comments captured under the '*other (please specify)'* encouraged:

- fast and decisive climate action rather than further information gathering;
- increased the involvement of communities and the use of traditional knowledge in climate change actions and decision making;
- increased research and information sharing;
- educating the residents of the NWT about climate change impacts, adaptation measures and emission reducing actions they can take; and,
- improved communication strategies with communities to disseminate this information.

Some comments included:

- "*Quit looking for additional information, its already there, start using it immediately to effect change*";
- "*Aboriginals can tell us what the land should be like. Ask the hunters. They are the ones using our land efficiently*";
- "*More information sessions for residents outlining the impacts of climate change"*; and,

- "*Increased research in areas where climate change is affecting heritage sites (archaeological, paleontological, and traditional use sites)*".

In total, 209 respondents completed this survey question and 46 supplied additional comments through the '*other (please specify)'* response.

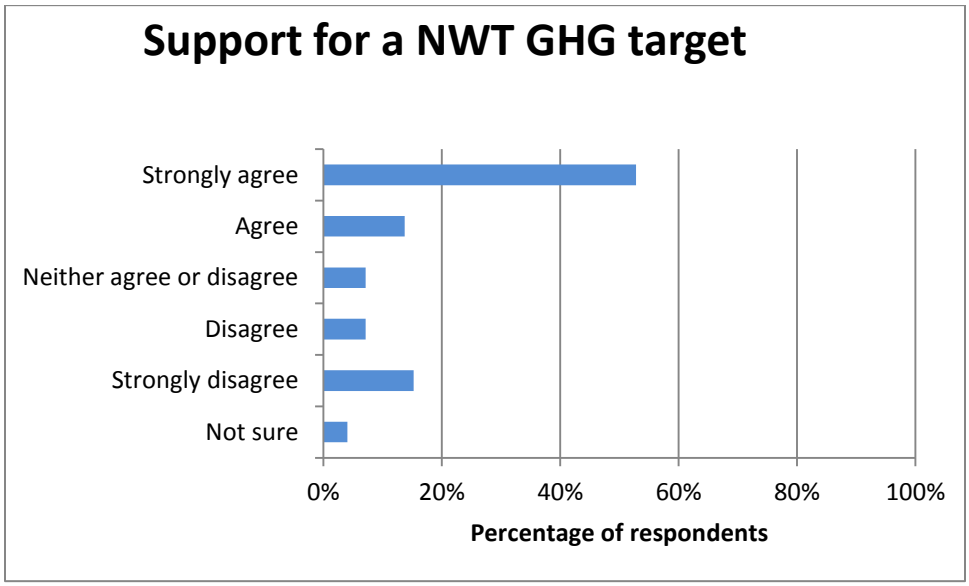
Question 6:

Please describe any climate change adaptation plans or actions taking place in your community or region (that you are aware of). Examples may include hazard mapping, risk assessment, making infrastructure more resilient, and minimizing human health impacts.

This question was skipped by 129 of 210 respondents and a large proportion of the 81 responses indicated that respondents were unaware of adaptation plans or actions in their region. This suggests either a lack of planning and adaptation at a regional or community level, or that these plans and actions are not being properly communicated to the residents of the NWT.

Question 7:

A greenhouse gas target is a limit on the amount of emissions that a jurisdiction can release into the air. For example, Canada has committed to reduce yearly emissions to 30% below the 2005 level by 2030.The NWT should adopt a greenhouse gas emissions reduction target for 2030.

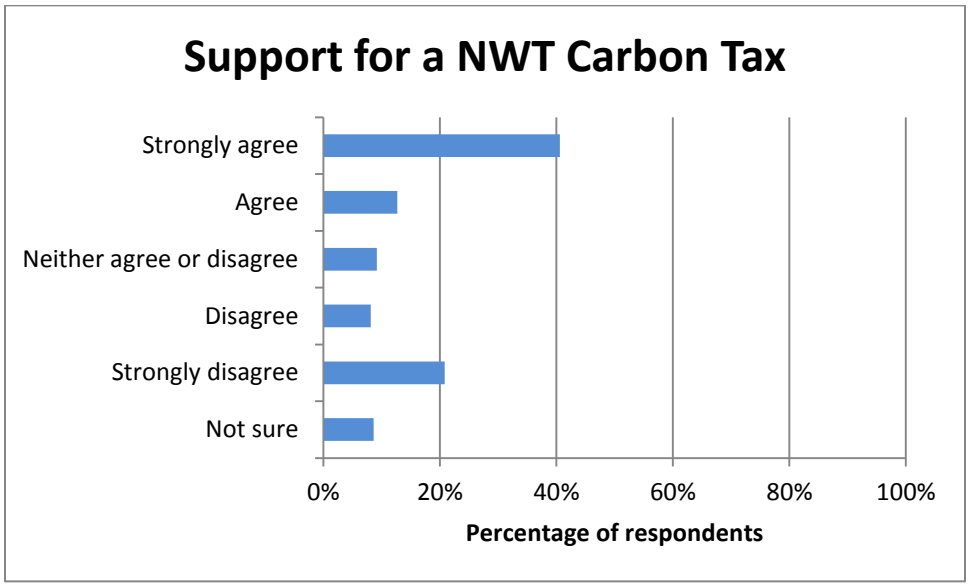


The majority of respondents either strongly agree with a greenhouse gas target (104 respondents, 53%) or agree with a greenhouse gas target (27 respondents, 14%). A fifth of respondents were against a GHG emissions target (7%) or strongly against a target (15%). An additional 22 respondents were undecided about a target, answering either '*not sure*' or '*neither agree or disagree*' (11%).

In total, 197 respondents completed this survey question.

Question 8:

Should the NWT consider implementing a carbon pricing mechanism, such as a carbon tax, to help reduce greenhouse gas emissions and address climate change?

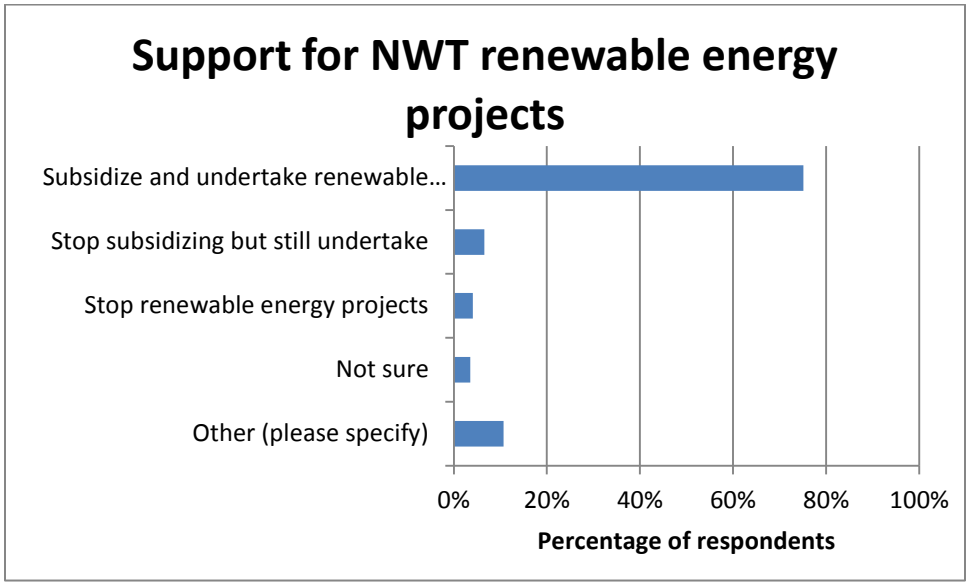


Though a small majority of respondents '*agree'* or *'strongly agree'* (105 respondents, 53%), respondents were strongly split about their thoughts on a carbon pricing mechanism, with almost a third of respondents opposing this action (57 respondents, 29%). The remainder of respondents were unsure of whether or not they supported a carbon tax (35 respondents, 18%). This number of uncertain respondents is higher than in other questions, perhaps indicating the need for more information on what a carbon tax is or details on how it would be implemented in the NWT.

In total, 197 respondents completed this survey question.

Question 9:

The GNWT has been subsidizing alternative and renewable energy projects in the NWT to reduce greenhouse gas emissions so that projects do not increase the cost of living for NWT residents. Please choose your preference:



Respondents were overwhelmingly in support of '*subsidize and undertake renewable and alternative energy projects in the NWT*' (148 respondents, 75%). In addition, a number of the '*other (please specify)*' respondents encouraged increasing funding for renewables and undertaking more projects. These strong responses indicate that most NWT residents are happy with the subsidizing and undertaking of renewable and alternative energy projects in the NWT.

In total, 197 respondents completed this survey question.

Question 10 and 13:

Are there any new energy or climate change initiatives you think the GNWT should explore?

Please provide any comments you may have regarding climate change or energy supply and use in the NWT.

These two similar and open-ended questions solicited a number of detailed responses. Respondents were resoundingly in favour of investment in renewable energy solutions in the NWT, especially wind and solar energy projects. Support for biomass heating, and geothermal and hydroelectric energy projects were also expressed, though to a lesser degree. About half of all mentions of hydroelectricity specifically referred to run-of-the-river or small scale hydroelectric projects. Non-renewable energies, including natural gas and nuclear power were mentioned as potential solutions by several respondents, though a handful of other responses specifically mentioned that nuclear would be a bad energy source for the NWT to look into.

Adaptation actions to improve the resiliency of the NWT in the face of climate change were considered important by a number of respondents. Actions that improve food security, reduce the reliance of NWT communities – especially those without all-season road access – on trucked-in goods and services, and the economic diversification of the NWT were all mentioned as critical actions to reducing the impact of climate change on the NWT.

Numerous comments identified the importance of economic support for homeowners and businesses to reduce emissions. These comments identified the high upfront costs of transitioning to renewable energies, improving energy efficiency and conservation of energy on an individual level. Increased support for programs like those provided through Arctic Energy Alliance was mentioned as a way to overcome these cost barriers. Some comments specifically mentioned a *Home Improvement Charge* as an excellent way for communities to support low carbon improvements and recommended that the GNWT encourage the implementation of these loan programs. Improvements to the net metering program – or perhaps better communication about the program – were also recommended by several respondents.

Education about the impacts of climate change, adaptation opportunities and ways for people to reduce their impact on the environment were deemed lacking by a number of respondents. This knowledge was considered important to allow individuals to make responsible decisions and could be delivered to communities through the youth, schools, social media, meetings, workshops and conferences within the communities. Improved communication with residents would also allow them to be more involved in energy and climate change projects within their communities. It was noted that the GNWT should be providing more support to projects that begin and develop at a local level, i.e., community-driven projects rather than community-based projects.

Strong local and territorial leadership was identified by many respondents as an important driver of both climate change and energy policy and projects. Local champions need to lead by example with

personal decisions and be able to incite organizations to take stronger actions towards building energy and climate resiliency within their jurisdiction.

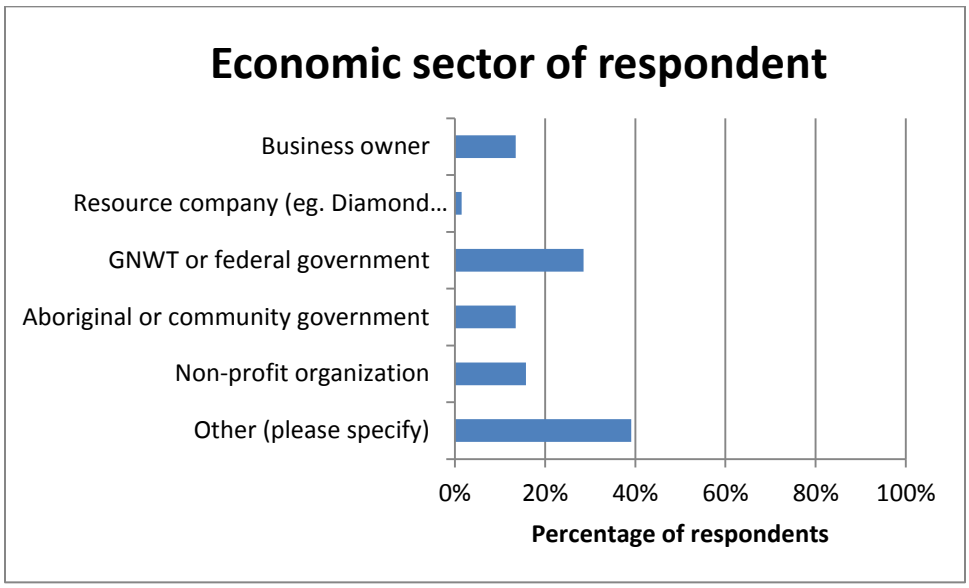
Support for carbon pricing was generally split, though slightly more responses were in favour of carbon pricing mechanisms. Those in favour urged reinvestment of revenue from a carbon tax into renewable energy projects and an emphasis on reducing industry greenhouse gas sources. It was also noted by some respondents that fuel subsidies run counter to a carbon tax and that all cross-cutting policies should be considered holistically and adjusted to see the greatest reduction in emissions. Respondents opposed to carbon pricing were mainly concerned about the already high cost of living, though some respondents cited an absence of evidence for climate change or the limited impact of the NWT's emissions as reasons that the territory should not implement a carbon pricing mechanism.

Many respondents felt that industry in the NWT should be taking stronger action to reduce their greenhouse gas emissions. Some suggested that new industrial operations should be mandated to include renewable energy goals when applying for land use permits and water licences, pay a higher rate under the carbon pricing mechanism, and be able to access a portion of carbon taxation revenue to fund renewable energy projects on their sites.

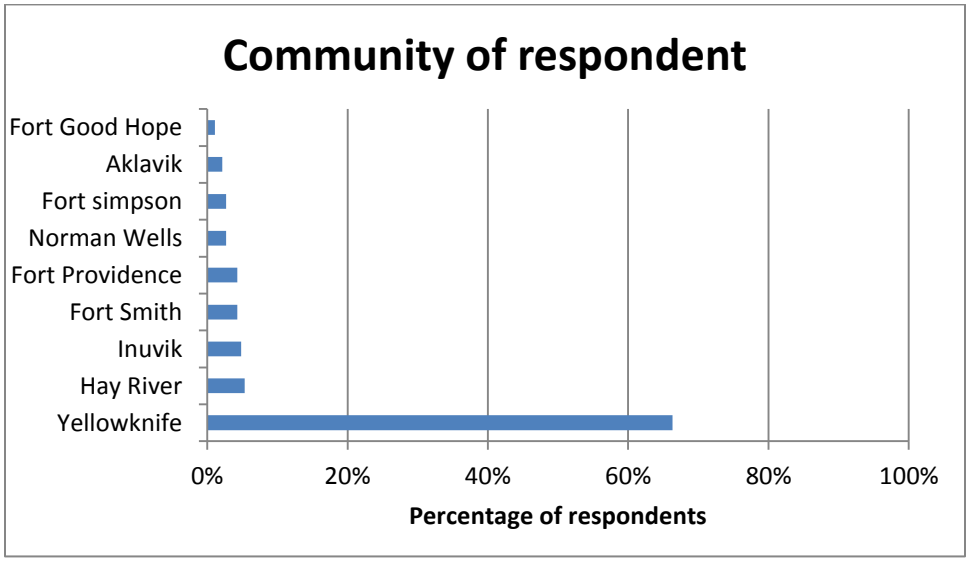
Figure 1: A word cloud based on the responses from questions 10 and 13. Words that were mentioned less than three times have been removed.

Questions 11 and 12:

Do you represent any of the following organizations?



In which community of the NWT do you live? (All communities, as well as 'Not in the NWT' were listed).



These identifier questions were to ensure that there was a fair representation of the NWT in the survey results. The economic sectors of the respondents were reasonably well divided amongst the categories. The communities of Dettah, Wekweèti, Paulatuk, Fort Resolution, Enterprise, Gamèti, and Behchokǫ̀ all had one respondent but are not represented in the graph.

There was a higher than anticipated number of respondents from Yellowknife; 66 % of respondents were from Yellowknife, while the city is 47% of the NWT population. Seventeen NWT communities were not represented in the survey, including Kakisa, Jean Marie River, Sambaa K’e, Nahanni Butte, Fort Liard, Sachs Harbour, Ulukhaktok, Tuktoyaktok, Fort McPherson, Colville Lake, Tulita, Wrigley, Whatì, Tsiigehtchic, Łutselk'e, Déljne, and Hay River Reserve.

APPENDIX B: REGIONAL ENGAGEMENT WORKSHOP REPORTS

Copies of the following reports are available at www.nwtclimatechange.ca

- Inuvik Regional Engagement Workshop - Summary Report
- Norman Wells Regional Engagement Workshop - Summary Report
- Fort Smith Regional Engagement Workshop - Summary Report
- Yellowknife Regional Engagement Workshop - Summary Report
- Fort Simpson Regional Engagement Workshop - Summary Report
- Hay River Regional Engagement Workshop - Summary Report