

Climate Change Impacts on Yukon Trappers

For the Fish and Wildlife Enhancement Trust

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Executive Summary

Trapping is a traditional way of life and has cultural significance in the Yukon for many First Nations people. Trapping and the lifestyle that it offers has also been pursued by a variety of Yukoners from different cultural upbringing, ages and genders. Climate change is part of Yukon's future; it is unavoidable and could have widespread impacts on human and natural systems. Some regions in Canada like the Yukon in northern latitudes are experiencing changes faster than others. An interview-based study was designed to record and document possible impacts trappers are experiencing on their traplines. The structured interview allowed for quantitative research where the interviewer asked a series of prepared closed-ended questions. The questions were broken down into 5 different categories, General Impacts, Health and Safety, Infrastructure, Traditional Knowledge and Cultural Impacts, Government Research and Regulations. These answers were then combined and analyzed to determine if trappers were experiencing impacts. In general, the trappers surveyed in Southeast Yukon have seen less impact to their traplines and the animals from climatic changes than other parts of the Yukon. One of the exceptions to this is the universal finding of unpredictable ice conditions. Trappers are experiencing unpredictable ice when they have a lake or river on their lines. Seventy-three percent of trappers across the Yukon are experiencing challenges around ice and overflow. This leads to decreased access and safety concerns. Central and Southwest Yukon have experienced more disruption to access, animal population decline, and increased activity not related to trapping. Trappers feel the increased activity is due to milder winters and higher snow levels that increases access to areas that were difficult to access in the past. Overall, 57% of participants feel that animal health is decreasing on their traplines due to this activity. Trappers in Northern Yukon are experiencing higher river levels along with increased snow, which is impacting access to the trapline, but have not experienced large declines in animal populations. Overall, 82% of trappers have experienced unexpected flooding from changing weather. However, ninety-four percent of participants felt they can pass on traditional knowledge of trapping to the next generation. Many trappers are actively trapping with younger members of their family and community. Although seventy percent of trappers feel the current government regulations still reflect the seasonal trapping window in the Territory, 90% feel they have not been engaged by government when creating government policy on Climate Change. More engagement on policy would be welcome within the industry.



Project Activities

Research and Questionnaire

A series of interview questions on the 5 main themes was researched and compiled together with the support of the project's partners. These include the Yukon Trapping Association, The Council of Yukon First Nations, Yukon Government and Yukon Fish and Game Association. This also include reaching out to some trappers to ensure questions were relevant and could quantify possible impacts. The research topics were broken down into 5 different categories, General Impacts, Health and Safety, Infrastructure, Traditional Knowledge and Cultural Impacts, Government Research and Regulations. The final questions were selected and reviewed by partners. Additional questions were added to ensure full coverage of the 5 categories.

Coivd-19 State of Emergency and Impacts to Study

On March 27, 2020, the Yukon Chief Medical Officer declared a State of Emergency in Yukon. This was extended on June 12, then again on September 9th and March 3rd, 2021. Restrictions were put on Yukon residence around working from home and limited travel and movement within the Territory. This impacted the studies original design and outreach efforts. Hours and expenses that were originally allocated to travel were diverted to emails, phone, skype and zoom. Connecting with individuals was more challenging and took more time to arrange and often required multiple attempts. Agency based participants would have been more straight forward arriving at an office with an appointment. Yukon residences were complying with the stay-at-home order, which required extra efforts on outreach and availability. Surveys were completed over different medias to ensure individuals safety and to comply with the Civil Emergency Measures Act.

Questionnaire and Structured Interviews

Interviews were arranged using different forms of media, the majority over the phone. The structured interview allowed for quantitative research where the interviewer asked a series of prepared closed-ended questions. These were read out exactly as worded. This standardize format means the same questions were asked by the interviewee in the same order in the same way. The interviewer only deviated from this standardize approach to clarify the question when asked by the participants. This method increased reliability of sampling each participant the same way while making the data more quantifiable. On certain questions there was the ability to add additional comments to clarify answer. For most questions, the interviewee was given 5 options for each question these include Completely Disagree, Somewhat Disagree, Neutral, Somewhat Agree, Completely Agree. They would choose the one that best suited their experience

on their traplines. There was also flexibility to capture larger answers if given. This was especially important when working with Elders. Capturing information that has been given when interviewing Elders is always top priority and was recorded outside of the standardize method.

Participants Review

After the survey is completed, the interviewee received an electronic copy of the completed survey. This will allow them the opportunity to review the survey and their answers to ensure it is correct. This is an extra step and does increase costs, but it has been found to be a worth while to ensure trust in data and increase accuracy of the dataset.

Data Collection and Database

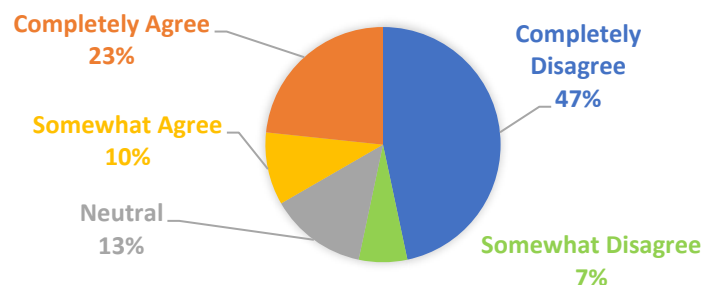
Once all the data was collected and reviewed it was entered into the database the data was analyzed. The purpose of the data analysis is to assess if the Yukon trapping industry were being impacted by Climate Change. Analysis of the five categories was completed to determine the possible impacts and effects that occurred within the industry. Data was examined to determine if there are any common trends within smaller regions as well as Yukon wide. Analysis of data and recommendations on possible mitigations were considered.

Results

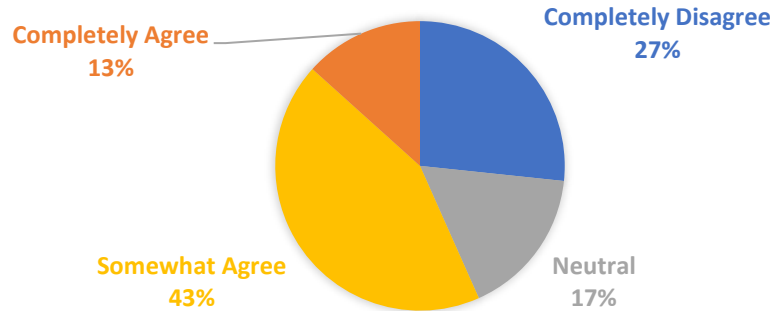
General Impacts

Survey participants were asked a series of questions on the general impacts they might be experiencing on their traplines. Below are the graphs to show how the participants answered the questions.

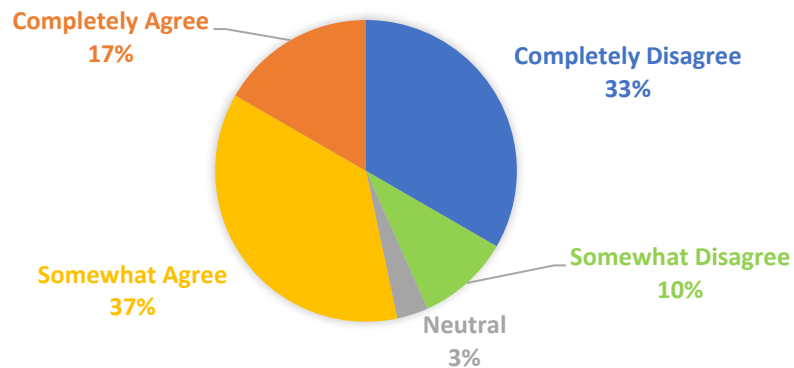
DECREASING POPULATION OF HARVEST SPECIES ON YOUR TRAPLINE



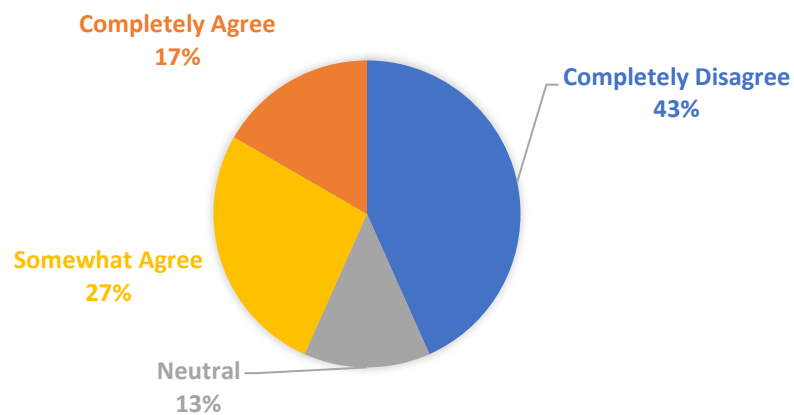
INCREASING POPULATION OF HARVEST SPECIES ON YOUR TRAPLINE



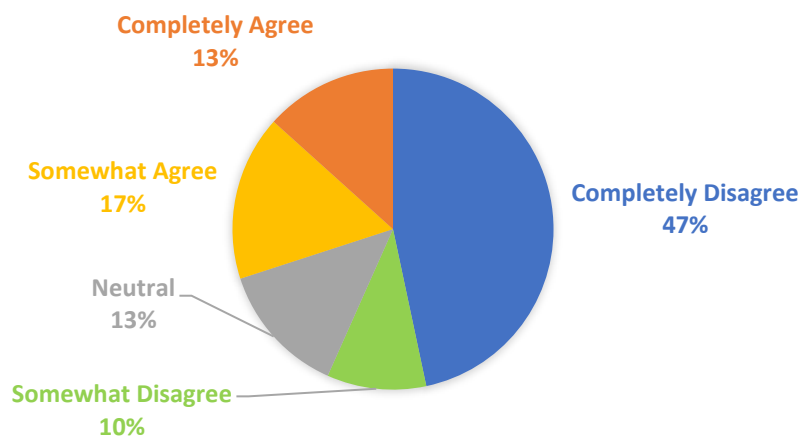
EXPERIENCING NEW ANIMAL POPULATIONS OF HARVEST SPECIES ON TRAPLINE



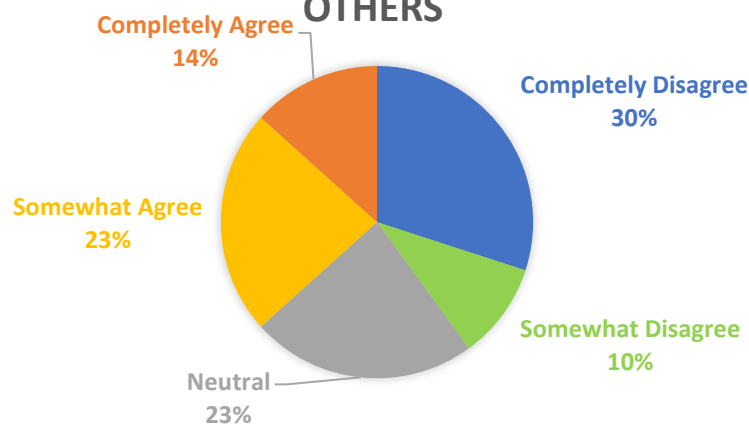
EXPERIENCING CHANGING ANIMAL BEHAVIOUR ON TRAPLINE



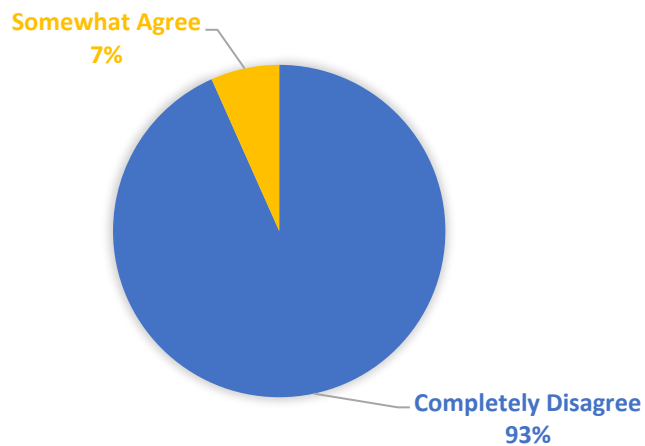
OBSERVING OVERALL CHANGES IN HEALTH OF SPECIES



OBSERVING CERTAIN SPECIES IMPACTED MORE THEN OTHERS



CONSIDER ANY NEW SPECIES ON YOUR TRAPLINE INVASIVE

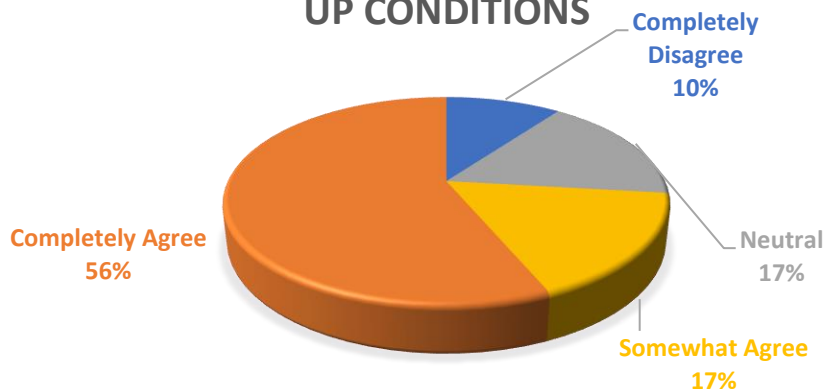


Health and Safety

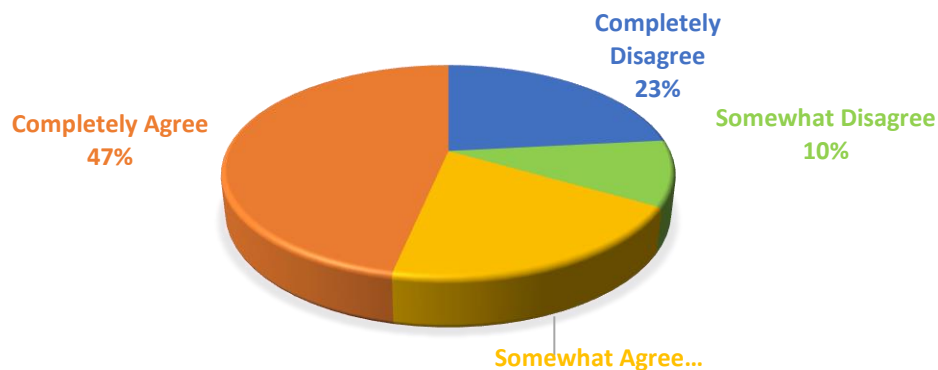
Personal health and safety while working on individual traplines must be carefully considered and managed throughout the trapping season. Given the remoteness of most lines and the working conditions of often solo and paired, work safety is always factored into trapping. This section was broken into three categories, Ice Conditions, Snow Conditions and Forest Fire.

Ice Conditions

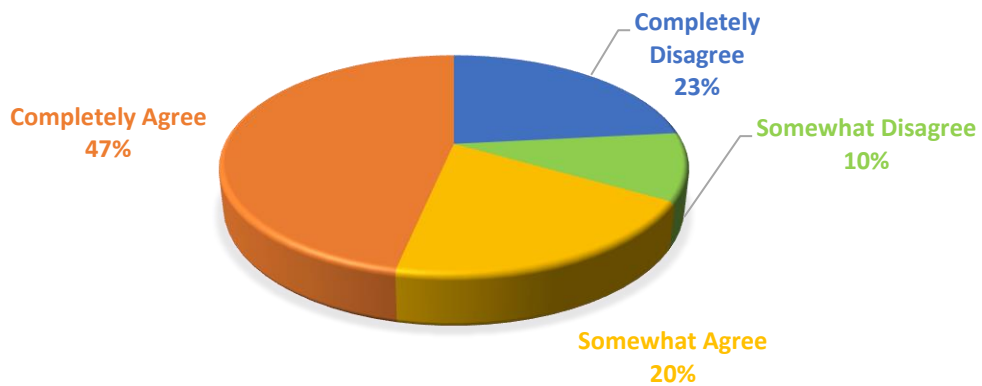
EXPERIENCED UNPREDICTABLE ICE AND FREEZE UP CONDITIONS



YOU HAVE BEEN CUT OFF FROM TRAPLINE DUE TO ICE CONDITIONS

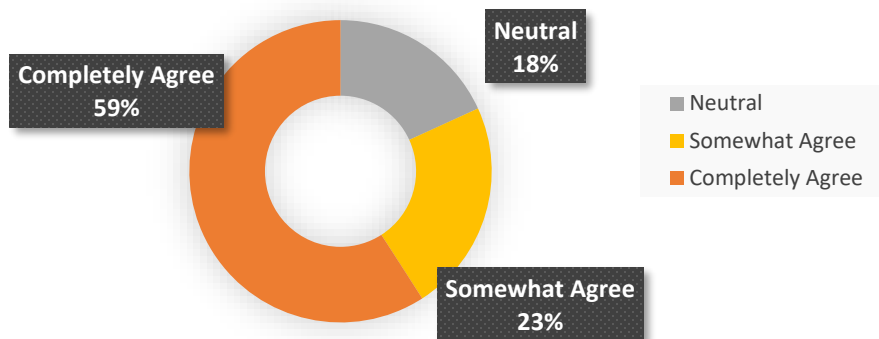


YOU HAVE EXPERIENCED ACCIDENTS DUE TO UNUSUAL ICE CONDNTIONS

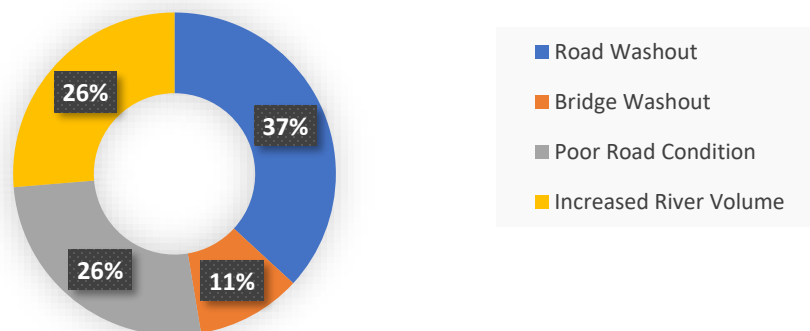


Flooding Conditions

UNEXPECTED FLOODING DUE TO CHANGING WEATHER

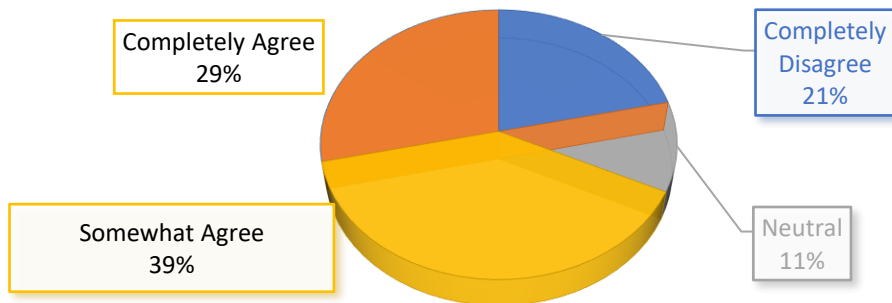


IMPACTS YOU HAVE EXPERIENCED

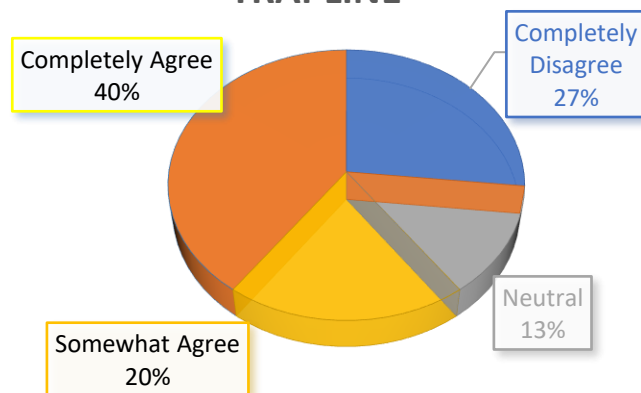


Snow Conditions

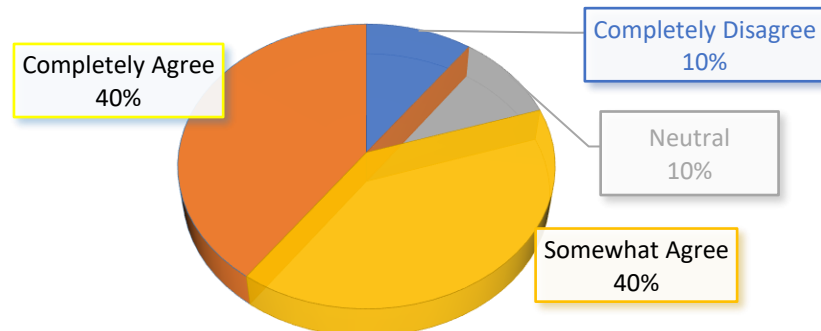
YOU HAVE EXPERIENCED HIGHER THEN NORMAL SNOW LEVELS



THE HIGH LEVEL OF SNOW DECREASED ACCESS TO TRAPLINE

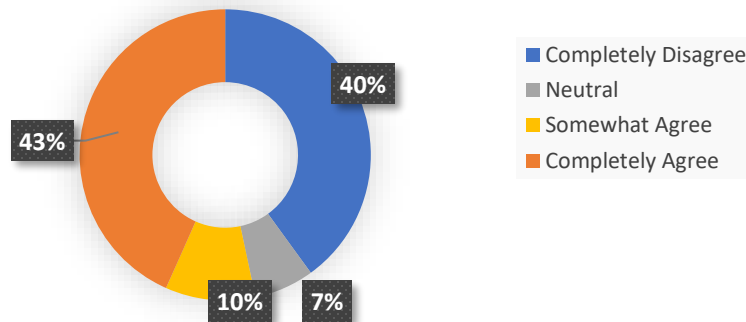


YOU HAVE EXPERIENCED LOWER THEN NORMAL SNOW LEVEL

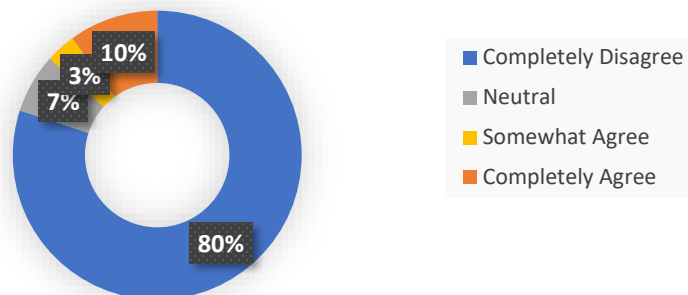


Forest Fires

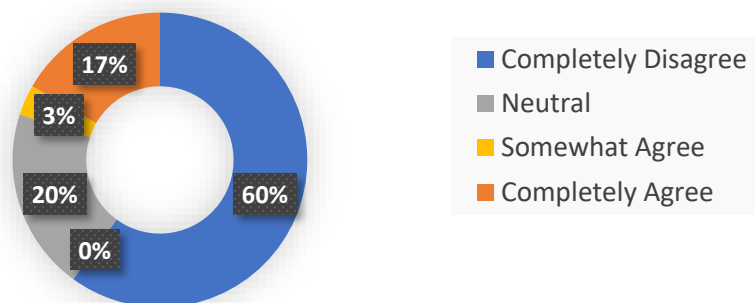
FOREST FIRES HAVE IMPACTED YOUR TRAPLINE IN THE LAST 10 YEARS



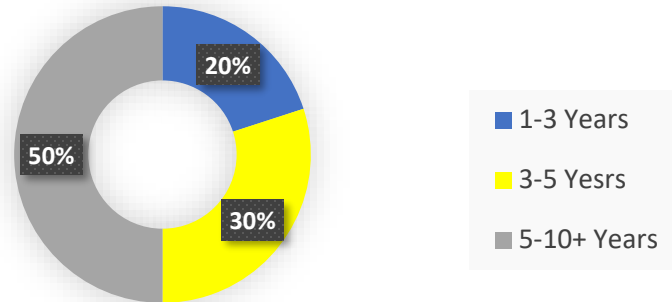
FOREST FIRES HAVE CUT OFF ACCESS TO YOUR TRAPLINE



FOREST FIRES HAVE IMPACTED ABILITY TO TRAP IN THE SEASON OR FOLLOWING SEASONS



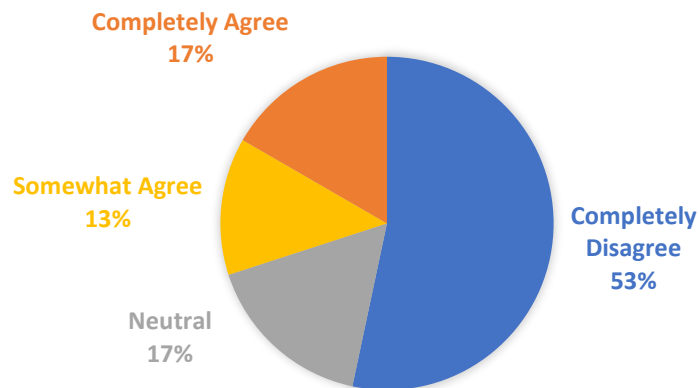
HOW MANY YEARS WILL IT TAKE FOR SPECIES ON TRAPLINE TO RECOVER



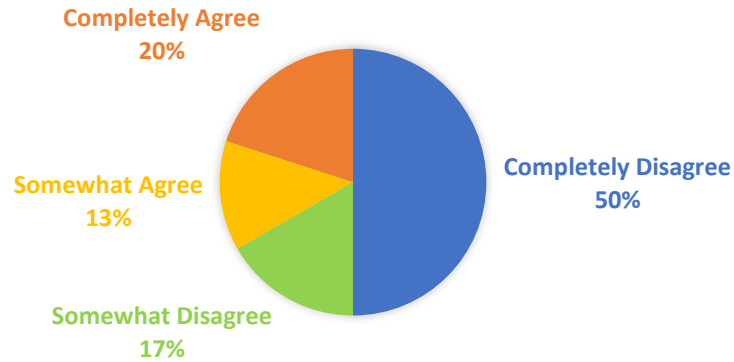
Infrastructure

Trappers maintain a variety of cabins, bridges, roads, trails, helipads and runways. These are essential to maintain access and safety during the trapping season. Trappers were asked a series of questions on the infrastructure they maintain on their traplines.

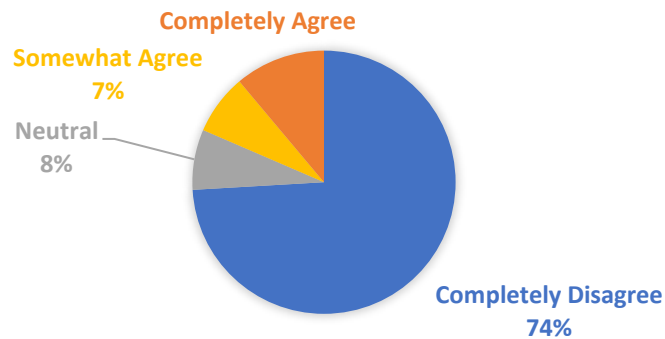
YOU HAVE EXPERIENCED DAMAGE FROM FLOODING OR SPRING RUN OFF



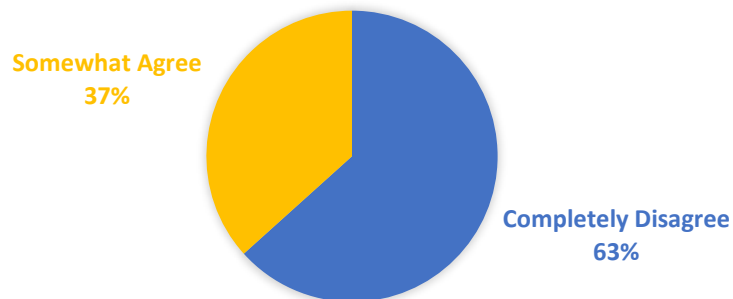
YOU HAVE EXPERIENCED DAMAGE FROM HEAVY SNOW LOADS NOT TYPICAL FOR AREA



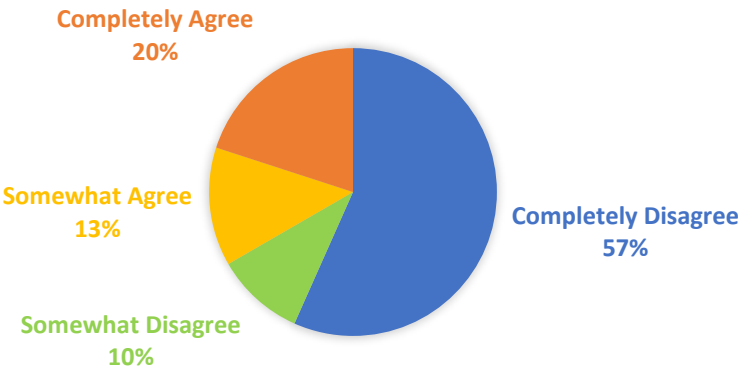
YOU EXPERIENCED DAMAGE TO PROPERTY DUE TO EROSION FROM ADVERSE WEATHER



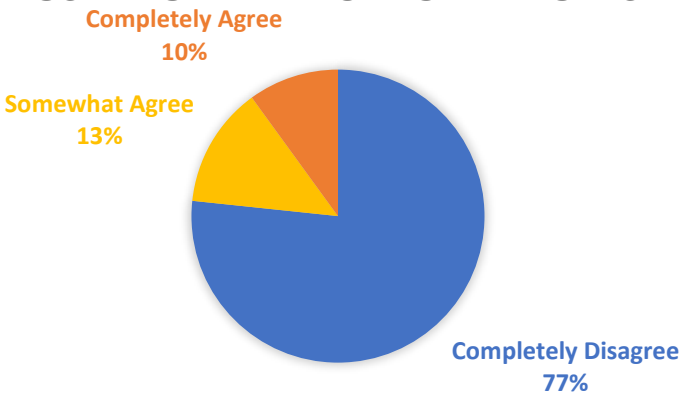
YOU EXPERIENCE DAMAGE FROM INCREASE RAINFALL IN AREA



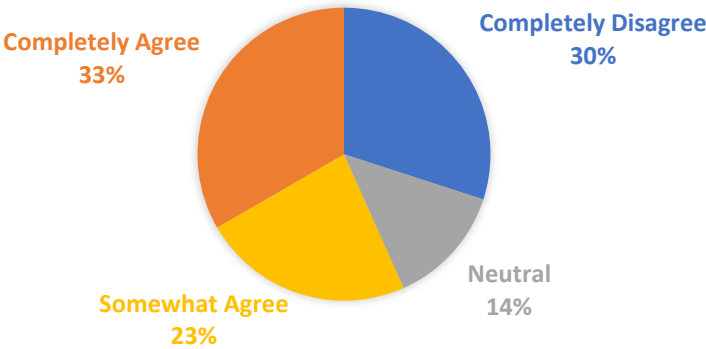
YOU EXPERIENCE DAMAGE FROM HIGH WINDS



YOU LOST PROPERTY DUE TO THE FOREST FIRE



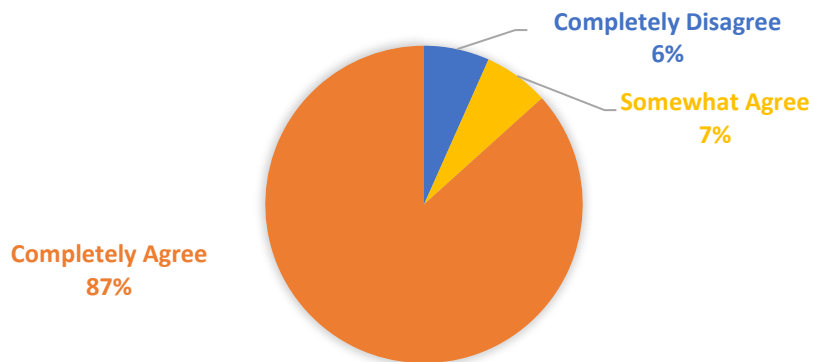
THERE HAS BEEN ACTIVITY ON YOUR TRAPLINE THAT IS CAUSING DAMAGE FROM OTHER USER GROUPS



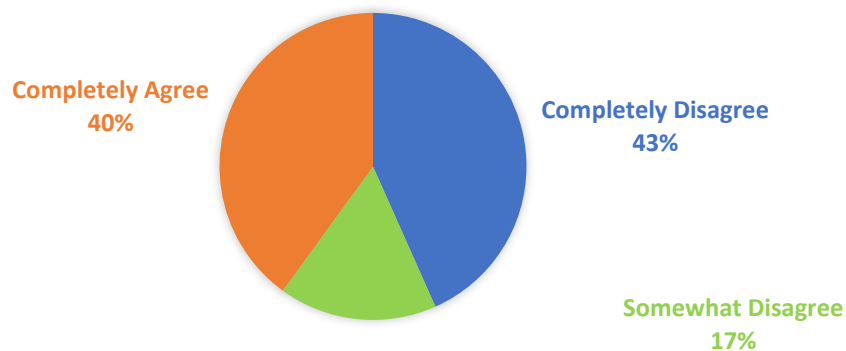
Traditional Knowledge and Cultural Impacts

Trappers were asked a series of questions around passing on the knowledge of trapping on their traplines. Many trappers surveyed were multigenerational trappers who had inherited their traplines from a family member and had long histories of their traplines.

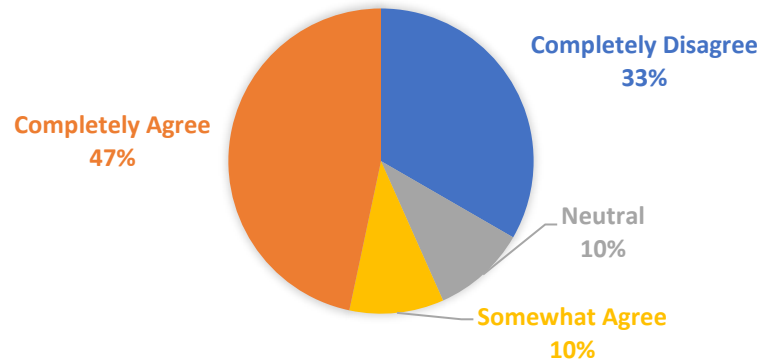
YOU CAN PASS YOUR TRADITIONAL KNOWLEDGE OF TRAPPING TO OTHERS IN YOUR COMMUNITY, YOUTH OR PART OF THE FAMILY



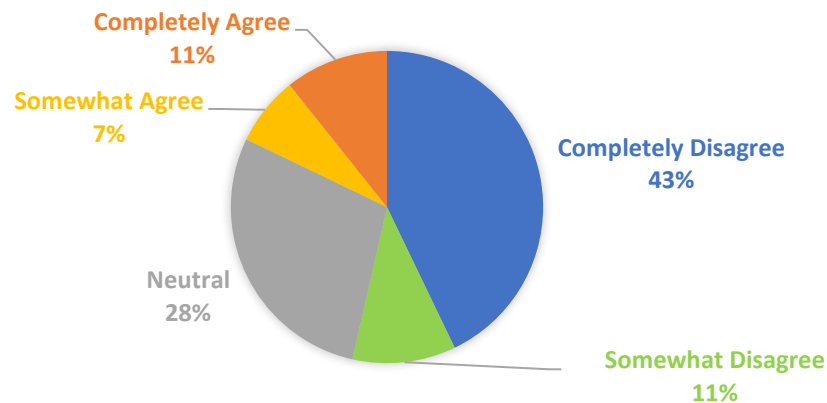
YOU FEEL THERE IS LESS INTEREST IN TRAPPING IN THE LAST TEN YEARS IN YOUR COMMUNITY



YOU FEEL THERE IS LESS INTEREST IN TRAPPING IN THE LAST FIVE YEARS IN YOUR COMMUNITY



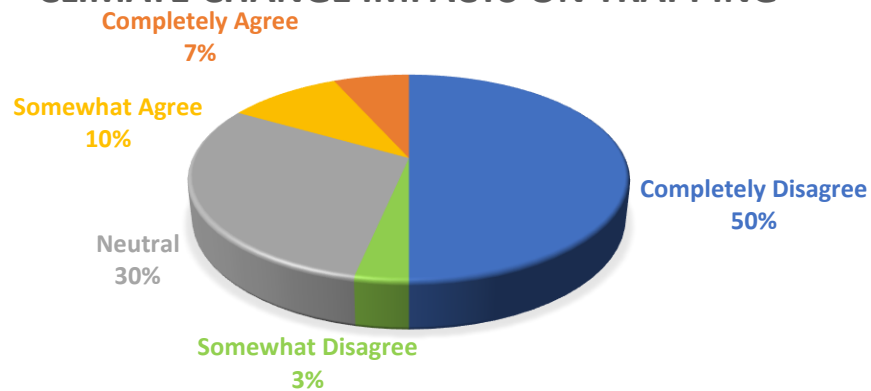
YOU THINK THE DECREASE INTEREST IN LINKED TO CLIMATE CHANGE



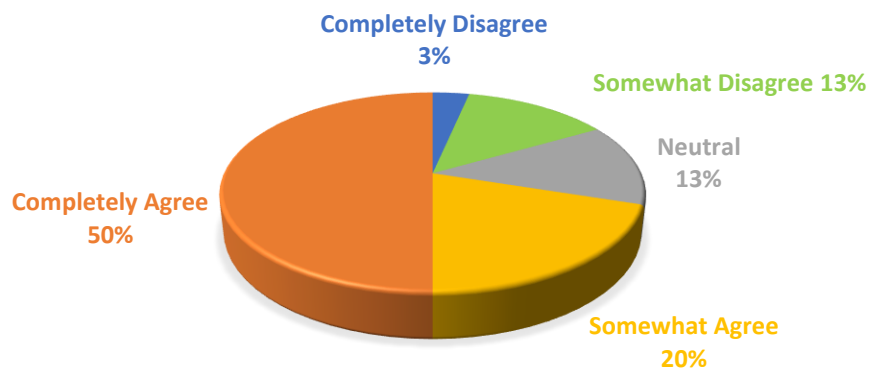
Government Regulation and Research

Government regulates the trapping industry while also providing education workshops that are required to get a trapping or assistant trapper's license. Trappers were asked a series of questions around government regulations, outreach programs and policies around Climate Change.

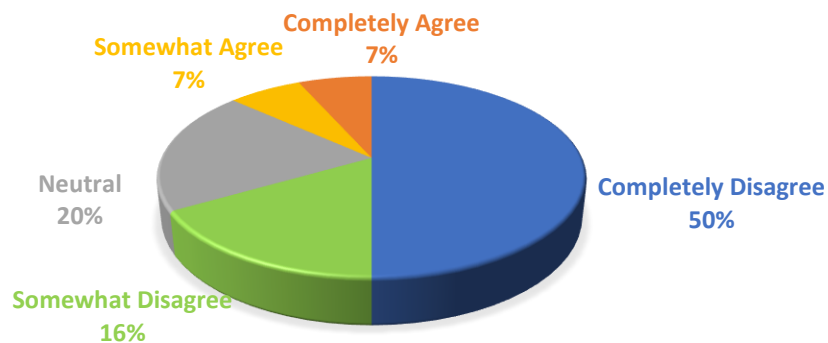
CHANGES TO THE REGULATIONS WOULD HELP MITIGATE CLIMATE CHANGE IMPACTS ON TRAPPING



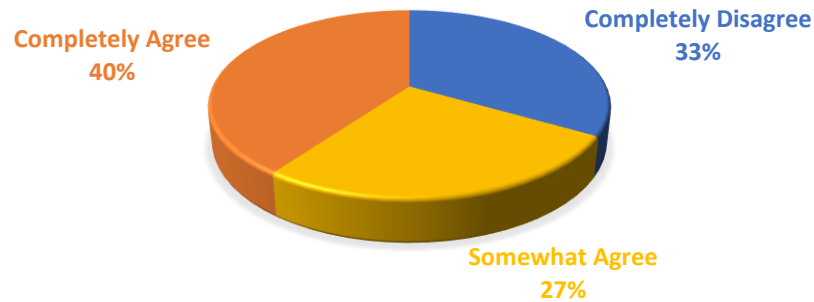
THE TRAPPING SEASON STILL REFLECTS THE SEASONAL TRAPPING WINDOW FOR THE BEST FUR QUALITY



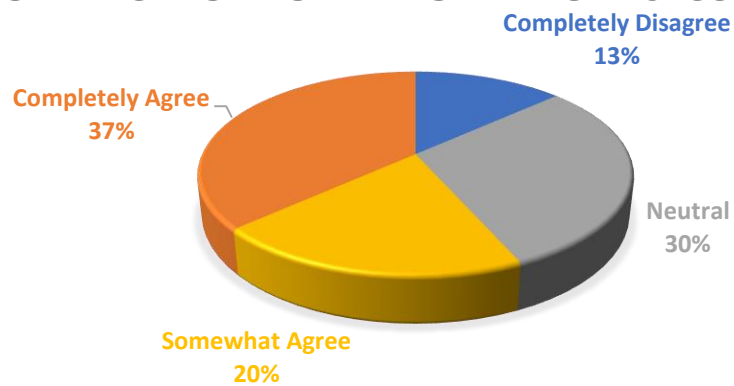
TRAPPING KNOWLEDGE IS BEING UTILIZED BY GOVERNMENT AGENCIES MAKING DECISIONS AROUND CLIMATE CHANGE POLICY



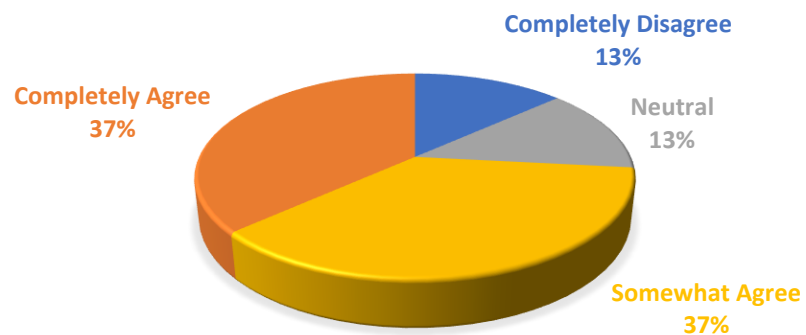
**THE PROGRAMS AND EDUCATION AROUND TRAPPING
DELIVERED BY THE GOVERNMENT IS MEETING THE
CURRENT NEED**



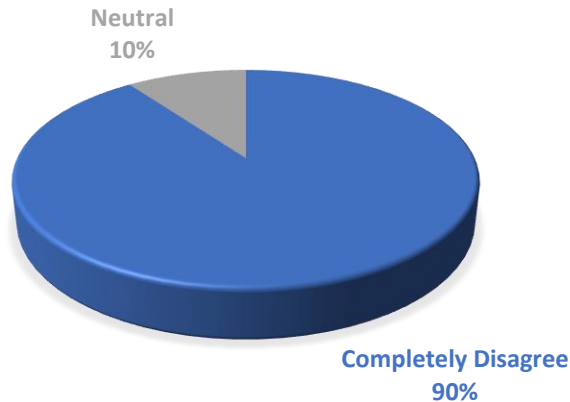
**THE GOVERNMENT COULD BE MORE INVOLVED IN FUR
AUCTION PRICE TO PROVIDE FOR A MORE SECURE INCOME**



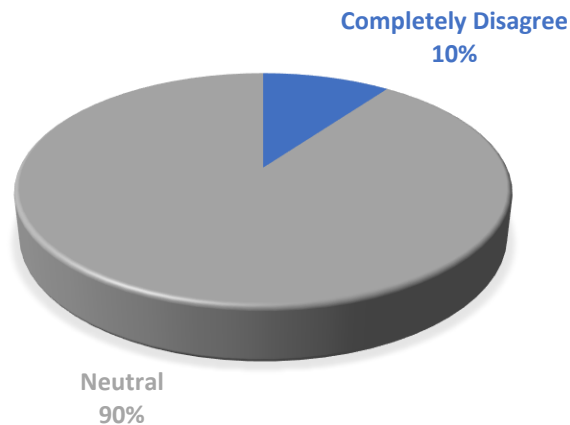
**THERE IS INTEREST IN THE TRAPPING COMMUNITY TO
HAVE MORE PROGRAMING FROM THE GOVERNMENT**



**THE GOVERNMENTS; OUR CLEAN FUTURE: A YUKON PLAN
FOR CLIMATE CHANGE, ENERGY AND A GREEN ECONOMY
ENGAGED THE TRAPPING COMMUNITY**



**THE DOCUMENT: OUR CLEAN FUTURE DOCUMENT
ADDRESSES THE IMPACTS YOU ARE SEEING ON THE LAND**



Protection and Enhancement

The Climate Change Trapping survey takes a snapshot in 2020-2021 trapping season reflecting the current conditions and possible impacts trappers are seeing on their traplines. It also increases understanding on the current industry challenges. In order to address possible impacts, they must first be recognized and acknowledged. By completing the survey and recording observations from different regions we can determine if there is change over time.

The Yukon Trappers Association, Yukon Council of First Nations, Yukon Fish and Game Association and the Yukon Government all reviewed and, in some cases, added to the survey. By collaborating on the survey questions all the agencies will be able to utilize the data to further their own initiatives around the trapping industry. The increased knowledge

from the final report will help mitigate possible impacts trappers might experience in the future.

The intention of the survey was to collect data from an industry that is spread out and remote in nature. Trappers have a close connection with the land and therefore have an understanding when changes are within the normal cycles they would expect and when they are seeing changes beyond that. By reaching out and connecting with trappers we get a greater understanding of the overall health of the animals and possible implications of Climate Change on the future of trapping.

Whenever data is collected from a group of individuals it can act as a collective voice on a topic or increase insight. In the future when trappers are engaging with regulators, they will have this data to inform the conversation. They will also have an opportunity in the future to survey trappers again and assess if there have been any changes in observations and possible impacts.

Future Considerations

General Impacts

Trappers in Southeast Yukon reported less impact on trapping population and overall health of the species than other regions. Although environmental factors such as high snow and fire has impacted some of their lines the overall trapping and animal health has remained relatively stable on most traplines surveyed. While only 37% see certain species impacted more than others, many of those participants are seeing marten as the most impacted species.

Trappers in other regions in the Yukon particularly in the Southwest has seen lots of activity from other user groups such as hunters, mining, dog mushers and recreationists that have impacted their trapline. This can affect the condition of trails, infrastructure and changing animal behavior. Trappers are seeing more activity in areas they would not have encountered individuals in the past. The increased bison hunting and gut piles near traplines has also changed animal behavior and impacted trappers' ability to trap. Some of this increased activity can be attributed to larger snowpack which increases access in some areas along with distances that can be travel. In addition, mild weather in mid-winter has made travel condition more desirable for recreational users. This increased use of the backcountry in the Yukon has been noticed within the trapping community and in some instances has impacted trapping. There is concern as temperatures warm this impact will continue and have long term implications.

Many trappers in the Central and Northern Regions have experienced increased river volume along with increased snow. This has contributed to erosion and damage to property. It has also impacted access to the trapline in some years.

Many trappers across the entire Territory have experienced less pronounced animal cycle than they have experienced in the past. The highs are not as high, and the lows are not as low when it comes to animal population cycles.

Some trappers also indicated that marten are not returning as quickly as they have in the past when their numbers drop. For many trappers this represents a significant loss in income. Trappers are also experiencing more coyotes on their traplines than they have had in the past. Even on lines that have not had coyotes in decades are seeing the tracks in the area.

Health and Safety

Seventy-three percent of participants have experienced unpredictable ice conditions. This impacts access and personal safety and possible loss of equipment. The frequency of unpredictable ice has increased greatly in recent years. In some incidence trappers have had to cut new trail or they lose access to trapline during certain times of the year.

Increasing outreach around safety in a changing environment can help adapt to changing safety conditions. These outreach courses have been offered in other jurisdictions by governments and associations which has increased overall safety in the backcountry. As winters become less predictable having the available tools to deal with poor ice condition will increase safety and will ensure overall industry growth.

Infrastructure

Increasing snow accumulation has caused damage on trails as well as infrastructure. As Yukon experienced record-breaking snowfall in 2020-2021 many trappers are having to put in extra effort and expenses to maintain traplines and buildings. This is not only with the snowfall but the flooding and erosion that follows with the spring melt. Relief programs can be considered if these impacts continue to reinforce existing structures with possibly funding being accessible to trappers.

If a forest fires crosses a trapline it has significant impact on the animals in the area as well as the length of time it takes for the species to recover. Often only part of the trapline is impacted but that is not always the case Trappers who do experience forest fires have expressed concern over the financial cost to purchase new traps and start over. If forest fires increase with warmer, dryer weather a relief program that helps trappers replace burned traps could be considered to decrease the overall impact of forest fire devastation. These small supports can be the difference to ensuring trappers can continue with trapping in their future.

Traditional Knowledge and Cultural Impacts

Ninety-four percent of participants felt they completely agree or somewhat agree that they can pass on traditional knowledge to the next generation. Many participants were activity

working with younger members of their family on the trapline. Several trappers surveyed were multigenerational trappers and had long histories on their lines. Some families have been trapping on their traplines from before the trapline designations were created.

Fifty-seven percent feel there is less interest in trapping overall outside of their family. In some regions where interest has increased, some trappers feel it is linked to the access to cabins and the desire to be on the land, not necessarily to trap. Forty-three percent of participants feel the decreased interest in trapping has nothing to do with Climate Change. Increasing temperatures and less need for fur is thought to be part of the decline in people activity trapping along with the fur prices being low.

Yukon Government Regulations and Research

Regulations

The survey reflects that most trappers feel the trapping regulations still reflects the current trapping window. Trappers did indicate in the comments that they think the government has to be flexible to reassess that in the future. If animal behavior and fur quality changes then the regulations should reflect that.

Outreach

Sixty-seven percent of trappers either completely agree or somewhat agree that the current education and programs is meeting their needs at this time. Although seventy-four percent of trappers either completely agree, or somewhat agree that communities would like more programing from the government. The participants in the communities would like to see the outreach visited more often as they are often at capacity.

Many trappers feel there should be more programing in schools to teach the younger generation about trapping and the industry. Bringing trappers into the classroom is a good way for people to learn and increase interest in the next generation.

Fur Auction Price

Fifty-seven percent of participants either completely agreed or somewhat agreed that the government should be involved in the fur auction price while thirty percent were neutral. Many participants would like the Northwest Territories approach considered when it comes to trapping and creating a stable income. While some feel paying the commission for trappers as well as promoting local added value would increase income security. These approaches would help protect the industry of possible impacts and preserve traditional knowledge that is passed on to the next generation.

Our Clean Future, A Yukon Strategy for Climate Change Energy and a Green Economy Document

When participants were asked about the Climate Change document published in November 2019, 90% of participants had not heard of it and the remaining 10% disagreed that the impacts they are seeing on the land were addressed.

When asked if they were engaged as trappers or members of the industry 90% said they were not engaged while 10% were neutral on the topic. This indicates that the Yukon Government has overlooked the trapping industry when it comes to engaging and creating policy around Climate Change. More effort could be made within the Yukon Government to recognize the industry and the economic and cultural impacts Climate Change could have. This could be done as direct outreach to individual trappers, Renewable Resource Councils, local First Nations or through the Yukon Trapping Association

Communications

This project was funded by the Fish and Wildlife Enhancement Trust. The project was also supported by the Yukon Trappers Association, Yukon Council of First Nations, Yukon Fish and Game Association and the Yukon Government.

After research was completed and the interview questions were created, all the supporting partners were given the survey to review. From these reviews' adjustments were made to incorporate all additions.

A fliersheet (a single page advertisement/program descriptor) was created to advertise the survey that could be handed out at the Yukon Trapper Associations and Fish and Game Association offices. This was also handed out at the fur sale and posted on the Trapper Association Facebook site and in their monthly newsletters. This was given to trappers to pass on to other trappers and was put up on community boards in many community offices. The Yukon Government trapping coordinator also distributed the survey to participants in communities.

An interview was given for the article in the Yukon News "Trappers seeking local markets to Weather COVID-19 and Climate Change Impacts". The article was published after the fur sale in October. This increased outreach to a broader audience as travel was limited through the covid restrictions.

An interview was given to Grand Chief Peter Johnston's radio show "Rock the Talk". We discussed the project, and the importance of understanding impacts trappers are facing. We also discussed the Covid impacts on trappers and the lack of tourism and international fur markets being impacted. This allowed outreach to Peter Johnston's audience and connection to trappers across the Yukon.

Presentations will be offered to the partners of the project for their associations if requested to ensure the data is understood and create an opportunity for discussions and dialog.

The Fish and Wildlife Enhancement Trust was acknowledged as the main supporter of the project and the logo and name were included on all presented materials associated with this study, findings and information shared.

Conclusion

Trappers found value in this survey. The industry remains active, invested and are acutely aware of changes in environment, as well as societal pressures and the effects on their work. They are willing to discuss their findings and observations and help shape regulation that protects their industry. Concerns about changes to land use are a constant for this industry, many trappers have long family history and a close connection to their areas. They are adaptable, but want to have a seat at the discussions on land use, impacts they will face, to prepare for such events/trends. Trappers have more to say and contribute and given the opportunity they will express themselves and their concerns. Their close connection and knowledge about the land and animals should be utilized more to help build policy in a meaningful way.

