The Role of the Theory of Planned Behaviour (TPB) and socio-demographics in influencing Pro- climate behaviours

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

The study aimed to investigate the association between demographic factors and components of the Theory of Planned Behaviour (TPB) with the climate change behaviour of the people residing in Canada. The hypotheses of the research focused on the association between socio-demographics of age, gender, race, region, income, language, and education with the intention of the people to act in an environment-friendly way. Moreover, the hypotheses were also concerned with social norms, attitudes, perceived behavioural control, intention, and behaviour of the people. The data of the study was obtained from the survey of Impact Canada, selecting wave 1 responses for the research as it provided information according to the variables required for the study. The data analysis was conducted through Chi-square and Spearman correlation. The findings have provided support for all of the study hypotheses, excluding H6 and H7 which were related to the association of language and race with intention. However, the other hypotheses have been accepted, which implies that demographic factors tend to play a significant role in determining the pro-climate behaviours of the people. In addition, the relevance of TPB has been established through this study as a means of understanding the adoption of environment-friendly behaviours of the people in Canada.

Keywords: Socio-demographics, Theory of Planned Behavior (TPB), climate change behaviors, social norms, attitude, perceived behavioral control, attitude, intention.

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Chapter 1: Introduction

Climate change refers to the major shift in climate patterns owing to people's environmentally damaging activities. The rising concerns about climate change have framed the crisis of major shifts in weather as a serious issue. This situation has increased the focus on climate change behaviours (Hase et al., 2021; Verlie, 2020). These behaviours include different activities that aim to lower the harmful impact on the environment. These behaviours can range from gaining awareness about the risks of changing climate patterns for the population and the planet to actively participating in pro-environment activities such as recycling and using renewable energy (Niamir et al., 2020).

According to Venghaus et al., (2022), various factors have contributed to the increased focus on climate change and facilitated the heightened awareness about its ecological impact. Specific goals have been created to address the issue of climate change, understanding the necessity to take remedial action promptly. However, addressing climate change and achieving these objectives related to the policies requires comprehensive planning and insight into the possible challenges that can arise. It is pertinent that the successful implementation of the climate goals depends not just on technological advancements and policy changes, but also on public awareness, behaviours and attitudes (Hornsey et al., 2016).

Some of the areas that support climate change behaviours include raising awareness among the public, encouraging sustainability-focused decisions and a greater degree of involvement of government in curbing the effects of environmental change (Bick & Keele, 2022). In addition, the development of policies that integrate the key areas where

sustainability practices can be implemented and map out a strategy are also essential to address the climate change issue. Different governments have taken various initiatives to deal with the ongoing challenge of environmental degradation, including the Canadian government.

1.1 Background of the Research Problem:

Ecosystems, economies and societies worldwide have been impacted greatly by climate change, which threatens their sustainability (IPCC, 2021). The IPCC report states a consensus that the anthropogenic drivers of climate change, such as deforestation, burning fossil fuels and increasingly non-recyclable waste, have forced the world towards a low-carbon economy. Thus, the pursuit of a low-carbon economy has led many countries, including Canada, to curate net-zero emission targets and strategies to achieve them. The aim is to combat the significant challenges posed by climate change and limit global warming below 2 degrees Celsius above pre-industrial levels, as mentioned in the Paris Agreement (UNFCCC, 2015).

Climate change mitigation is important as policymakers, economies, and businesses are now projecting the crucial need of the hour to transition towards a low-carbon economy and renewable energy sources (Matemilola & Salami, 2020). This transition requires unanimous public support, along with policy changes that the governments will tend to bring about (Perlaviciute & Squintani, 2020). It is imperative to have positive public perception and support towards climate change strategies, thus impacting consumer awareness and behaviours for the movement to implement the necessary shifts in practices. Although the process of transitioning towards a low-carbon economy seems promising, it does project its own set of challenges and doubts. Public perception and opinions on climate change and its consequences are varied since many people lack knowledge about the climate change goals

and their feasibility (Lee et al., 2020; Maiella et al., 2020). Additionally, scepticism and resistance to climate action coupled with capitalist mindsets, tend to sabotage the efforts to foresee the transient policies and initiatives to achieve net-zero emissions (Whitmarsh, 2011). Therefore, every country and economy must understand and address public perceptions regarding climate change strategies, and influence consumer behaviours that aid the policymakers, businesses and economies in achieving climate targets for a sustainable future (Abbass et al., 2022; De Vries, 2020).

1.2 Studies addressing the research problem:

Positive public perception, behaviours and opinions are crucial for the climate change strategies for numerous reasons. Firstly, the policy implementation requires the political will of the general public to gain momentum. When governments and policymakers tend to implement climate change policies, public support strengthens their ideologies, acting as a stepping stone for bold action (Shaikh Khatibi et al., 2021).

Furthermore, public support can aid in the adoption of clean technologies and sustainable strategies, drive market demand and accelerate the process for a low-carbon economy (Lorenzoni et al., 2008). Public engagement and participation are important for inculcating collective responsibility, motivating the general public to take bold steps at the domestic level and take part in societal transformation (Hornsey et al., 2016).

A recent study in 2023 in the UK employed a mixed method approach, combining survey data analysis with qualitative interviews, to analyse and comprehend the attitudes of people towards the net zero policy framework in the UK (Poortinga et al., 2023). The findings provide insights into the factors that determine public support for net zero initiatives. The research highlights the socio-demographic factors such as age, education level, and

political ideology as significant predictors of support for net zero policies. It is to be noted in the research that younger individuals and those with higher levels of education tend to support climate action measures more than others. This means that targeted messaging and outreach measures are to be well received when tailored to specific demographic classes. Another key finding of the research highlights that framing climate change as an urgent threat requiring quick action urges the people to strongly support net zero policies compared to framing the issue as a distant problem. This also implies how crucial strategic communication strategies are in garnering public support for using net zero as a climate mitigation strategy (Poortinga et al., 2023).

To summarise, the urgency of climate change mitigation emphasises the need for positive public perception and behaviours in achieving climate change targets (Hornsey & Fielding, 2019). It is in the best interest of policymakers and stakeholders to understand and address public concerns as well as their barriers to communication and misconceptions. This would ultimately aid the climate change transformation as individual change will bring about greater change for a sustainable ecosystem.

1.3 Gaps in Current Studies:

The review of the literature identifies some gaps in the studies done previously. One of the major areas that requires attention is the scope of public awareness towards climate change and its implications. While the general public around major developed countries has substantial awareness regarding climate change, there remains a gap in understanding climate change concepts and their relation with actions. Existing studies often focus on climate change issues, while policies and initiatives are not as much researched or talked about (Poortinga et al., 2023).

The analysis and understanding of the perception of climate change among the masses is crucial to identifying the way forward. In the context of Canada, there is a lack of research in this area, which highlights the perception of people toward climate change, using the lens of the Theory of Planned Behaviour (Si et al., 2019). The behaviour is not only learned from the environment but the approval of the people in the form of subjective norms and other factors like the sense of control determines the degree of environment-friendly behaviour of people. There have been few studies that have established this understanding, indicating a need for further expansion of literature in this area (Yuriev et al., 2020), especially in Canada.

The current literature is still evolving, adding to the understanding of the way policies developed and implemented can affect the public's behaviour. Even though policies have been devised and applied to reduce the climate change impact, the behaviour change is not as expected which indicates the presence of underlying issues (Dale et al., 2019). The present study aims to elaborate on the role people's attitude towards climate change and their intention can play in making climate change more effective.

In the original formulation of the Theory of Planned Behaviour (TPB) by Ajzen (1991), the focus is primarily on psychological constructs—attitudes, subjective norms, and perceived behavioural control—as direct predictors of behavioural intention. However, socio-demographic factors such as age, gender, income, education, race, and geographical location are not explicitly accounted for within the core model. These variables are often treated as background factors, with little emphasis on how they may systematically influence individuals' intentions across diverse populations. As a result, the TPB assumes a level of universality that may overlook important social and structural differences, which can shape how people perceive environmental issues and decide whether or not to act. This omission represents a critical gap in the theory, especially in the context of public policy and

environmental research where demographic diversity plays a significant role in shaping behavioural outcomes (Zaikauskaitė et al., 2023).

Governments and policymakers must address these gaps in current research to develop evidence-based strategies to increase public awareness of climate change actions in Canada and worldwide. Evidence-based policymaking is likely to contribute to strengthening the impact of the implementation of the required changes in different regions (Tangney, 2017). The inclusion of expert knowledge is likely to benefit the policymakers as it would provide them insight into the challenges and areas of the gap in public knowledge.

1.4 The Purpose Statement:

This study aims to research the factors that influence public intentions of climate change behaviours and initiatives in Canada. The study's goal is to understand and put forth recommendations to improve the way governing bodies engage the general public in making efforts for climate change in Canada. Through quantitative research methods, the study aims to uncover which factors influence public opinion on climate change strategies. The goal is to also tap into potential barriers to climate change intentions and behaviours. Through this exploratory research, the study looks forward to providing evidence-based strategies that would be conducive to the effective promotion of positive climate change attitudes, intentions and behaviours in Canada. The attitude and intention dimensions of climate change behaviour are beneficial to understanding how people can be motivated to be a part of positive change.

1.5 Research Objectives and Questions:

The study will revolve around the Theory of Planned behaviour (TPB), while central to this study would be the demographic factors such as age, gender, education, income and geographical location, which are integral to understanding the diverse course of actions and behaviours relating to climate change. This research aims to identify potential gaps in the existing literature and suggest avenues for future research, which would contribute to an in-depth understanding of fostering effective pro-environmental behaviours.

The primary purpose of this study is to understand and assess how pro- environmental behaviours and intentions are formed in Canada. For this, it is crucial to understand the current state of knowledge that people have related to climate change. It is important to know the pressing issues that motivate people to take climate mitigation actions and the climate issues that are ignored by them. Furthermore, it is of utmost importance to learn about which socio-demographic factors influence the majority of positive opinions and behaviours regarding climate change. This will help the governing bodies and policymakers better understand the gaps in policies and key areas that require improvement to instil positive climate change beliefs and behaviours.

Accordingly, the objectives of this research are to:

- Identify whether attitudes, socials and perceived behaviour control constructs are related to behavioural intentions.
- Assess the socio-demographic factors that influence people's intentions regarding climate change actions.
- Recommend the key strategies to improve climate change policies

To achieve the objectives of this research, the research must answer the following question:

Main Question: How do socio-demographic variables alongside the constructs of the Theory of Planned Behaviour shape individuals' intentions toward climate change behaviours in Canada?

1.6 Research Scope:

This research study primarily focuses on the general Canadian public. It revolves around the knowledge of climate concerns, threats, and its impact on the future of society. It delves into the potential solutions that deem fit on an individual and societal level. The literature review would emphasise the comparative nature of this research, and build upon the similarities and differences of these researches with the study. It assesses the socio-demographic factors that will influence people's opinions related to climate change. This research utilises a secondary source of survey data in a longitudinal study across 8 different periods or waves. Therefore, to build up the research, the data used in secondary research was collected by Impact Canada and generously provided to us. Only wave 1 data has been used as it was covering the variables of the study addressing the different components of TPB.

This study includes all the provinces and territories in Canada; British Columbia, Ontario, Alberta, Manitoba, Saskatchewan, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Prince Edward Island, Quebec and Yukon. These areas have been selected based on the need for all-inclusive research in Canada that is not yet present in Canada. These selected provinces and territories represent diverse regions that exhibit different age groups, social classes and races in Canada. This research study

benefits from a wide range of published literature and research conducted in different parts of the world. This literature includes journal articles, e-articles, and government statistical reports from different countries.

1.7 Research significance and contributions:

The study aims to comprehensively understand the rationale of Canadian people on climate change issues and identify which socio-demographics impact their intent of climate behaviours, and their attitudes towards them by applying the theory of Planned behaviour (TPB) (Ajzen, 1991). Ultimately, the goal is to enhance the policymaking and social marketing of climate change issues and initiatives, for that to become easily adaptable in the larger strata of society.

Firstly, this study contributes to the knowledge of the current socio-demographic influence on the Canadian people's intentions and behaviours towards climate change. A vast amount of literature is available on this topic, with continued expansion occurring of the research in this area. The need for this research is to study how coherent the socio-demographic impact on intentions and behaviours of people is with other research around the world. This study will look into similar research done in other countries to see similarities and differences in public opinions regarding climate change.

Secondly, the understanding of the level of awareness would help the policymakers to identify the areas that need to be addressed to move forward with their climate change initiative. Communication with the stakeholders and public can be created based on the insights about the attitudes and intentions of the people for climate change, which will make communication more effective.

Thirdly, this study is meant to draw the attention of governments, policymakers, advertisers and stakeholders to make amends to their approach towards climate change policies. The research will help articulate the issues that hold importance and the ones that don't to the general public, which would be conducive to a better environmental protection and awareness plan in the years to come. This would help in enhancing the adaptability of the masses in Canada to a more environmentally friendly lifestyle approach, promoting the integration of eco-friendly behaviours in their daily life.

Chapter 2: Literature Review

In this Chapter, the focus is on analysing theoretical and empirical literature that would strengthen the credibility of the research on factors that influence climate change intentions and behaviours. The Chapter consists of sub-topics such as climate change concerns, human adaptability to change, the role of humans in climate degradation and mitigation, the application of the Theory of Planned Behaviour (TPB), and the influence of socio-demographic factors on climate change intentions and behaviours. Through this detailed review, we identify gaps in the current literature and suggest avenues for future research, ultimately contributing to a deeper understanding of how to foster more effective and widespread pro-environmental behaviours.

2.1 Climate change threats and concerns

Climate change is a pressing environmental challenge, which has ample academic literature present on an individual's perceptions, opinions, intentions, and behaviours influencing environmental degradation (Estrada et al., 2017; Shen et al., 2024; Li et al., 2019; Nicolai et al., 2022). This literature review delves into exploring theoretical and empirical research, aiming to highlight the multifaceted way individuals relate to and get influenced by climate change behaviours. The chapter reviews past and current literature on the topic, to provide a thorough understanding of how an individual's behaviours are shaped toward climate change.

Climate change signifies changes in the average atmosphere, such as climatic conditions like rainfall, windiness, and weather. It reiterates that there have been and will be changes in climatic conditions in the coming ages, and the world better be prepared for it (Government of Canada, 2020). It is crucial to understand the real meaning of climate and

climate change, as often they are used interchangeably and loosely in public discourse. Thus, choosing the right definitions for any study or public disclosure, is of immense importance, as it would help in communicating issues about the climate system (Werndl, 2016). The world doesn't have accurate criteria for how many rainless years it takes to embrace the words 'climate change' (Todorov, 1986 as cited in Werndl, 2016).

A report by the Intergovernmental Panel on Climate Change (IPCC) in 2014, was published by more than 3800 scientists from more than 195 countries in the world, which emphasises that climate change is inevitable. It also talks about an important factor that acts as an influence on climate conditions, i.e. humans. "The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen" (IPCC, 2014, p. 2). For the last 800,000 years, the atmospheric concentrations of greenhouse gases are the highest, which is conducive to the rising global warming in different parts of the world (IPCC, 2021;Chu & Karr, 2017; Parmesan & Yohe, 2003).

As previously discussed, the Intergovernmental Panel on Climate Change (IPCC) in 2021, also outlined the climate projections signalling insights that suggest the mean global temperatures are estimated to experience an increase, ranging somewhere between 1.4 - 5.8°C throughout the span this century. These projections are calculated based on present data of various greenhouse gas emissions and different factors influencing these emissions (IPCC, 2021). In a major development, 195 nations around the world joined hands in Paris in December 2015 to sign the greatest climate agreement in history. This pact commits them to put forth their best foot forward in terms of climate change initiatives conducive to lowering carbon emissions and striving to limit the rise in global temperatures to just 1.5°C above pre industrial levels. Nonetheless, this agreement marks as an integral stepping stone for the future of our upcoming generations, in pursuit of becoming a safer, sustainable and green environment globally (Chu & Karr, 2017).The impacts of climate change spread far beyond

the environmental concerns, potentially causing instability in the socioeconomic and political aspects of a society, that can profoundly alter the lives of communities globally(Burton, 2003; Mbah, 2024; Klingelhöfer et al., 2020).

2.2 Human Adaptability of Change

The United Nations Framework Convention on Climate Change (UNFCCC) explicitly mentions the concept of adaptation to climate change, in its policy discussions of Article 2 (UNFCCC, 1994). This article's main focus relies on getting the entire Convention to acknowledge the need for adaptation to climate change impact, necessary for ensuring food security, sustainable ecosystems, and sustainable economic development (Adger et al., 2008). It is also crucial for the Convention to acknowledge that there is capacity and willingness to adapt to the changes. In the early decades of international climate policy development, during 1990's and onwards, the discourse revolved more around mitigation strategies such as reducing greenhouse emissions (Botha & Wiese, 2024), rather than adaptation plans. Whereas, it is only in recent times, there has been a major transition towards adaptation strategies. This transition is not limited to the practical implementation of measures, but also the political aspects of these adaptation policies. These institutional level transitions help to translate to individual levels as well. This transitional shift has been well-recorded and analysed in the work of researchers such as (Sietsma3 et al., 2021) and (Jorgenson et al., 2019). (Adger et al., 2009) also discusses how actions and adaptability to change stems from the awareness and exposure to information.

Climate Change adaptation consists of various actions taken by different stakeholders in the society, such as individuals, groups and government bodies (Clar & Steurer, 2019; Valkengoed & Steg, 2019). The motivations that act as drivers of these adaptation actions are numerous such as, economic stability, cleaner environment, safety and other significant goals.

Sometimes, the personal and collective goals as humans and social species also aid in fulfilling such motivations (Brick et al., 2021). Such efforts are either initiated by individuals for personal goodwill, aiming to reduce their carbon footprint and impacts of climate change on their own lives as well as the future generations. Governments and policymakers tend to focus on ensuring public health and safety, and thus would instil regulations accordingly. The collective nature of these adaptation efforts are integral and conducive to effectively mitigate environmental hazards and adapt to the Climate Change (Neil Adger et al., 2005).

The levels of hierarchical structures are present in adaptation actions and influence one another. Thus, individual choices are not entirely independent and more often influenced, and limited by institutional processes like regulatory frameworks, social norms and property rights that govern behaviour. According to the UN Framework Convention on Climate Change (UNFCCC) Article 3, all national governments should undertake adaptive measures for climate change (UNFCCC, 1992). Appropriate adaptation measures are crucial at political and jurisdictional levels, as well as local institutions such as cities, enterprises, markets and municipalities.

Arguably, adaptation is relevant at every level including individual, national and global levels (Pisano & Lubell, 2015). Essentially, any change that is supposed to take place in society needs to meet the objectives set for the change and its impact on others' ability to achieve their adaptation goals. It is also true that one action that is deemed successful in achieving behavioural change for a person, may not necessarily be the same metric of success that others are looking for, for example different kinds of communication approaches including arts and emotions, can influence behaviour changes (Burke et al., 2018) . Therefore, achievement of behavioural change depends upon the implementation scale. IPCC defined adaptation to climate change in 2001, as adjustment to the potential changes in social, ecological and economical systems around the world, in anticipation of climatic stimuli and

their impacts (IPCC, 2021) . These efforts aim to mitigate climate change impacts and make the use of available resources. It aids in building adaptive capabilities of individuals, groups and organisations to implement decisions that reflect these capabilities in action. Thus, behavioural adaptation is an ongoing process for people, who can notice and perceive changes in their surrounding environment (Kulmala & Rama, 2010, pg 15). Moreover, it is important to note that adaptations do not occur independently, but rather depend on the context of demographic, cultural and economic shifts, as well as changes in social structures, technology and governance (O'Brien & Leichenko, 2000). Certain actions that encourage adaptive practices include spreading climate change awareness and building sustainable habits in the daily lives of people (Whitmarsh & Verplanken, 2021).

2.3 Role of human behaviour in Climate Change:

The ecological changes that have evolved in the past few decades have hinted at the possibility that human behaviour plays a key role in creating and mitigating these changes. The environmental degradation combined with the continued use of natural resources has created a significant threat of climate change (Pearce & Turner, 1990; Hermans & McLeman, 2021; Upadhyay, 2020; Ahmed et al., 2018; Lu & Wang, 2023).

Fiorella et al (2021) have conducted an analysis of the fishery industry in Cambodia and found that in response to the impact of climate changes in terms of rising temperature, the fishermen have altered their behaviour and opted to invest resources in other sources of earning. This implies that alterations in climate patterns in underdeveloped countries are causing significant disruption to the lives of people. Moreover, the shift in climate carries serious implications for both people and government, as issues such as rising temperatures, Arctic ice depletion and the threat of flooding exposes the population in Canada to a

substantial degree of risk (Greaves 2021). Therefore, it is pertinent to understand the way human behaviour can affect the pace of climate change.

As mentioned by Beckage et al. (2022), human behaviour needs to be positioned as a crucial element in contributing to, and thus, addressing climate challenges. The success of sustainability initiatives is dependent on the way people view the issue of climate change, the severity they link with the current environmental degradation and the willingness they display to play a positive role in mitigating ecological harm (Tobler et al., 2012; Liobikienė & Juknys, 2015; Ye et al., 2022). The systems theory has been used to corroborate this notion that the human element is an essential part of the Earth system models. Furthermore, Beckage et al. (2020), have suggested the adoption of social-climate models to navigate through the challenge of climate change, integrating human behaviour into the equation.

Since human behaviour is governed by analysis of internal and external factors, variables such as normative influences and the beliefs about what constitutes as morally acceptable and unfavourable are examples such factors (Bury et al. 2019). It has been further elaborated that the dominant norms in the society are regarded as the expected behavioural standards to be followed by the masses. It can be stated that the attitude and behaviour towards climate change is a reflection of the normative influences (Druckman & McGrath, 2019). Concurrently, the behavioural impact on climate change is integral to understand the role of human behaviour on climate change.

Lynas et al (2021) have conducted an analysis of relevant literature and found a considerable degree of data pointing at the role human behaviour has played in climate change. The rising population, urbanisation and lack of concern towards the ecological impact of the behaviour that contributes to the continuity of environmental degradation. In

addition, the increase in greenhouse gas emissions (GHG) is attributed to the use of oil for generating energy which poses a major threat to the environment.

Since the agriculture segment is deemed to be the main consumer of water resources, the impact of people in this segment has been highlighted by different studies (Arora 2019; Brown et al. 2019; Flörke et al., 2018). Tang et al (2021) have indicated that the issue of water shortage in China is an outcome of the lack of action among the farmers with regards to protecting the environment, which has led to the challenge of water scarcity. The US is struggling to respond to the issue of accumulating plastic waste (Shen et al., 2020), while Canada is facing the challenge of rising temperatures as an inevitable outcome of released GHGs due to human activities (Aziz et al., 2024; Wan et al. 2019). Furthermore, Trenberth et al (2018) have stated that absence of a strong framework for preventing climate change through regulating behaviour of the individuals has amplified the effect of global warming. It is evident through the heat waves and more frequent forest fires incidents due to the intense heat index in Canada (Wang et al., 2024).

The analysis of behaviour is not only relevant in the context of being a perpetrator of climate change, but it also needs to be viewed as a tool that can help in lowering the pace of environmental damage. When the general public perception doesn't focus on the link between behaviour and climate change, substantial alteration and pro-environment behaviour is not likely to emerge (Anttonen et al., 2023; Lembregts & Cadario, 2024). On the other hand, Sisco (2021) has observed that when people in a society recognize how their input can make a difference on their living and the overall ecological health, they are more willing to contribute by endorsing and adopting behaviours that protect the environment.

2.4 Human behaviour and mitigating climate change:

Even though the literature has highlighted the adverse impact of human activities on the climate, there have been researches that have indicated the way human behaviour can become a source of positive change through the implementation of climate change initiatives. When the barriers to such behaviour are addressed such as reducing the impact of limiting beliefs and negative social influences, a positive behavioural change can be observed (Trudel, 2019). In cases where groups of people start changing their behaviour and become more environmentally conscious, it tends to have an overall positive effect on the climate change process.

The development of climate change management policies and initiatives is important, however the role of individual's perception and beliefs can't be overlooked. Van Valkengoed and Steg (2019) have identified various factors that facilitate a person to engage in behaviours aiming to protect the environment. One such factor that helps in mitigating climate change is the component of self-efficacy as people are likely to engage in adaptive behaviours. Beckage et al. (2018) have applied TPB to illustrate the way behaviour has the potential to change the pace of climate change through examination of Climate Rapid Overview and Decision Support (C-ROADS) framework. It has been concluded that substantial changes in climate change create a sense of concern among people, which leads them to have a more open attitude towards making changes that mitigate ecological damage. Change at behavioural level is required to attain successful implementation of such strategies which can be achieved through the implementation of various approaches to motivate the favourable behaviour among individuals (Bergquist et al., 2023). The researchers have concluded that among the various strategies applied, the tool that showed significant level of

behavioural change towards mitigation was pairing the pro-environment behaviour with financial incentives.

Researchers have emphasised that developing a strategy for bringing improvement in the ecological environment when supported with the positive behaviour from the individuals is critical for the success of such plans (Abbass et al., 2022; Jacobson et al., 2020). In a study Hornsey and Fielding (2020) found that when individuals are sceptical towards their role portrayed in creating environmental changes, there is less likelihood that they will adopt pro-environment behaviour. Conversely, when people actively participated in accommodating eco-friendly behaviours, the mitigation of climate change was more effective.

Lacroix et al (2022) have used the case of the US to examine the way personal and collective behaviour is linked with initiatives taken to protect the environment. The assumption that individual behaviour would provide a foundation for prompting group behaviour was supported by the empirical evidence. In addition, it has been found that when communication pertaining to the mitigation policy is centred on collective input, it is more effective in eliciting a favourable response among the public. Climate change and its implications make Canada susceptible to adverse events such as flooding and rising temperatures. This makes climate change a serious area of concern for the region warranting the need to develop a robust mitigation strategy (Abreu et al., 2021). Aziz et al (2024), have discussed that the environmental policies in Canada have proven to be beneficial in the context of GHG emissions. For instance Ontario has developed a plan to gradually reduce the dependence on energy generated through coal and seek alternate means of energy production. An interesting finding from Alberta, Canada shows that the farmers disagreed with the notion of human behaviour impacting climate change. Nevertheless, the respondents engaged in use

of pro-environment initiatives (Davidson et al., 2019). This behaviour was attributed to the favourable perception towards learning and conservation orientation.

Some of the behaviours that had a positive impact on the mitigation of climate change is reflected through the incorporation of approaches that favour the reliance on alternate sources of energy and bringing changes in energy expenditure at the individual level to reduce GHG. In China, people's willingness to integrate solar energy for fulfilling the energy requirements has made it possible to reduce the GHG (Irfan et al., 2021). In this case, the focus of the government on creating awareness within the public in terms of hazards linked with climate change and emphasising the role people could play brought the needed change. Climate protection behaviour in Canada has also been studied and it was concluded that in order to achieve the goal of having a carbon neutral economy, the government needs to optimise the environmental concern of the people. This would create a momentum towards achieving the climate protection goals (Dale et al., 2020). Moreover, Smith et al. (2021) have highlighted the crucial role the behaviour of local communities plays in the Canadian context, as they can facilitate a widespread pro-environment attitude and behaviour in the society.

2.5 Intentions, Actions and Behaviours

Since climate change adaptation processes have a lot to do with behavioural intentions and actions, it is crucial to define these in real terms. Although the definitions and the meanings of intentions, actions and behaviours have changed over the years in academic literature, there is an abundance of contributions made from prestigious researchers in the social science fields such as sociology, psychology and many others. Theorists in the early 20th century were keen to introduce different theoretical outlooks to understand the concept of observable behaviour, leading to an in-depth research in its foundational nature. In 1913, John B. Watson defined behaviour as any observable and measurable act that is acted by any

human, animal or organism (Watson, 1913). B.F. Skinner, with his contributions to operant conditioning, emphasised that behaviour is a function of its results, which highlighted the importance of conditioning behaviours aiding in shaping behaviours such as punishments (B F Skinner, 1938). This view reiterates that behaviours are more often than not, a result of reinforcements, punishments and any external stimuli, rather than conscious cognitive involvement. In the mid-20th century, many researchers started focusing on behaviour that possesses mental and cognitive decision-making underneath. The Social learning theory, introduced by Albert Bandura describes how behaviours are often acted upon by imitating others. He also discussed that mental processes including attention, retention and motivation are huge motivators in the performances of behaviours (Bandura, 1977). Bronfenbrenner's ecological system theory of 1979 focused on how social and cultural factors contribute to individual behavioural performance by shaping interactions between different ecological systems (Sadownik, 2023). In recent times, Psychology defines behaviour as "an organism's activities in response to external or internal stimuli, including objectively observable activities, introspectively observable activities, and nonconscious processes" (*The American Psychological Association, 7th Ed*, 2020). This notion consists of both observable actions, cognitive and other internal processes.

Actions are known to involve high cognitive abilities and processes, and are performed intentionally with a purpose (Gollwitzer, 1999). Actions are mostly goal oriented, and generally have tendency of frequent shifts based on new goals, information and changes in environment. This attribute of action is mentioned in Kohlberg's Stages of Moral development, which is integral to behavioural economics and policy design, where we can research and learn how an individual's moral reasoning affects their behavioural and cognitive decision-making (Kohlberg, 1981; Thaler & Sunstein, 2008). According to the Theory of Planned Behaviour, actions are influenced by behavioural intentions, which are

guided by attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). This theory differentiates cognitive actions from automatic behaviours. It is also important to note that habits are habitual behaviours and actions in repeated contexts (Wood & Neal, 2007). This concept blurs the line between actions and behaviours as it suggests that deliberate actions can become consistent behaviours with the help of reinforcement and repetition. Behaviours are more often researched by observing and recording frequency and context (Pavlov, 1927), whereas, actions are intentional thus, researched through self-reports, surveys, and experiments that bring out cognitive processes in play such as intentions, plans and goal achievement (Ajzen, 1991).

Ajzen defines intentions as a person's willingness to perform a given behaviour, an immediate forerunner of these behaviours (Ajzen, 1991). This definition emphasises how intentions are at the forefront of behaviours, highlighting their function as plans or commitments to motivate behaviours. Intentions are an integral concept in psychology and behavioural sciences, serving as crucial variables in predicting planned behaviours. It is because they often encapsulate the motivational factors that tend to influence behaviours. Intentions can signify the level of effort and willingness, individuals are exerting to act on certain behaviours (Sheeran, 2002). This view helps to understand how strong intentions are more likely to cause specific sets of behaviours, given that the individual is motivated to act. A meta-analysis study which reviewed 185 studies, found that intentions contribute towards, on average 28% of the variance in future behaviour (Armitage & Conner, 2010). Despite the range of measurement artefacts that affect the intention-behaviour consistency, there remains a significant gap between intentions and behaviour. There has been substantial progress in identifying different types of characteristics and properties of intentions, as well as the cognitive, personality and demographic variables that influence how well intentions can predict behaviour. Implementation intentions is the concept introduced in 1999 by Gollwitzer,

which means specific plans that contain details such as when, where and how a person will act on a behaviour (Gollwitzer, 1999). Such details of intentions inform us about goal intentions or general plans and actual behaviour, as they provide an action plan. Implementation intentions have been shown to improve the performance of intended behaviour by motivating automatic responses to situational cues.

2.6 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) also discusses a comprehensive framework to better understand intentions. It discusses how intentions can be influenced by three major components: attitudes towards the behaviour, perceived behavioural control and subjective norms (Ajzen, 1991). Attitudes signify the positive or negative evaluations of performing the behaviours, while subjective norms reiterate the social pressure to act or not on a behaviour, and perceived behaviour control signify the perceived ability of performing the behaviour. With all these factors surrounding the intentions, they shape the strength and directions of intentions.

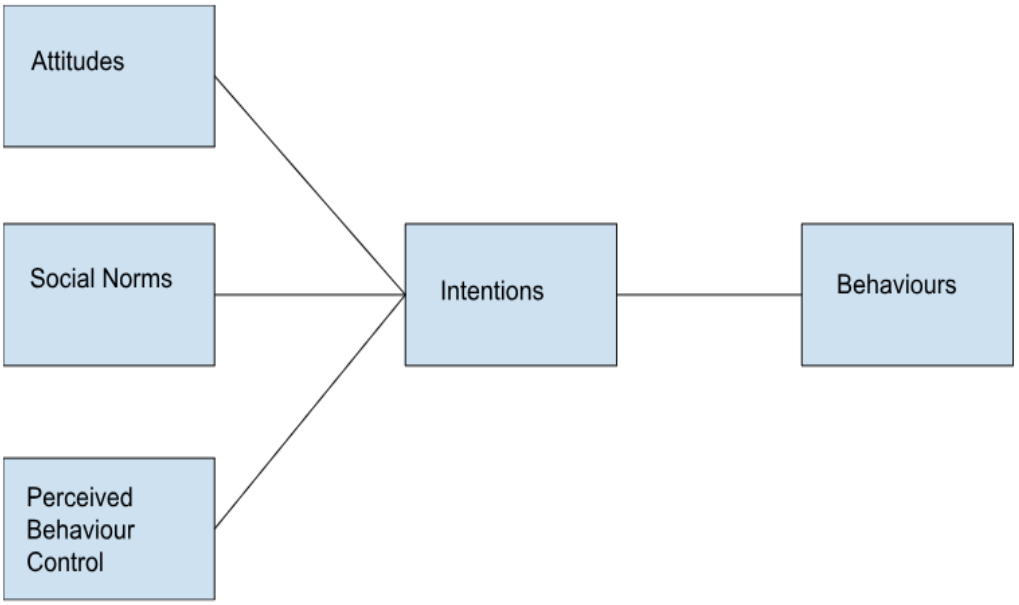


Figure 1.1: Traditional Theory of Planned Behaviour

Human behaviour is a complex phenomenon that comprises multiple layers and aspects, therefore warranting the need to be examined through different perspectives. One theory alone is not sufficient to encapsulate the intricacy of the way human behaviour is formed. Furthermore, researchers find it challenging to identify the antecedents of behaviour of people across different situations as the actions displayed by individuals shift from one scenario to another. Moreover, the presence of multitude of factors affecting behaviour is further adding to the complexity making it difficult to create a comprehensive list of antecedents that define the behaviour (Vaughn et al., 2013). Efforts have been made to create theoretical frameworks that can help in identifying the key variables that can be used to explain the way individuals behave and make decisions to add some level of predictability in the equation (Takemura, 2021; Ulker-Demirel & Ciftci, 2020).

At the core of all the theories developed to illustrate the workings of human behaviour, one common theme is present. It is related to the thought process of a person which leads towards decisions and related behaviour (Rausch & Kopplin, 2021). The thought

process comprises the cognitive aspect, as well as the analytical progression that develops the willingness in a person to behave in a particular way. In some instances, people can readily analyse the situation and respond accordingly, while in other cases, the behaviour emerges after careful consideration of the different aspects in the given context (Ajzen, 2020). Nevertheless, there are some factors that remain present in the form of antecedents, guiding the ultimate behaviour of the individual. In this context, theory of reasoned action is relevant as it has elaborated how attitude and norms influenced the intention of a person and effected their tendency to behave in a specific way (Fishbein, 1979). Furthermore, the notion that attitude could be used to explain the behaviour of an individual was challenged by Fishbein (1979), and it was asserted that the component of attitude should be examined along with the belief system of a person to understand the behaviour dynamics.

According to Smith et al. (2008) individuals engage in different sets of behaviour over the course of their lives which are governed by their values and belief system. These beliefs motivate them to engage in or refrain from certain behaviours. Various theoretical constructs have been developed to provide insight into the way an individual's belief and behaviour are connected (Gadenne et al., 2011; Gkargkavouzi et al., 2019; Liobikienė & Poškus, 2019). The resultant behaviour of a person is viewed as an outcome of their personal beliefs and societal factors.

Since the attitude behaviour link was deemed as lacking in this domain, Theory of Planned behaviour (TPB) has originated out of the theory of reasoned action which implies that the way people behave is primarily shaped by their underlying beliefs and social influences as well as their perception of these facets (Barbera & Ajzen, 2020). So, it can be stated that behaviour is grounded in the belief system held by an individual, a social group or the society as a whole, which further facilitates the participation in action (Kumar & Nayak,

2023). There are three core beliefs that have been included as a part of the TPB framework, namely, (behavioural, normative and control), which have laid the foundation of the predictors included in the theory that allow the researchers to make predictions about the likely action displayed by a social group or the society as a whole. The behavioural beliefs affect the attitude, normative beliefs serve as the foundation of norms that govern the sense of morality. The control beliefs are a reflection of the degree of control a person perceives to have in a given situation (Groot & Steg, 2007; Kaiser & Gutscher, 2003).

TPB has been proposed as a means to examine multiple facets of behaviour such as social change, factors that determine present social behaviour, and workplace behaviour (Linden, 2011; Singh & Kaur, 2021; Yang et al, 2018). Moreover, the theory has also been incorporated as a part of the evaluation of sustainable practices (Wu et al., 2021), highlighting the components such as attitude towards recycling among the people (Aboelmaged, 2021; Arli et al., 2020), waste management practices (Ertz, et al., 2021; Wang et al., 2021; Wu et al., 2022), and use of green energy (Harorli & Erciş, 2023; Wong et al., 2024). The intention to engage in a specific behaviour is affected by the three predictors, which formulate the theoretical construct of TPB. These include (a) attitude toward the behaviour (b) subjective norm and (c) perceived behavioural control (Ajzen, 2020). According to Bosnjak, et al. (2020), the degree of favourable attitude towards a behaviour originates out of the driving force that has been termed as behavioural beliefs, which in combination with normative beliefs creates the overall behavioural inclination. These beliefs allow a person to identify the consequences that they are likely to experience in response to their actions and make a decision based on the satisfaction of the outcome. The way other people in the surrounding react to an issue also affects a person's degree of inclination towards that action. Furthermore, the intention to behave is affected by the point of view of an individual towards the degree of

control they can exert on their own behaviour and the external pressure they have to deal with that can limit them.

The decision to adopt TPB over other behavioural theories is rooted in several compelling reasons. First and foremost, the survey given to us by Impact Canada has data that is limited to the applicable theories, and TPB emerges as a strong contender amongst others that provide a holistic approach to intentions and behaviours. TPB is a three construct model, which is uniquely comprehensive as it integrates both internal and external factors that shape behaviour. This comprehensive approach allows for a nuanced understanding of the numerous influences on behaviour, something that simpler models like the Theory of Reasoned Action (TRA) might overlook, as TRA does not account for perceived behavioural control. The power of TPB is its ability to predict, which has been extensively validated across a wide range of behavioural domains. Empirical studies have consistently demonstrated its robustness in explaining variances in behaviours. For instance, Sheeran (2002) emphasises how intentions, as defined within TPB, encapsulate motivational factors that influence behaviours, thus serving as strong predictors. The meta-analysis by Armitage and Conner's (2010) also reaffirmed the influence of intentions in forming behaviours, which helps to reinstate the applicability of TPB. In comparison with other behavioural theories, such as The Social learning theory by Bandura, which focuses on behaviours that are a result of imitating others and Bronfenbrenner's ecological system theory, which focuses on social and cultural influences on behavioural performance, TPB offers a targeted approach for anticipating planned behaviours. TPB's specific focus on intention as a precursor to behaviour, coupled with its consideration of control beliefs, provides a more direct and actionable framework for understanding a wide range of behaviours, including those related to environmental sustainability. In conclusion, the choice of the Theory of Planned behaviour over other theories is driven by its comprehensive and structured approach, robust empirical

support, applicability to environmental behaviours, ability to address the intention-behaviour gap, and compatibility with implementation intentions. TPB provides a powerful and nuanced framework for understanding the complex interplay of factors influencing individual behaviours, making it an ideal choice for the study of climate change perceptions, intentions, and actions.

TPB was based on the premise that using generic attitude as a lens to analyse human behaviour was not providing the necessary details into the behaviour adopted by individuals. It was argued that a more detailed framework was required to understand the constructs that produce specific behaviour (Ajzen, 1991). When it comes to identifying the behaviour of people in terms of predictability in a particular situation, the analysis needs to be conducted from a perspective that helps in bridging the gap between the diversity of human behaviour and using the explanatory constructs to gauge the likelihood of a response (Fishbein & Ajzen, 2011). Therefore components such as demographic factors, personality traits and the situational dynamics need to be considered to comprehend the way human behaviour is shaped (Kim & Tandoc, 2022). In addition, the willingness of a person to engage in a specific behaviour is of critical importance when it comes to expanding the applicability of the theory. Theory of Planned behaviour has outlined how each of these constituents are connected to the intention and the subsequent behaviour, along with highlighting their link with intention and behaviour. These components are further elaborated below, examining how each separate aspect is related to the domain of intention and behaviour.

2.7 Attitudes

Attitude constitutes the first predictor in the theory, which implies the perspective individuals hold for a specific situation. Different explanations for the term attitude have been

offered, with scholars viewing it as a mental and neural state (Allport, 1935), motivational, emotional, perceptive and cognitive process (Krech and Crutchfield, 1948), and affect for or against a psychological object (Thurstone, 1931). These definitions although vary to some extent, nevertheless, the underlying theme is related to the cognitive processing of information pertaining to a situation.

The formation of attitude is dependent on the type of behavioural beliefs a person has which can be used to gain insight into the process of attitude creation and retention. The component of attitude has been explored across various studies by social psychologists who identified it as the central motivational force behind a favourable or unfavourable response (Forgas et al., 2011). Earlier researchers have drawn connections between attitude analysis and the use of the findings in mapping out the likely behavioural course of action (Bentler & Speckart, 1979; Sample & Warland, 1973; Snyder & Tanke, 1976). However, these initial studies have not been able to focus on the role of intention and control within their respective frameworks, suggesting a need for a more refined understanding of the concept of attitude.

Fishbein and Ajzen (1975) have elaborated that attitudes are an outcome of the beliefs that individuals possess towards an object of attitude or event. In cases where negative connotations are attached to the object of attitude, the resultant attitude would be negative. When positive consequences are deemed to follow the specific behaviour, people are more likely to view that behaviour from a positive perspective thus depicting the presence of a favourable attitude. The stronger the likelihood of a positive outcome, the more favourable the behavioural belief, which in turn increases the intention of a person to engage in the behaviour. In addition, Shrigley (1990) has concluded that the variables of attitude and behaviour hold reciprocal relationships, which are further accentuated by individual-related and external factors. Not only the personal beliefs about an object of attitude elicit a response,

but other factors are also taken into consideration which strengthen or weaken the intention. Therefore, it can be stated that attitude is not a single-dimensional construct but needs to be examined from the viewpoint of beliefs, intention and behaviour (Fishbein & Ajzen, 2011).

Testing of the variable of attitude has been challenging as there was a gap present between the theoretical explanation and the uni-dimensional tools designed to measure it (Bagozzi, 1981). Thurstone and Chave (1929) have undertaken a study to develop a scale that catered to their bipolar structure of attitude. It was concluded that the construct can be measured in terms of being a bipolar variable, represented by two extremes, along with constituting a neutral position between the two ends. However, criticism emerged from researchers who believed that a bivariate model was more robust and would offer a better insight into the independent and unipolar aspects of the variable (Cacioppo et al., 1997; Kaplan, 1972). The idea is further supported by scholars who argue that adopting a bivariate model ensures the inclusion of ambivalent attitude as well in the construct, which is not possible while using the bipolar structure approach (McGrane, 2019).

From the measurement of attitude as a belief based construct focused on uni-dimensional aspects to the development of the understanding of attitude existing as instrumental and experiential domains; the research on nature of attitude has significantly evolved (Armitage & Conner, 2001). The measurement scale developed in conjunction with the framework of TPB encapsulates the essence of behavioural beliefs and their impact on attitude adopted by a person and the behaviour they depict when faced with that specific situation.

The theory has been applied in different contexts to evaluate the attitude and beliefs of people and their behaviour, indicating the different avenues of its application. For instance, Hagger et al (2002), have indicated the use of behavioural beliefs and attitude as a means to

understand the tendency of people to display an inclination towards being physically active. In another study, Twillert et al (2020) found that when the respondents believed that the incorporation of technology in their learning environment would add value for them, they had a higher degree of acceptance and intention to adopt the technology. Likewise, in a recent study, Rahiman and Kodikal (2024) have highlighted how attitude and behaviour facilitate the degree of openness of individuals towards AI based technology as a part of their work processes. The more positive attitude, the higher are the chances of using AI in fulfilling their work responsibilities.

The theory of planned behaviour has also found application in the context of green energy and environment-friendly practices adopted by the people. Emekci (2019) has studied environmental knowledge and concern through the lens of TPB to see how the attitude of people becomes environmentally conscious when their behavioural beliefs are positive towards making green purchases. Ataei et al (2021) have found that the degree of use of environment-friendly pesticides was greater in cases where the target market or farmers depicted a positive attitude, in terms of incorporating green products as a part of their farming practices. The relevance of TPB has also been established in the domain of predicting people's responses to sustainable practices of managing water resources. The study has indicated that the TPB framework accounted for more than 60% of the predictability of the intention and actions of the respondents.

These studies suggest that the component of attitude strengthens the path between intention and behaviour. When an individual regards an activity as desirable, they develop a favourable mindset towards the activity. On the other hand, a negative mindset is formed when an object of attitude creates displeasure thus the intention to participate in the behaviour is reduced visibly. TPB can be used to predict the behaviour of an individual, considering the

influence their belief is likely to have on their intention and ultimate behaviour (Leone et al., 1999; Linder et al., 2017).

2.8 Subjective Norms:

The subjective norm is reflected in the form of societal rules which have a significant effect on the way decisions are made by the people. Before making a choice individuals not only take their personal preference into account but also reflect on the way society is going to view their behavioural choices. This shows the power subjective perception of social norms holds over the behaviour of the people, as they may refrain from displaying certain behaviours because of their deviation from the social norms (Fishbein & Ajzen, 2011). The notion of social behaviourism has also been used to further explain the way normative pressures affect the behavioural choices. According to the rational choice perspective, normative pressure is there to ensure that the behaviour of the people is aligned with the societal standards, as individuals are motivated to match their actions with what is deemed as socially acceptable. Thus, the underlying motivation is to avoid negative consequences that are followed by a behaviour that doesn't adhere to the normative structure of a social group or is likely to lead to criticism from the social group or society (Bosnjak et al., 2020).

A difference has been established between injunctive norms and descriptive norms, considering the former as the perception about what should be done or avoided. On the other hand, descriptive norms are reflected through the observation of an individual concerned with the behaviour of others. Therefore, the action of others is used as a benchmark to decide about one's own behaviour (Gugenishvili & Colliander, 2023). Whether the norms are injunctive or descriptive in nature, their effect on the intention and behaviour is evident as people analyse the likely response of others before taking an action. However, these

components can have different impacts on the likelihood of eliciting a behaviour. Habib et al. (2021) have studied the different effects of injunctive and descriptive norms and found that in cases where the behaviour of the society didn't match their belief, the low degree of descriptive norm weakened the effect on the intention to show acceptable behaviour. However, injunctive norms were more likely to affect the course of action adopted by the people, thus highlighting the significance of perception of behaviour standards in shaping a positive intention to act. In order to deal with the discrepancy between the two dimensions of the variable, studying it as a combined norm has been suggested (Jacobson et al., 2020; Mauduy e al., 2022).

The concept of normative belief as a part of the theory of planned behaviour framework implies that referent power is playing a crucial role in this regard as people are inspired to behave in ways that are deemed as favourable by their referent group. The society as a whole may not hold as much significant power in this context as the group people refer to when making decisions (Kim et al., 2019). A behaviour that is aligned with the perception of norm for the group will be readily accepted. Similar to the construct of behavioural belief, normative belief also follows the bipolar measurement structure (Fishbein & Ajzen, 2011). The approval or disapproval of a behaviour by the people regarded as important provides the two extremes which serve the purpose of gauging the strength of subjective norm and the predictability of behaviour based on its strength. For instance, the intention to donate blood is created out of the subjective norms as people deem it as a noble cause, thus the participants in this activity feel obligated to follow the norms and hold a positive attitude towards this action (Masser et al., 2008).

Another area of concern is the sources which contribute to the development of subjective norms. The people in a close social circle don't need to be the only ones

influencing our judgment and decision-making (Smith et al., 2008). There can be various sources that help in the development of subjective norms such as educational experiences and popular culture. In addition to this, social media is also an important component when it comes to influencing the view of acceptable and unacceptable behaviours. Xie and Madni (2023) have explored the power social media holds on shaping the opinion of individuals for green consumption. The findings indicate that social media can regulate green behaviour among the young generation by encouraging them to consider green products while making purchases as it is portrayed as a norm. Some researchers have considered subjective norms to hold comparatively less influence on the intention and behaviour link (Armutcu et al., 2024; Tarkiainen & Sundqvist, 2005). Nevertheless, there have been studies that have illustrated the contribution of subjective norms in strengthening the link between intention and behaviour, allowing the researchers to use this factor for predicting the expected action through the use of the TPB framework (Alsaad, 2021; Singh et al., 2022).

In terms of increasing the likelihood of engaging in positive social change and environment-friendly behaviour, Xu et al., (2022) have found descriptive norms to play a key role. It has been stated that when people are afraid of being negatively evaluated by others due to their lack of prosocial behaviour, this fear facilitates the adoption of a more responsible approach when buying products. People are more likely to opt for the purchase of green products when others around them endorse similar buying behaviour and their normative beliefs support green product purchase, thus illustrating the influence the referent group has on an individual (Becerra et al., 2023).

Tonder et al. (2023), have offered similar findings through their research, which highlighted the role of subjective norms in creating green citizenship behaviour among the customers. It was observed that people had a greater potential to guide others to purchase

environmentally friendly products when the subjective norms supported the pro-climate behaviour. Furthermore, Dalila et al. (2020) have examined the acceptance and adoption of eco-friendly packaging material by people, gauging the readiness of accepting the material through their subjective norms and intention to use the packaging. It was reported that when subjective norms and personal values favoured environmentally friendly packaging usage, the respondents depicted a favourable attitude and willingness to engage in green behaviour.

2.9 Perceived behavioural control:

Perceived behavioural control is linked with control beliefs, which indicates the level of difficulty an individual experiences in terms of engaging in behaviour due to external influences. Despite the existence of a favourable attitude and subjective norms, the difficulties that could arise in performing the action can weaken their willingness to act upon their intention (Barbera and Ajzen (2020). On the other hand, when the actor is allowed to engage in behaviours they deem as socially acceptable and hold a favourable attitude towards it, the probability of acting in favour of the object of attitude greatly increases. Therefore, perceived control is of essence when understanding the factors that make people adopt certain behaviours or refrain from including specific behaviours as a part of their lives (Ajzen, 2002).

Behavioural control has been integrated into cognitive models to make predictions about people's participation in health-related activities, allowing insight into the implications of non-volitional factors on behaviour (Armitage & Conner, 2001). It has also served the purpose of highlighting that intention and behaviour are guided by an individual's perception of their respective ability to display the behaviour. While the reasoned action approach emphasizes the other two constituents, TPB illustrates how behavioural outcomes can change depending on the variable of perceived control (Emekci, 2019).

The interaction between different constructs of TPB has been examined in various studies with the similar conclusion that favourable subjective norms and adequate behavioural control can create a higher intention among the respondents (Aboelmaged, 2021; Albarracín et al., 2001; Earle et al., 2020). This interplay between control and behaviour can be used to predict the behaviour of people across multiple scenarios. The underlying theme is the capability to engage in an action, which if limited due to negative external influences is a predictor of existence of low chances of the behaviour emerging in a situation. While evaluating and predicting the adoption of novel behaviours, this component is found to be a determinant of related human behaviour.

It has been further discussed that the impact of perceived control tends to differ from one situation to another as in certain scenarios the presence of significant influence of attitude and norms is sufficient to guide the positive behaviour of a person, requiring less input from the control element to elicit behaviour (Ajzen, 1991). In unfamiliar situations, people are more prone to rely on subjective norms as the ability to perform the task becomes uncertain, thus individuals reflect on the social group's behaviour to make decisions. However, the prediction of behaviour becomes more accurate with the inclusion of perceived control, specifically in contexts where the element of volitional control has varied degrees of impact (Armitage & Conner, 2001). The measurement of behavioural control is carried out by treating it as a proxy of the actual degree of control a person has, considering the difficulties in measuring the construct (Hagger et al., 2022). This allows the researchers to understand the perception of control a person has and use the information to identify the possible actions that can emerge.

Barbera and Ajzen (2021) have specifically examined the facet of perceived control in TPB, evaluating its effect on the behaviour of people and its potential to create conformity in

society. It has been argued that perception about the control of behaviour affects the decisions made by people in different social situations, including morally complex or novel decisions. The behaviour of individuals towards environment-friendly products is also guided by the control they hold on making the choice. In a recent study, Armutcu et al. (2024) have demonstrated how perceived behavioural control is a primary factor that motivates the people to make green purchase decisions.

In cases where a wish to engage in green behaviour is present but the situational variables don't allow the person to pursue such behaviour, these obstacles help in predicting the low likelihood of the green behaviour being displayed (Afridi et al., 2021). It has also been stated that the willingness to control the use of energy by a household was connected to the need to fulfil the felt obligation of energy conservation. This need was further intensified by the view they held about the extent to which they could exercise control on making this decision, (Abrahamse & Steg, 2011). Nimri et al. (2020) have identified the component of control as being the most significant predictor in the domain of endorsing green hotels, extending a favourable stance to the environment friendly hotels.

Application of TPB on climate change:

Climate change is becoming a significant challenge with time, gaining attention from scholars to understand the mechanisms that can help in creating a pro-environment attitude among the society and learn ways to help people adopt the behaviours that support the climate saving goals. There are various reasons which encourage a person to behave in an environmentally responsible way. For instance, Bamberg and Möser (2007) have identified self-interest and the desire to protect others as a motivator for engaging in environment friendly behaviour. Moral norms are at the foundation of the decision to behave in ways that

are aligned with environment protection initiatives. Besides moral norms, there are other factors that play an integral role in encouraging people to adopt green behaviours, as indicated by the relevance of TPB (Bamberg & Möser, 2007).

A strength of TPB is its ability to be integrated across different contexts and scenarios. The researchers have to specify the behaviour they intend to examine as a starting point, which needs to adhere to the principle of compatibility. Keeping this into consideration, the framework when applied to a specific phenomenon needs to ensure that all the components ranging from attitude to behaviour are aligned with each other and the elements of construct are reasonably well defined. Moreover, behaviours that fall under the scope of TPB are volitional in nature which indicates that intention is an essential component of the behavioural mechanism (Lin & Roberts, 2020). The components of attitude, norms and perceived degree of control exerts influence on the probability of initiation of a behaviour. As noted by Perri et al. (2020), who have suggested the mediating influence of attitude and control on subjective norms, which facilitates favourable decisions for smart grid technology adoption. Besides the area of green energy, TPB has been integrated into other research studies that aim to predict green behaviour adoption among the masses (Choe & Kim, 2018; Tarkiainen & Sundqvist, 2005).

Yuriev et al (2020), have examined the applicability of the theory of planned behaviour in understanding the antecedents of environment-friendly behaviour and predicting it. The framework aims to measure the direct (attitude, norm, control, intention) and indirect (beliefs) influences on the behaviour of an individual. Using these constructs not only helps in understanding the causes of a specific behaviour but can also help in formatting a plan of action to bring positive change by fostering positive attitudes. In addition, insight into the

barriers that limit people from acting upon their intentions facilitates the development of suitable interventions that can help in reducing the impact of these barriers.

There have been mixed claims about the effectiveness of TPB in climate change initiatives taken by the people, with some scholars deeming it to offer sufficient insight into the adoption of climate change endeavours, while others propose the need to utilize other frameworks. However, evidence suggests that TPB does holds relevance for understanding behaviour of people towards climate change (Ahmed et al. 2021). The adaptation with climate change is explained through the use of the theoretical framework as perceived control affects the intention and behaviours of the farmers to follow the climate change program directives and implement it as a part of their farming practices in China (Zhang et al., 2020).

Besides the farming sector, climate change initiatives can be seen in the form of energy saving across the households to reduce the degree of emissions. Liu et al. (2020) have investigated the applicability of TPB on climate change and the behaviour of people in China, in terms of reducing their energy consumption in an effort to lower the environmental impact of the emissions. The findings of the study show that the intention to actively participate in energy saving activity is dependent on the three antecedents in the TPB model.

An additional influence is observed in the form of the socio demographic and socio-psychological factors which are regarded to play a distinctive role in the integration of environment friendly behaviour (Oreg & Katz-Gerro, 2006). The variable of income is observed to play a significant role in shaping the intention of the people to be a part of the energy saving activity. These findings have generated the assumption that socio-demographic factors have the potential to affect climate change attitudes and beliefs of individuals.

Another study was carried out in South Africa, exploring the different demographic variables and it was reported that employment status of an individual had the most influence

on developing favourable intentions and participating in green behaviour (Dlamini et al., 2021). The implementation of TPB has also been conducted in UAE, considering the intention to e-waste recycling and it was concluded that habitual influences were predominant in determining the related behaviour (Aboelmaged, 2021). These themes have also been explored in the US, considering the effect of beliefs people held about climate change and the behaviour they displayed to respond to global warming (Clement et al., 2014). The construct of perceived behavioural control seemed to have the highest degree of predictability while the other two antecedents were also found to carry significant implications for the response to climate change.

There have been studies conducted in the context of Canada as well, for instance Jacob et al. (2023) have specifically analysed the changes in the behaviour of people due to flood prevention programs through the use of TPB. The results of the study support the notion that behavioural, normative and control beliefs had an effect on the intention to integrate flood prevention techniques, while subjective norms was the most significant predictor of the behaviour of the respondents. Mu et al. (2023) have investigated the tendency to adapt with the climate change in China and Canada, analysing the differences existing between the two regions. It has been concluded that individuals from these two regions respond differently to climate change, for example, in Canada greater degree of interest was generated by the efficient irrigation techniques, while in China, the range of crops gained more attention by the respondents of the study. Depending upon the ecological challenges being faced by the people, the climate adaptation response varies. In China, water shortage is a challenge being faced by the people, therefore their strategies are centred on this issue. Canadian respondents showed a significant concern for the increasing temperatures and depicted intention to adopt behaviours that helped in lowering the impact of climate change. Apart from the farming community, researchers have explored the attitude and intention of

campers towards environmentally friendly behaviour and their response to the constraints that make it challenging for them to retain environmentally responsible behaviour (Moghimehfar & Halpenny, 2016). The study has further indicated that facing barriers doesn't change the intention of the people and they are likely to seek ways to change the situation and make it more favourable through negotiation.

The literature review further dwells in the depths of socio-demographic influence on intentions and behaviours.

Socio-demographics factors role in behaviour formation

Various factors tend to affect the way people respond to the climate challenges being faced. The intention to be more environmentally responsible is not only related to the cognitive analysis of environmental issues but also involves demographic variables. In essence, the differential responses elicited across different regions indicate that the climate change behaviour needs to be examined in more detail. The analysis of GHG emissions has indicated that demographic variation has the potential to influence intention and behaviour (Gill & Moeller, 2018). Therefore, the element of demographic factors should be taken into view to understand how the variance in age, gender, income, etc. can create different sets of responses among the people.

Several empirical studies have shown that socio-demographic variables significantly influence the Theory of Planned Behaviour (TPB) and its effectiveness in predicting pro-environmental intentions and actions. For instance, Lucarelli et al. (2020) researched by integrating socio-demographics such as employment status and education as moderators of TPB constructs, noting that women and highly educated individuals showed stronger intention-action alignment. In the realm of recycling behaviour, Botetzagias et al. (2015)

demonstrated that incorporating socio-demographic controls like age and education enhanced TPB's predictive power by influencing the salience of moral and normative beliefs. Studies from more diverse contexts, such as Ifegbesan and Rampedi (2018), illustrated how geographic location, cultural norms, and income levels affected the role of subjective norms and control beliefs, particularly in collectivist societies. Finally, Abrahamse and Steg (2011) reported that gender and educational background shaped individuals' energy conservation attitudes and control perceptions, with women often exhibiting stronger pro-environmental motivation in household decisions. Collectively, these studies emphasize that while TPB provides a foundational psychological model, socio-demographic factors act as moderators or intervening variables, subtly reshaping the impact of behavioural, normative, and control beliefs across different segments of the population. Including these variables enhances TPB's relevance and applicability in diverse and multicultural contexts like Canada.

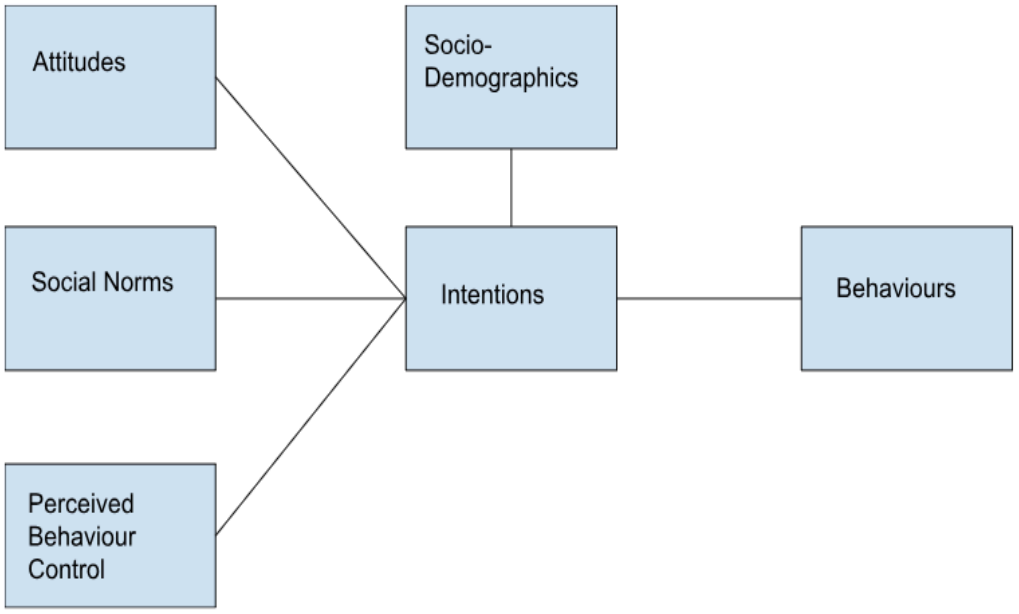


Figure 1.2 : Socio-Demographics in Theory of Planned Behaviour

Building on the existing research, this study aims to expand the Theory of Planned Behaviour by incorporating socio-demographic variables—such as age, gender, education,

income, race, language, and geographic location—to examine their influence on individuals' intentions toward climate-related actions. While TPB traditionally focuses on psychological predictors, this research acknowledges that intention is also shaped by the social and demographic context in which individuals live. By including these variables, the study explores how different population groups may differ in their willingness or readiness to engage in pro-environmental behaviours. This approach not only addresses a critical gap in TPB literature but also offers a more inclusive understanding of what drives climate action intentions within Canada's diverse society.

A. Age

One of the factors that has been examined in the context of climate change behaviour and readiness to adopt actions that support the notion of environmental protection is the age of an individual. A substantial number of studies have focused on the way climate change is affecting the older population and causing a decline in their health and quality of life (Kriebel-Gasparro et al., 2022; McDermott-Levy et al., 2019). It has also been established that climate changes are also affecting young children, as the changing environmental patterns expose them to various health issues.

Some researchers have explored the theme of age and the differences existing in the level of concern for climate change, which is attributed to the variable of age (Clayton & Karazsia, 2020). This shows that the perception of climate change is a critical issue and the likelihood of taking relevant action can be linked with the age of a person. The underlying assumption is that the age bracket that is exposed to environmental issues will have more serious concerns about the deteriorating ecological condition. Moreover, the intention to take actions that help protect the environment will be stronger in the ages being affected.

Skeirytė et al. (2022) have conducted an analysis of climate perception and the initiatives taken in European Union regions, exploring their views about the climate challenges. The study focused on the comparative analysis of different age groups, including Baby Boomers, Gen X, Y, and Z. Contrary to the commonly held assumption, the youngsters have displayed greater concern about the damage to the ecosystem than people belonging to the baby boomers or Gen X categories.

Another finding of the study suggests that the young individuals recognized their role in managing climate change, thus increasing their likelihood to engage in activities that lower the harm caused to the environment (Skeirytė et al., 2022). Some of the ways that reflected their intention and behaviour to protect the environment were observed through their consideration of the carbon footprint of products and focus on the reduction of disposable products, which showed significant commitment to environmental protection. On the other hand, people included in the older age group had comparatively lower levels of intention to reduce their carbon footprint and environmental impact. However, in cases where the youth viewed that the responsibility to protect the environment was within the business and industrial domain, the degree of personal accountability and initiatives decreased.

In another study, Shin and Kim (2023) drew a sample from Korea, analysing the behaviour of the respondents across various environment-friendly behaviours. These behaviours included actions ranging from shifting to the use of public transportation as a primary means of travelling to the conservation of natural resources. In terms of awareness, the younger generation showed a higher level of knowledge about environmental challenges and their possible implications. However, the older population had a higher intention of displaying eco-friendly behaviour than the youth and were more likely to participate in activities such as managing water and energy usage.

The difference in intention and behaviour towards climate change can also be a reflection of the level of dependence a youngster has on their family. As an adult, an individual has to play the role of a responsible citizen, which contributes to creating a stronger intention to behave in an environment-friendly manner (Wallis & Loy, 2021). The sample drawn from the Netherlands indicated that the level of self-efficacy experienced by university students determined their subsequent decision to participate in climate activism.

In the specific context of Canada, there have been a varied range of responses, keeping the variable of age into consideration, to examine pro-environment intention and behaviour. Gray et al (2019) have reported the variable of age doesn't play a significant role in determining the intention and behaviour of people. Other researchers have provided a different conclusion, indicating that age has the potential to impact the degree of intention and behaviour of people (Hao et al., 2020).

Anderson and Krettenauer (2021) have analysed the effect of age on the intention of the respondents to engage in environment-friendly actions. Contrary to the research that has failed to establish a strong relationship between age and willingness to be eco-friendly, the study data suggests that the older the population, the more likely the people are to take the impact of their actions on the climate more seriously. As a result, the adults had a higher sense of accountability and responsibility for being pro-environment as compared to the younger population. It was further found that adults displayed significantly higher levels of emotional connectedness to nature and pro-environmental behaviour in comparison to adolescents. These differences in their level of connectedness and accountability were ultimately translated into their intention and behaviour (Anderson & Krettenauer, 2021). A possible reason for these differences is the underlying cultural influences where the older people in Canada hold a greater sense of moral obligation towards the environment.

However, there have been researches that have shown that the younger population was more inclined to participate in activities that support climate change policies in their daily life actions. Lewis et al. (2019), have argued that younger people had a more favourable attitude towards climate change policies, which in turn affected their environment-related behaviour. The adoption of recycling and choosing public transportation are two examples that illustrate the pro-environment behaviour. Based on the analysis of the literature about age and intention of the people towards climate change, the following hypothesis has been formulated:

H1: There is a significant association between age and intention.

H0: There is no association between age and intentions.

B. Geographical Location

The geographical location can also be a factor that provides a basis for distinction between the behaviours of people. There are some regions where pro-environment behaviour flourishes, while there are some areas where similar patterns of behaviour are not evident. Researchers have mentioned that people from different areas tend to hold different viewpoints about the critical nature of climate issues which affects the way they respond to the situation (Ifegbesan & Rampedi, 2018). In some countries, the threat of climate change triggers a stronger willingness to take preventive actions. However, there are regions that despite facing various issues due to changing climate patterns, the overall public attitude is not leaning towards engaging in pro-environment behaviour (Dechezleprêtre et al., 2022).

There can be various motivating factors that elicit favourable attitudes towards the environment, which can be attributed to place attachment (Nicolosi & Corbett, 2018) psychological distance (Maiella et al., 2020), (Perera et al., 2022), etc. A common theme evident through the studies is the differences in the behaviour of people in different locations,

which implies that geographical location is also an important variable influencing pro-environment behaviour. The dominant norms in a specific location affect the way people think about and respond to climate challenges. When a significant number of people are focusing on taking environment-friendly actions, others are likely to be influenced by these dominant norms. This motivates them to develop a perspective that extends beyond their immediate interest. As a result, they engage in activities that are aligned with the pro-environment attitude that is publicly supported (Anderson & Krettenauer, 2021).

Rural and urban regions are expected to have different levels of intention and behaviour in the domain of environment-friendly activities. According to Rajapaksa et al. (2018), individuals who are located in the developed regions of India and urban centres hold a more responsible attitude toward climate change. Moreover, they are more likely to behave in a manner that is aligned with pro-environment activities, reflecting a stronger intention and behaviour to protect the environment. On the contrary, people living in areas that are marked by poorly developed infrastructure have a lower degree of intention to adopt ecologically protective initiatives.

Anderson and Krettenauer (2021) have investigated the differences existing in the behaviour of people in Canada, considering the distinction between urban and rural areas. Similar findings have been generated in the research, as the respondents from the rural regions depicted a lower score on environment-friendly behaviours than the urban residents. A plausible explanation for this difference offered by Anderson and Krettenauer (2021) was the different levels of infrastructure development experienced by urban and rural areas. The greater the development, the more it was able to facilitate people to act upon their intention to be environmentally friendly. Another research conducted in the context of rural and urban differences was carried out by Van der Werf et al. (2018) who examined the variation in the

food waste management practices of the people in Ontario. The food waste patterns depicted a significant difference in the rural and urban regions, where the latter was engaged in producing a higher amount of waste. These findings imply that the intention to manage food waste and the practices adopted in this regard are affected by the geographic location of an individual.

In another research, the differences in the intention and behaviour of people across the Canadian provinces have been evaluated (Lee & Khan, 2020). The study findings have identified the residents of British Columbia to have the greatest degree of pro-environmental behaviours, while New Brunswick was at the lowest end of the scale. The respondents of the study had incorporated a range of eco-friendly behaviours such as recycling and composting as well as illustrating green behaviour in their purchasing. Lee and Khan (2020) have further offered insight into the differences in terms of the varied probability of green behaviour of people residing across different provinces. For instance, in the case of home energy usage following pro-environment behaviour was least evident in Newfoundland and Labrador. Alberta residents indicated a higher intention and engagement in green behaviours. An interesting finding of the study was that the lack of motivation and low intention originate from the low acceptance of the required changes by the population. The required changes, when viewed as an additional complication by the individuals, lower the degree of their willingness to implement those pro-environment behaviour.

Talaei et al. (2020) have evaluated the different provinces in Canada in terms of their GHG emission from the industries established in the different regions. The comprehensive nature of policies by the provincial government is recognized as a key factor that creates differences in the ability to control emissions and focus on clean energy. The case of Alberta has been used to highlight the way the climate policies and strict regulations related to GHG

have resulted in a decline in the emissions in the province. The stance of local government is crucial to determine the intention and behaviour of the people, as the more stringent policies increase the intention of the people across various industries to implement environment-friendly mechanisms and policies.

In addition to these examples, eco-friendly behaviour is reflected through the incorporation of green energy in households. The provincial differences in the implementation of solar energy as a pro-environment behaviour has also been explored. Parkins et al. (2018) have argued that the need to implement solar energy has become more profound due to the accumulating effects of fossil fuel energy on the environment. The local government in Ontario is particularly supporting the involvement of households in following the green energy goals by integrating solar energy sources as a part of their residential energy supply. The differences existing in the level of knowledge and the degree of favourable attitude held by the people can affect the pace of implementation of the solar energy process. Furthermore, the differences between different provinces can be attributed to the strategy of the government to facilitate the decision-making of people. When there is significant support from the government, people are expected to have a stronger intention to behave in environment-friendly ways.

In another study, Liu et al. (2018) have investigated the implications of the carbon tax policy in the Saskatchewan region, and the effectiveness of the policy for the climate change goals. The findings of the study show that policy is likely to generate different responses in various provinces, as each region has its own macroeconomic and social dynamics. Besides the intensive policy adopted by the government, the impact of climate change on the population also determines the intention of the individuals to act upon the preventive plan. In regions that were found to face more severe effects of climate change, the residents indicated

a stronger intention to behave in eco-friendly ways (Díaz et al., 2020). On the other hand, in areas where environmental changes had less severe impact, the willingness to be eco-friendly was lower. The difference in intention can be linked with the motivation they experience to take action and the awareness they develop about the way their behaviour can impact the environment. This analysis has led to the development of the following hypothesis:

H2: There is a significant association between region and intentions.

H0: There is no association between region and intentions.

C. Education

As a demographic variable, the educational level attained by a person determines their behaviour in society in terms of their willingness to participate in eco-friendly activities. Liu et al. (2020) have highlighted the moderating role of educational level and its significant effect on the intention and behaviour link in the domain of climate change. Behaviours such as recycling are affected by the educational level of a person. As observed by Wang et al. (2019), people who had a higher educational level were more engaged in the process of e-waste recycling, as compared to individuals with a lower level of educational level. One of the reasons for this difference was that the higher education level allowed people to have their own opinions which are less likely to be influenced by external pressures. In another research, Seacat and Boileau (2018) have examined the tendency of people to participate in recycling activities and its link with their educational level as a predictor. The results of the study have supported the notion that educational level has a positive impact on the intention of people to become a part of recycling activities.

Climate change behaviour has been explored in terms of the demographic variables as the predictor in the framework (Jamshidi et al., 2018). The analysis has shown that the level

of education can be viewed as a significant predictor of understanding the link with the intention of people to participate in different eco-friendly behaviours. It has been further concluded that the education level of an individual determines their chances of being exposed to information related to climate change. Individuals who have been able to access higher education have a greater chance of getting awareness and information related to ecological challenges and pro-environmental behaviours. Jamshidi et al. (2018) have also mentioned that the education level of farmers was a notable predictor, as the higher the education level, the greater their intention to be a part of protecting the environment through different relevant activities. The level of education also enabled them to gain access to the related information, which shaped their perception of the critical nature of climate change and helped them to recognize the way they can contribute to preventing ecological issues. This in turn increases their willingness to implement climate change initiatives. Davidson et al (2019) have evaluated the behaviour of farmers in Canada and indicated that their level of education contributed to shaping their attitude towards incorporating different eco-friendly actions. For instance, farmers having post-secondary education favoured bioenergy production, while also holding a higher degree of learning orientation.

Likewise, Dechezleprêtre et al. (2022) have supported this conclusion and stated that people who were able to access college-level education had a greater understanding of climate challenges which could be attributed to their ability to access the related information more easily. Climate-related education is also an influencing factor that facilitates people's perception of ecological issues and gains insight into the way they can help protect the environment (Rousell et al., 2020). The development of informative programs centering on addressing the different aspects of climate change facilitates people to fill up their knowledge gaps. According to Xue-Qi & Jin (2021), the level of education, awareness, and knowledge about climate change's effects on the ecosystem as well as knowledge about the long-term

implications of the damage to the environment motivates people to take necessary actions. Climate change education helps in filling up the gap between the level of information held by the people, and further developing their understanding of the effects of climate change and the role they can play to protect the environment.

Petre et al (2019), have conducted a study in Canada, taking input from different hospitals and the recycling activities being performed as a part of the anesthesiologist's work practices. The sample of the study comprised anesthesiologists, who have completed their higher education. The study findings reported that one of the major barriers that affected the intention and green behaviour of the people was a lack of information and education about the construct. Therefore, it can be seen that in addition to the educational level, information that specifically focuses on the implementation of recycling and green behaviour is needed to initiate pro-environment behaviour. Dolter and Boucher (2018) viewed energy literacy to play a crucial role in making Canadian households open to the idea of using solar energy to respond to the threat of climate change.

Even though Petre et al (2019) have argued that educational level on its own is not a strong predictor of intention and behaviour, Pickering et al. (2020) have suggested a different relationship between education level and degree of intention and green behaviour. The study sample was drawn from Niagara, Canada, comprising people with various educational achievements. The analysis of their responses has illustrated that the educational level of an individual can be used as a predictor to determine their probability of becoming a part of the waste management program. The key finding was that the higher the level of education, the more informed people were about the impact of the initiative, which enhanced their willingness to play a positive role in protecting the environment.

The integration of solar energy as a part of the household was also dependent on the level of education of people, as concluded by Das et al. (2018). Over the years, the consumption of energy in Canadian households has increased, which is affecting the pace of climate change consequently. Different degrees of willingness and attitude towards energy-saving protocols have been observed in the sample of the study. The researchers have indicated that older people had a more favourable attitude towards energy savings, while people with higher levels of education had a more open approach towards energy efficiency. Through this study, Das et al. (2018) have shown how educational level in the context of Canada illustrates similar results as the higher level of education promotes greater intention to act on eco-friendly initiatives. Therefore, education seems to play an important role in shaping the intention of people, as demonstrated by the following hypothesis.

H3: There is a significant association between education and intentions.

H0: There is no association between education and intentions.

D. Household Income

The attitude of people towards social and environmental issues, as well as their habits, are affected by income levels. Due to the significance of income in determining behaviour, household income as a demographic variable has been examined in the domain of intention and green behavior of people. There have been different findings generated through the research with some studies supporting the link between income, intention, and behaviour with the main conclusion that income influences the relationship between intent and action, playing the role of a moderator (Khan, 2020). Other studies have concluded that income status is not likely to have a strong effect on these variables thus it is not seen as a strong moderating variable (Schulte et al. 2022).

Douenne and Fabre (2020) analyzed the environmental concerns and behaviour in France along with the public's response towards environment management policy. The researchers have highlighted the way the population demonstrated concern about the environmental crisis despite having limited knowledge about the issue but held a skeptical attitude towards the policies. This indicates that the degree of knowledge is not the only prime factor affecting the intention and behaviour of people. There are other factors such as the view about the potential impact of such policies and the adaptation required by the people. The income levels were of particular relevance here as the lower-income families considered the implementation of the carbon tax policy to have a significant financial impact. Al Mamun et al (2018) have also analysed recycling intention and the adoption of this practice by people belonging to different financial backgrounds and income levels. The lower income groups had more engagement in recycling activities as compared to the people from higher income groups, as recycling was considered to be an additional source of earning by the people who were facing financial challenges.

Besides other regions, the adoption of environment-friendly behaviours has been examined in the specific domain of Canada as well. Yang and Arhonditsis (2022) have carried out a comprehensive survey-based analysis of the attitude of the Canadian population and their responses to climate change challenges. The households that had a higher income and were financially stable had a greater degree of interest in adopting eco-friendly behaviours. The demographic variable of income generated by households showed a significant relationship with the tendency of people to have a favourable intention and behaviour in the domain of environment-friendly initiatives. On the contrary, households that were a part of the lower income bracket had a weaker intention to invest their resources in eco-friendly practices (Yang & Arhonditsis, 2022).

Das et al. (2018) have created a distinction between the impact of household income and financial benefit on the intention to be environmentally conscious. It has been argued that Canadian households that have embraced solar energy were responding favourably to the energy efficiency due to monetary benefit, while their income levels had no significant impact. In addition, in households that have to deal with the challenge of low-income or unstable sources of employment, decisions such as shifting to clean energy do not receive favourable responses (Fobissie, 2019). The income level is also connected with the likelihood of the people being a part of the energy efficiency audit. As suggested by Gamtessa and Guliani (2019), higher-income families are motivated by the subsidies they are granted by the government when they offer their input in the audit. In the case of households falling in the lower income bracket, the lack of knowledge about the process becomes a barrier, thus highlighting the gap that the government needs to address.

The income levels also determine the access of the people to sources that provide them with required information about climate change and the initiatives they can take. Belonging to the low-income group limits their chances of getting exposure to this knowledge on a similar scale as the high-income group (Yang & Arhonditsis, 2022). Having limited chances to progress educationally, the probability of accessing knowledge during educational experiences is further restricted. Therefore, the lack of knowledge becomes a barrier to their adoption of green behaviour and initiatives as people are not able to identify the behaviours that can help protect the environment and fail to implement those actions. Moreover, the component of income satisfaction also affects the way people respond to climate issues. As found by Islam and Managi (2019), having financial stability lowered the focus of people on adopting behaviours such as energy saving and the use of public vehicles for commuting. Individuals belonging to lower income had a stronger intention to save energy and use public transportation due to their financial limitations. Regardless of the

reasoning to be pro-environment, income is seen as having a notable effect on the intent and actions of individuals.

Furthermore, the monetary aspect of green behaviour is a critical factor that shapes the willingness of people to be eco-friendly. When recycling is seen as a financially beneficial task, households from lower income brackets are likely to have a stronger intention of participating in it. On the other hand, people with stable financial backgrounds deem recycling as generating insignificant financial benefits, thus, their intention is weaker (Wang et al., 2019). Other researchers have also highlighted the way financial status determines the behaviour of people when dealing with climate change issues. For instance, Davidson et al (2019) have found that farmers in Alberta who were practising bioenergy production were primarily motivated by the cost-effectiveness of the process. Thus the intention and the decision to pursue bioenergy was not elicited by normative influences but the monetary benefits, which shows how income and financial aspects of climate change initiatives can affect the intention and behaviour of people. The norms may favour the adoption of green practices, but the financial benefit gained from participation in such initiatives can't be overlooked as well.

There have also been cases where people had the intention to engage in green behaviour, however, the willingness was not translated through their actions, which can be attributed to various factors. A probable reason for this gap between intention and behaviour is linked to the perception of people about the effectiveness of green products (Nguyen et al. 2019). In cases where people believe that the external circumstances are not supportive of their intention, they will hold back from taking the action, despite having willingness. On the other hand, when the external environment supports their sense of efficacy, the intention and behaviour link is stronger. Furthermore, Enzler and Diekmann (2019) have pointed out that

the relationship between income and pro-environment behaviour is significant, as observed through the impact on GHG emissions. However, the dynamics of this link involve other variables as well, such as the knowledge people have, the access to relevant information, and the government's policies and strategies deployed to endorse eco-friendly behaviour in the public. After establishing the link between income and intention, the following hypothesis has been proposed.

H4: There is a significant association between income and intentions.

H0: There is no association between income and intentions.

E. Gender

Since men and women have differences in terms of their cognitive processing and behaviours in the domain of climate change, the component of gender is also deemed as a relevant variable to understand the variation in eco-friendly intention and action. Gender differences can affect the way people respond to environmental challenges and their intention to take actions that protect the environment. According to Zhao et al. (2021), females are more likely to view climate issues as more severe due to their exposure to the effects of a changing environment. The females residing in rural areas regard climate change as a serious issue as compared to the males, showing the way gender can create different perceptions of climate issues. As a result of these different viewpoints, the willingness to support environment-friendly initiatives is also varied due to gender.

Sreen et al. (2018) have examined the construct of green purchase intention and have conducted a detailed analysis of behavioural differences between males and females, using the theoretical framework of TPB. The results of the study illustrate that female respondents showed a greater influence of the environmental campaigns, which affected their buying

decisions. Moreover, in contexts where women have the primary role of making purchase decisions and managing the home and their family, pro-environment behaviour is expected to take precedence (Díaz et al. 2020). However, Sreen et al. (2018) have not been able to present any conclusive evidence of gender being a moderator in climate change intention and behaviour. Likewise, Caggiano et al. (2021) have not been able to establish a strong relationship between the intention to be environment friendly and the gender of the respondents, in terms of shifting from fuel to electricity-based vehicles. Thus, the component of gender has generated mixed results, with some studies supporting the role of gender in pro-environment behaviour, while other researchers conclude it to be a non-significant variable in the framework. Nevertheless, the role of gender can't be overlooked as the buying decisions and intention to invest in green purchases are affected by gender.

For instance, Moon (2021) has evaluated green purchase behaviour in the hospitality industry, with the study being based on the premise that gender plays a vital role in creating a specific set of attitudes and behaviours. The development of an environment-friendly perspective can be linked with gender, as the findings suggest that gender does have a significant effect on the intention to participate in green purchases. Females were reported to have stronger green intentions in comparison to the males, which shows that within the TPB model, gender is a significant moderator.

Similar findings have been reported by Li et al. (2022) who have evaluated the environment-friendly behaviour in the Chinese population. Females who responded to the survey have been observed to have a more favourable attitude toward inculcating green behaviours in their everyday lives. Behaviours such as recycling and lowering plastic usage had a higher ratio in females as compared to males. Policymakers need to consider the pivotal role women can play in implementing environmental protection protocols. Similarly, in

Canada, females are more inclined towards being protective of the environment, thus making them more willing to adopt environment-friendly actions and behaviours that are aligned with climate change policies (Anderson & Krettenauer, 2021).

Lieu et al., (2020) have taken a different perspective on the analysis of gender and climate change, focusing on the variable of energy transition, and studying the way gender narratives create differences in responses. In the context of Canada, it has been pointed out that the government needs to take the required action to bridge the gender representation gap in energy policies. The implication of these changes would be evident in the ability of females to have a greater input in implementing and supporting climate change policies. Considering the way females can influence pro-environment activities, the development of related policies needs to utilise their favourable behaviour and attitude. This would help to drive the successful application of pro-environment initiatives in the local context (Desrochers & Zelenski, 2023). Based on this literature review, the following hypothesis has been formulated.

H5: There is a significant association between gender and intentions.

H0: There is no association between gender and intentions.

F: Race

An individual's racial background affects how they perceive and respond to various social situations. People from a specific group share a belief system, and the normative influences from their racial background consequently affect their behaviour. There have been different conclusions drawn from various studies exploring the role of racial background as a predictor of intention and behaviour. Some studies have not been able to establish a

significant connection between ethnic background and the intention to engage in a specific behaviour of an individual as reported by Stevenson et al. (2019). Another example is the study by Gibson et al. (2021) who have explored how racial background influences social distancing decisions. The presumption was that people from varied races would depict differences in intention to practice social distancing. However, the findings pointed out that race did not serve as a key contributing factor in determining such behaviour of the people. On the other hand, Taylor and Kuo (2019) have found that the components of intention and behaviour in the domain of seeking mental health support are dependent on the ethnicity of the individual. Therefore, it can be seen that the moderator of race holds a significant position in the intention and behaviour link. Likewise, Li et al. (2019), found a connection between racial background and health-related behaviours, indicating that the behavioural profile can be mapped in the light of general normative influences of their ethnicity.

Different theories can be applied to understand the way human behaviour is shaped by external influences. In addition, the way a person's belief system and perception work is also a crucial determining factor in creating the willingness to act towards achieving a goal. The theory of planned behaviour has been applied in the context of racial background as well, considering it as a predictor that determines the willingness of a person to participate in a behaviour. In an earlier study, Blanchard et al. (2007) examined the tendency of the students to participate in physical fitness practices. The study focused on the role that participant's race played in influencing their decision to be a part of the physical activities. It has been found that the white students illustrated a stronger intention and behaviour than the participants from the other ethnic groups.

The link between intention and behaviour in terms of climate change has also been explored by researchers, with the assumption that ethnic background differences will also be

reflected in the different attitudes toward adopting environment-friendly behaviours. According to Benegal (2018), earlier researchers were focused on the White and Black races. The conclusion drawn from these studies highlighted that white people were more concerned about climate issues. However, these samples were not an accurate representation of the different ethnicities across the globe. The adoption of refined measures has provided a more accurate representation of the attitudinal differences among people from different ethnic backgrounds. For instance, Romero et al (2018), analysed the environmental attitude of Brazilians living in Canada and concluded that the participants already were equipped with knowledge about eco-friendly practices. The migration to Canada didn't make any significant additions to their knowledge base.

Various studies have been carried out investigating the environmental attitudes of different racial backgrounds. Osei-Marfo et al (2020) have specifically focused on the willingness to integrate biogas in households and the variable of race as a predictor. The data analysis shows that racial background impacts people's green behaviour as their beliefs are shaped by their ethnicity. The study of Ghazali et al (2019) has further supported this notion as the researchers have observed different attitudes towards climate change among people from Malaysian and Chinese backgrounds. For example, the component of openness (OC) to change was a significant factor that influenced the behaviour of Chinese participants, while the sample comprising Malay respondents didn't show a similar level of impact of OC on their green behaviour. Moreover, the normative beliefs of Chinese participants were guided by the overall favourable attitude of the ethnic population towards environment-friendly products. In the context of the US, Ballew et al (2018) analysed the differences existing in the climate change beliefs of people with Latino and non-Latino backgrounds. Since people with Latin backgrounds had comparatively stronger eco-friendly norms, a similar pattern was indicated through their climate change perception.

In addition, they were more likely to adopt a proactive approach to engage in behaviours that support environmental protection. Stewart et al (2024) have conducted a recent study on the relevance of ethnic background in understanding behaviour toward climate change, using responses from different racial backgrounds such as Black, White, Hispanic, and other ethnicities. The data analysis shows that different ethnicities have different response patterns to environmental threats, as their beliefs about the causes of climate change vary. For example, the Blacks emphasised the human impact on the environment more as compared to the Whites, which could be attributed to their normative beliefs. Another interesting finding of the study was that Whites have shown greater concern for the threat of climate change for future generations than Blacks. These differences highlight the way ethnicity can potentially shape the views of climate change and the intention to engage in activities that mitigate the impacts of environmental harm, thus leading to the proposition of the following hypothesis.

H6: There is a significant association between race and intention.

H0: There is no association between race and intention.

G. Language with intention:

Language and thoughts are interlinked as individuals present their thoughts in the form of verbal or written communication. Language is used to communicate ideas across various themes, providing the foundation for exchanging viewpoints with others. The selection of words and phrases can make language a means of persuasion, influencing the views and beliefs of the people (Zong & Zhen, 2021). The variable of language has not been extensively explored in the context of intention and behaviour in climate change and environment-friendly actions. However, the studies that have included language as a part of

their analysis of human behaviour have provided inconclusive results. Cousse (2021) has investigated the attitudinal differences between German and French-speaking people residing in Switzerland towards setting up solar parks in the region. Despite having language differences, both groups had similar levels of willingness to support the setup of renewable energy. Therefore, it can be seen that language itself doesn't necessarily have a significant impact on attitudes towards adopting environment-friendly practices. It is the way climate change and its related challenges are portrayed through language that creates awareness among the masses and encourages them to take preventive actions. The narrative created through the medium of language facilitates the development of favourable climate change attitudes and beliefs. It also supports the people in making informed choices.

It has been stated that language not only plays a critical role in delivering knowledge about climate change to the people, but the selection of words and the ability of the people to relate with the speaker is also important. For example, the study by Stewart et al (2024) has indicated the effect of President Obama's speech about climate change on Blacks and how their concern towards the environment and understanding of their role in protecting the environment is attributed to his speech. The crucial role of linguistics in creating favourable intention and behaviour among people has further been explored by Stecula and Merkley (2019). Their study has examined how the discourse of climate change has evolved over the years. The findings also suggest that the current emphasis on the risk linked with climate change and the urgency of action is shaping the way people view climate change in the present era. A different perspective has been provided by Osburg et al. (2020), who indicated that to create a stronger intention among people to be environmentally conscious, the product information on the packaging can be used. Individuals use the provided information to process the product details and then make buying decisions. The important factor in this

context is to select language expressions that appeal to the climate change beliefs of the people.

Furthermore, providing people with information related to climate change and aligning it with the linguistic expressions that are linked with their normative beliefs is important to create a favourable attitude. It is imperative to develop climate change awareness campaigns that consider the cultural and language aspects to make the message more effective (Carvalho, 2023). When expressions are used that highlight personal contributions to managing climate change, people are more likely to analyse their behaviours and make efforts to align them with environmental protection practices. On the other hand, when communication focuses on creating the narrative that climate change is not significantly related to human inaction, the degree of intention and pro-environment behaviour of the people are altered in response to this discourse. In addition to this, understanding the role that language can play in tackling the issue

Climate change scepticism is also important. As noted by Hornsey and Fielding (2020), messages about the need to become environmentally friendly should be targeting the root cause of the scepticism. This would allow the policymakers concerned with climate change to shift the public's behaviour from inaction to supportive intention toward eco-friendly practices.

H 7: There is a significant association between language and intentions.

H0: There is no association between language and intentions.

2.10 Relationship of social norms and intention:

The variable of social norm has been examined in various contexts as one of the key determinants of human behaviour. Studies have been conducted in the domain of climate change behaviours, which centred on the analysis of social norms as the antecedent of pro-environment behaviour (Yamin et al., 2019). The findings generated through this study show that people rely on their reference group's values as a guiding framework for their behavioural choices. When the norms are inclining towards pro-environment behaviour, people respond to this influence and behave in ways that are aligned to climate protection activities.

Gansser and Reich (2023) have extensively explored the dynamics between social norms and intention of the people, analysing the way the social pressures are translated into the form of human behaviour. The key conclusion is that sustainability practices are largely affected

Moreover, Yu et al (2019) have argued that when deviating from the norms is seen as carrying significant risk, people adopt behaviours that are deemed to be socially acceptable in the context of environment protection initiatives.

Mu et al (2023) have examined TPB and the link between social norms and intention across different regions, including Canada, China and British Columbia. The main findings suggested that social norms facilitated the development of a stronger intention to be climate friendly, while the norms that did not support sustainability practices became a barrier in the adoption of such initiatives. The following hypotheses have been developed based on this analysis.

H8: There is a significant association between social norms and intentions.

H0: There is no association between social norms and intentions.

2.11 Relationship between attitude and intention:

The component of attitude holds a prominent position in forming the behavioural patterns of people across different situations. Zhang et al (2020), have found that TPB outlines the way the behaviour of people is shaped, supporting the implementation of climate change practices. At the core of this behaviour is the link between attitude and intention. Climate change scepticism may weaken the impact of attitude on intention, but in cases where people have a strong attitude towards eco-friendly activities, such scepticism becomes insignificant (Chen, 2020).

The attitude and intention link is also corroborated by Aliabadi (2020) who found that behaviour such as adoption of sustainable water management was influenced by the intention people held to be a part of the implementation plan. The intention was dependent on the attitude that was at the foundation of the formation of the inclination to shift towards an eco-friendly water management system.

Zhu et al (2020) have used the case of city smog to investigate whether the intention and attitude were connected or not. It was found that people judged the degree of threat they were facing, as well as navigated through the public opinion on the matter. This analysis enabled them to identify whether they needed to be a part of climate change practices being implemented to curb the smog issue. The following hypothesis has been formulated on this basis.

H9: There is a significant association between attitudes and intentions.

H0: There is no association between attitudes and intentions.

2.12 Relationship between perceived behavioural control and intention:

The factors of perceived behavioural control and intention are also a part of the research concerning TPB, considering these components to play an essential role in determining the behaviour of individuals. In the context of agricultural production, while following eco-friendly practices, Zhang et al (2020) have explored the way TPB components come into play and the way perceived behavioural control influences the intention to invest effort in such activities. In cases where people feel that they have an adequate degree of control over making choices, they feel more motivated to be a part of the climate change plan.

Another study has used the case of recycling behaviour to identify how perception about behavioural control directed the intention towards favourable behaviour. The findings suggested that a higher degree of control helped the people to have a stronger willingness to do recycling activities (Pamuk & Kahrıman-pamuk, 2019). Likewise, perception about the degree of self-efficacy is found to be an underlying factor in determining intention as noted by Vamvaka et al (2020), who concluded that perceived control and self-efficacy seem to have the strongest linkages with the resultant intention of the people. Therefore, the following hypothesis has been proposed.

H10: There is a significant association between perceived behaviour control and intentions.

H0: There is no association between perceived behaviour control and intentions.

2.13 Relationship between intention and behaviour:

The connection between intention and behaviour has also been established through the review of previous literature. Mu et al (2023) have indicated that climate change behaviours are significantly impacted by the intention of the people. Weak intention to be

environment friendly is most likely to result in behaviours that deviate from sustainability-focused endeavours. In a recent study, Denault et al (2024) have mentioned that intention is a main predictor when it comes to understanding climate change behaviours. People only engage in a specific set of behaviours when they have a prior intention to act upon them. Absence of intention is likely to reduce the chances of that behaviour being displayed. In the context of the present study, the intention of the people and behaviour towards climate change activities is significantly linked as proposed by the following hypothesis.

H11: There is a significant association between intentions and behaviours

H0: There is no association between intentions and behaviours

Chapter 3: Methodology

3.1 Statement of Purpose:

This exploratory study aims to provide an understanding of Canadian's behaviours towards climate change, in the context of The Theory of Planned Behaviour (TPB) and the influence of socio-demographic factors. A thorough review of the literature enabled the study to establish construct relationships and examine the strength of the relationship between various components of TPB and demographics. The core purpose of the study is to investigate whether, the TPB constructs; social norms, attitudes and perceived behaviour control in addition to demographics, impact the intention to influence the climate change behaviours in the Canadian population. This section of the study explains the research design, research questions, sampling, data collection, coding procedure, limitations, ethical considerations and statistical tests used for the analysis.

3.2 Research Design:

The research design followed the quantitative paradigm, which is related to the use of numerical data for testing the relationship between study variables (Bougie & Sekaran, 2019). The variables of the study included demographic variables, components of TPB such as attitudes, social norms, perceived behavioural control, intentions and behaviours towards climate change which were measured through related items through a survey.

Two primary research questions for the study are; what are the key learnings from applying TPB in the context of climate change in Canada, and do demographics influence the

intentions towards climate change behaviour in Canadians? Each of these questions has an associated hypothesis that attempts to predict the nature and strength of the relationship between social norms, attitudes, perceived behaviour control, climate change intentions, climate change behaviours and demographics. The Theory of Planned Behaviour and findings from the literature review have influenced the basic structure of the study. Based on this research framework, the following hypotheses have been developed:

H1: There is a significant association between age and intentions.

H2: There is a significant association between gender and intentions.

H3: There is a significant association between income and intentions.

H4: There is a significant association between region and intentions.

H5: There is a significant association between education and intentions.

H6: There is a significant association between language and intentions.

H7: There is a significant association between race and intentions.

H8: There is a significant association between social norms and intentions.

H9: There is a significant association between attitudes and intentions.

H10: There is a significant association between perceived behaviour control and intentions.

H11: There is a significant association between intentions and behaviours.

For social norms, two key survey items were used to gauge the perceived expectations from one's social circle. The first, *"In your opinion, what percentage of your friends and family believe climate change is a threat that requires urgent action?"*, captures the

descriptive norm by assessing perceived group beliefs. The second, *"People who are close to me generally expect that I do my part to help limit climate change,"* directly taps into injunctive norms, revealing the perceived pressure or support from one's close relations to act pro-environmentally.

Attitudes were measured through items that reflected personal beliefs about climate change. For instance, *"There is no need to make changes in my life because humans are not the main cause of climate change"* represents a sceptical or negative attitude, while *"It is important to (him/her/them) to protect the environment"* and *"Most people like me care about climate change"* reflect more favourable attitudes aligned with pro-environmental values.

In terms of perceived behavioural control, three indicators were used. *"I believe my actions can have a positive effect on climate change"* assesses personal efficacy, while *"If we act collectively, we can have a positive effect on climate change"* captures collective agency. Conversely, *"Taking actions related to climate change will not work because it is a natural phenomenon"* represents a limiting belief that diminishes perceived control.

Intentions were examined through self-reported willingness and identity alignment, including items such as *"I am the type of person who acts in an environmentally friendly way"* and *"I am willing to make substantial changes in my life to help limit climate change"*. These questions assess motivational readiness and self-perception regarding climate action.

Finally, actual behaviour was captured through a range of actions participants reported engaging in over the past two months. These included high-impact behaviours like *taking long or short flights*, and low-impact, sustainable choices such as *using public transport*, *active transportation*, or *an electric scooter or bicycle*. Additionally, information-seeking behaviour was included with *"Looked for information about the risks of an extreme weather event in your local area, including potential health impacts."*

These examples not only frame the hypotheses and theoretical alignment but also provide a lens for interpreting the statistical findings.

3.3 Data Collection:

The study used the data collected by Advanis on behalf of the Privy Council Office (PCO). The data was related to the beliefs, attitudes, and behaviours of people in Canada towards climate change. The sample selection parameters followed by Advanis included the age of the respondents (18 and above) and the location of the respondents who were from Canada. The survey was carried out in 8 different waves, from December 2021 to March 2023, leading to a total of 17,324 completed questionnaires across the 8 waves. However, due to the difference of questions in different waves, we chose wave 1 for this research, which had 2104 participants. The rationale behind the selection was that wave 1 had all the variables used in the study, while the other waves didn't focus on all the variables. Therefore the study included wave 1 data only as it was aligned with the scope of the research.

The information was collected through a questionnaire that covered the different demographic components, as well as helped in identifying the norms, attitudes and perceptions of people towards climate change and planned behaviour.

3.4 Data Analysis:

For the present study, non-parametric tests of Chi-square and Spearman correlation were used. According to Timming (2022), when researchers are dealing with categorical data to examine the association between variables, non-parametric tests such as Chi-square are suitable in this context. Another statistical tool that applies to categorical data is Spearman correlation, which also illustrates the relationship between nominal and ordinal scales

(Bougie & Sekaran, 2019). Spearman is a non-parametric measure of correlation that assesses the strength and direction of association between two ordinal variables. It is particularly useful when the data does not meet the assumptions required for Pearson's correlation, such as normal distribution (Ma, 2012).

The data collected for the study related to demographic factors was on a nominal scale, except for the component of education, income and age, which were coded on an ordinal scale. Both of these scales are viewed as categorical. Moreover, the data related to TPB components ranging from social norms to climate behaviour was measured using the Likert scale, which reflects the use of ordinal scale. Furthermore, the hypotheses focused on the analysis of the association between the variables of study. Therefore, the data analysis for the study was carried out using Chi-square and Spearman Correlation to test the strength of association between the independent and dependent variables of the study.

Rezaei et al. (2018) have also used Chi-square to test the model fit and to identify the presence of association between the variables. In addition, the relevance of the Chi-square technique for the data gathered for TPB components is also illustrated in examining the association between intention, attitude and behaviour of the respondents (Jufri and Katmini, 2021; Valencia-Arias & Restrepo, 2020).

Another testing method used for categorical data analysis is Spearman Correlation which facilitates identifying the predictors for an individual’s behaviour while using the framework of TPB (Gabriel et al., 2019; Jadgal et al., 2020). Other researchers who have used the TPB model to map out the predictors of intention and behaviour have used these tools (Almeida et al., 2020). For example, Chi-square and Spearman correlation were used to understand whether the psychosocial factors depicted significant association with intention, attitude and behaviour of the respondents. There are other statistical tools such as regression

analysis as well, but they were not suitable in the context as the study was aiming to find the association between the variables as stated in the hypotheses. In this case, Chi-square and correlation were more relevant.

The association of attitude, social norm, and perceived behavioural control with intention was also investigated through these techniques in the domain of climate change. Pouya and Niyaz (2022), have used Chi-square for model fit analysis and determining the association between climate change behaviour and intention of the respondents based in Turkey. Empidi and Emang (2021) have also analysed the survey data related to intention, climate change behaviour and demographics through Spearman rho, to identify the nature of association between the TPB components and demographic variables. Based on the nature of survey data and the literature supporting the use of non parametric testing in the given context, the present study has included Chi-square and Spearman Correlation tests to investigate the link of demographic factors with intention, attitude and behaviour for climate change in Canadians.

3.5 Instrumentation:

The study was based on the statistical analysis of the dependent variables of intention and climate change behaviours alongside independent variables such as age, income, education, gender, race, location, language, social norms, attitudes and perceived behaviour control. The survey by Impact Canada was used in the study which was designed by Environment and Climate Change Canada (ECCC), Natural Resources Canada (NRCan), the Privy Council Office (PCO), and programmed by Advanis ensuring all adequate standards for public opinion research in the Government of Canada were met (Advanis, 2023).

The questionnaire used for collecting information about the climate change behaviours of Canadians included different variables. These included demographic

information such as age, income, gender, education, language, race, and region. The questionnaire also included items related to various components related to TPB for instance, intention (e.g. I am the type of person who acts in an environmentally friendly way), social norms (e.g. in your opinion, what percentage of your friends and family believe climate change is a threat that requires urgent action?), attitude (e.g. There is no need to make changes in my life because humans are not the main cause of climate change) etc. Each section of the questionnaire had different items that aimed to measure the responses of the Canadian population across the different options on ordinal and nominal scales.

3.6 Coding Procedure:

The coding of the data related to demographic factors was on a nominal scale, requiring the respondents to select the answer that matched their demographic details. For instance, the age ranges included 18-34 years, 35-54 years and 55 or older categories, which were coded into 1, 2 and 3 respectively. The variables of attitude, social norms, intention and climate change behaviour scales also included ordinal data on Likert scale. An example is the attitude scale, which included a 5-point Likert scale, ranging from 1= Strongly Disagree to 5= Strongly Agree. Similarly, for intention, the data was recorded on a 5-point Likert scale, ranging from 1=Strongly Disagree to 5= Strongly Agree. For climate change behaviours, the questions were related to the frequency of involvement of people in environment-friendly activities. The items were on a 7-point Likert scale, ranging from 0=Never to 6= 5 or more times a week.

3.7 Limitations and Delimitations of the data and study:

The study was limited to the analysis of the intention and behaviour of the people towards climate change in the context of Canada. Another limitation of the study was that the researcher did not collect the primary data on their own, but used the publicly available data set. This imposes the limitation of not being able to have direct interaction with the participants. On the other hand, it enabled access to a large dataset related to the variables of the study.

As far as the delimitations are concerned, the researcher has focused on the TPB and demographic-related constructs amongst the data, being able to identify key factors influencing climate change behaviours in Canadians. The TPB framework components included attitude social norms behavioural control, intention and climate change behaviour, indicating the scope of the present study. Moreover, the study identifies a set of factors crucial for the successful implementation of climate change behaviours.

3.8 Ethical Consideration:

The data collection entailed the use of survey data gathered by Impact Canada, which is concerned with climate protection in Canada. The use of consent of participation and anonymity wasn't relevant in this context for the researcher as the entity carrying out data collection had implemented the ethical considerations. However, the organisation was contacted to seek permission for using their longitudinal survey for this study and they were gracious to provide their publicly available data. Thus, the study didn't require any ethics clearance certificate.

Chapter 4: Results and Discussion

4.1 Introduction

This chapter presents the discussion of the statistical analysis of the quantitative data collected through the survey by Impact Canada. It discusses the results of the quantitative study and describes their possible theoretical explanation. Since the underlying assumptions guiding the study emphasize the association of the TPB components, rather than exploring the linear relationship, and the data generated is categorical, Chi-square and Spearman Rho correlation are relevant statistical tools.

Table 1: Demographic Frequency

Category	Subcategory	N	%
Age	18 to 34	506	24.00%
	35 to 54	682	32.40%
	55 or older	916	43.50%
Gender	Male	1077	51.20%
	Female	1006	47.80%
	Other	21	1.00%
Region	Alberta	251	11.90%
	British Columbia	322	15.30%
	Manitoba	111	5.30%
	New Brunswick	68	3.20%
	Newfoundland and Labrador	51	2.40%
	Northwest Territories	5	0.20%
	Nova Scotia	87	4.10%
	Nunavut	2	0.10%
	Ontario	557	26.50%
	Prince Edward Island	36	1.70%
	Quebec	533	25.30%
	Saskatchewan	78	3.70%
	Yukon	3	0.10%

Language	English	1509	71.70%
	French	439	20.90%
	Mandarin	20	1.00%
	Other (e.g., Tagalog, Arabic, etc.)	Various	8.90%
Income	Under $20k	80	3.80%
	$20k to just under $40k	195	9.30%
	$40k to just under $60k	244	11.60%
	$60k to just under $80k	251	11.90%
	$80k to just under $100k	249	11.80%
	$100k to just under $150k	409	19.40%
	$150k to just under $200k	202	9.60%
	$200k to just under $250k	111	5.30%
	$250k and above	125	5.90%
Race	White	1670	79.40%
	South Asian	50	2.40%
	Chinese	46	2.20%
	Black	45	2.10%
	Other (e.g., Filipino, Arab, etc.)	Various	14.30%
Education	High school diploma or less	211	9.90%
	College/CEGEP diploma	303	14.40%
	Bachelor’s degree	613	29.10%
	Postgraduate degree	477	22.70%
	Registered Apprenticeship/Trades	135	6.40%

In this demographic analysis, the sample surveyed represents a diverse population across several variables, including gender, age, region, language, income, race, and education. Regarding age, the majority of participants were 55 years or older (43.5%), followed by those aged 35 to 54 (32.4%), and the smallest group was aged 18 to 34 (24.0%). In terms of gender, the sample was almost evenly split, with males making up 51.2%, females 47.8%, and 1.0% identifying as other. The sample was geographically dispersed, with a significant portion from Ontario (26.5%), followed by Quebec (25.3%) and British Columbia (15.3%). Smaller proportions came from provinces like Alberta (11.9%) and Manitoba (5.3%). The sample also included a wide range of languages, with English being the

dominant language spoken by 71.7% of participants, followed by French at 20.9%. Other languages such as Mandarin, Punjabi, and Tagalog were spoken by a small proportion of participants. In terms of income, 19.4% of the participants earned between $100k to just under $150k, while 11.8% earned between $80k and just under $100k. A smaller portion of the sample earned under $20k (3.8%). When it came to race, the majority of the sample identified as White (79.4%), with smaller groups identifying as South Asian (2.4%), Chinese (2.2%), and Black (2.1%). In terms of education, 29.1% held a bachelor's degree, while 22.7% had a postgraduate degree above the bachelor's level. A smaller percentage, 6.4%, had registered apprenticeship or trades certificates.These demographic variables provide a comprehensive view of the population under study, allowing for a thorough analysis of various social, economic, and behavioral patterns.

4.2 Demographics and Climate Change Intentions:

The research explores the role and the extent to which demographics have an impact on the intention of the people in Canada. The study findings are presented as follows:

Age and intention:

The first hypothesis formulated for the study was related to the link between the age of the respondents and their intention to engage in pro-climate behaviour. The p-value of .000 is as shown in table 4.1, indicates that there is a significant association present between the age of the people and their intention when it comes to engaging in activities that help protect the environment.

Table 2: Chi-Square Age and intention

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	53.681[a]	22	.000
Likelihood Ratio	54.334	22	.000
Linear-by-Linear Association	.000	1	.982
N of Valid Cases	2089		

a. 15 cells (41.7%) have expected to count less than 5. The minimum expected count is .48.

The Spearman correlation shows that there is a significant correlation between the variables of age and intention (.071). This implies that an increase in age leads to a small increase in positive environmental intentions among the respondents. Therefore, it can be stated that there is a weak positive relationship between age and intention, thus leading to the acceptance of H1.

Table 3: Correlation age and intention

Correlations

			Age	Intention
Spearman's rho	Age	Correlation Coefficient	1.000	.071**
		Sig. (2-tailed)	.	.001

	N	2104	2089
Intention	Correlation Coefficient	.071**	1.000
	Sig. (2-tailed)	.001	.
	N	2089	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Gender and Intention:

The second hypothesis was concerned with the nominal variable of gender and the ordinal variable of intention to be a part of the climate change behaviour. Since the analysis was being done between nominal and ordinal scales, only Chi-square was applied. The Chi-square p-value of .000 shows the presence of a significant association between gender and intention, which means that gender can affect the way people respond to climate issues. Therefore, the second hypothesis (H2) has been accepted.

Table 4: Chi-square gender and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	107.190[a]	22	.000
Likelihood Ratio	100.967	22	.000
Linear-by-Linear Association	16.063	1	.000
N of Valid Cases	2089		

a. 20 cells (55.6%) have expected to count less than 5. The minimum expected count is .02.

Income and intention:

The variable of income and intention did not yield similar positive Chi-square p-value as the value of .032 shows a significant association between the variables as the value is less than .05. These findings suggest that changes in income and intention to be a part of the climate change activities are significantly connected.

Table 5: Chi-square income and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	114.202[a]	88	.032
Likelihood Ratio	113.075	88	.037
Linear-by-Linear Association	.615	1	.433
N of Valid Cases	1860		

a. 54 cells (50.0%) have expected count less than 5. The minimum expected count is .04.

The Spearman correlation shows a significant but weak inverse relationship between the two, as the increase in income is linked with a lower intention for being eco-friendly and vice versa. Therefore, the H3 can be accepted.

Table 6: Spearman Correlation income and intention

Correlations

			Income	Intention
Spearman's rho	Income	Correlation Coefficient	1.000	-.077**
		Sig. (2-tailed)	.	.001
		N	1866	1860
	Intention	Correlation Coefficient	-.077**	1.000
		Sig. (2-tailed)	.001	.
		N	1860	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Region and intention:

Only Chi-square test was conducted as the analysis was concerned with testing the association between the nominal scale of region and ordinal scale of intention. The p-value of .000 shows that there is a significant link between region and intention. People from different provinces and territories tend to hold different degrees of intention of working towards protecting the environment. Therefore, we can accept H4.

Table 7: Chi-square region and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)

Pearson Chi-Square	214.455[a]	132	.000
Likelihood Ratio	200.129	132	.000
Linear-by-Linear Association	.365	1	.546
N of Valid Cases	2089		

a. 100 cells (64.1%) have expected count less than 5. The minimum expected count is .00.

Education and intention:

Another hypothesis formulated for the study was the link between the level of education and the intention of people from Canada. The Chi-square p-value of .020 shows a significant association between these variables.

Table 8:Chi-square education and intention

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	117.355[a]	88	.020
Likelihood Ratio	107.949	88	.073
Linear-by-Linear Association	1.511	1	.219
N of Valid Cases	2070		

a. 60 cells (55.6%) have expected count less than 5. The minimum expected count is .00.

Spearman correlation value of .096 shows the presence of a high correlation between education and the intention of the people. It can be stated that increasing educational attainment is linked with increased intention to be environment friendly, therefore, leading to the acceptance of H5.

Table 9: Spearman Correlation education and intention

Correlations

			Education	Intention
Spearman's rho	Education	Correlation Coefficient	1.000	.096**
		Sig. (2-tailed)	.	.000
		N	2082	2070
	Intention	Correlation Coefficient	.096**	1.000
		Sig. (2-tailed)	.000	.
		N	2070	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Language and intention:

The next hypothesis was related to language and its association with the intention of people to be environment friendly. The Chi-square p-value of .578 shows no significant association between these variables, thus we cannot accept H6.

Table 10: Chi-square language and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	280.674[a]	286	.578
Likelihood Ratio	185.855	286	1.000
Linear-by-Linear Association	1.998	1	.158
N of Valid Cases	2082		

a. 304 cells (93.8%) have expected count less than 5. The minimum expected count is .00.

Race and intention:

The last demographic variable included in the study was related to the race of the people, which was also tested through Chi-square. The resultant p-value of .829 suggests that it is not significantly associated with people's intention to be eco-friendly. Therefore, we cannot accept H7.

Table 11: Chi-square race and intention

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	95.871[a]	110	.829
Likelihood Ratio	91.083	110	.905

Linear-by-Linear Association	1.476	1	.224
N of Valid Cases	1948		

a. 103 cells (78.0%) have expected count less than 5. The minimum expected count is .00.

Social norm and intention:

The H8 proposed that social norms and the intention of the people to be eco-friendly will be linked to each other. The Chi-square p-value of .000 indicates significant association, while the Spearman Correlation .423 shows positive and significant correlation. Therefore, it can be concluded that the strength of social norms towards the environment and intention to engage in climate change behaviours relate to each other.

Table 12: Chi-square social norms and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2101.494[a]	1100	.000
Likelihood Ratio	1460.386	1100	.000
Linear-by-Linear Association	11.233	1	.001
N of Valid Cases	1921		

a. 1113 cells (91.8%) have expected count less than 5. The minimum expected count is .00.

Table 13: Spearman correlation social norms and intention

Correlations

			Social Norms	Intention
Spearman's rho	Social Norms	Correlation Coefficient	1.000	.423**
		Sig. (2-tailed)	.	.000
		N	1927	1921
	Intention	Correlation Coefficient	.423**	1.000
		Sig. (2-tailed)	.000	.
		N	1921	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Attitude and Intention:

The components of attitude and intention were also examined in the study, and the Chi-square (p-value .000) and Spearman Correlation (.303) show significant association and correlation between these variables. Therefore we can accept H9.

Table 14: Chi-square attitude and intention

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4468.851[a]	341	.000
Likelihood Ratio	674.931	341	.000

Linear-by-Linear Association	1.926	1	.165
N of Valid Cases	2081		

a. 337 cells (87.8%) have expected to count less than 5. The minimum expected count is .00.

Table 15: Spearman correlation attitudes and intention

Correlations

			Attitudes	Intention
Spearman's rho	Attitudes	Correlation Coefficient	1.000	.303**
		Sig. (2-tailed)	.	.000
		N	2095	2081
	Intention	Correlation Coefficient	.303**	1.000
		Sig. (2-tailed)	.000	.
		N	2081	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Perceived behavioural control and intention:

The analysis also focused on the link between perceived behavioural control and intention. The Chi-square (p= .000) shows significant association while Spearman value of .310 indicates a positive and significant correlation. Thus we can accept H10.

Table 16: Chi-square behavioral control and intention

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1644.677[a]	187	.000
Likelihood Ratio	496.639	187	.000
Linear-by-Linear Association	421.035	1	.000
N of Valid Cases	2070		

a. 171 cells (79.2%) have expected count less than 5. The minimum expected count is .00.

Table 17: Spearman correlation perceived behavioral control and intention

Correlations

			Perceived Behavioral Control	Intention
Spearman's rho	Perceived Behavioral Control	Correlation Coefficient	1.000	.310**
		Sig. (2-tailed)	.	.000
		N	2080	2070
	Intention	Correlation Coefficient	.310**	1.000
		Sig. (2-tailed)	.000	.
		N	2070	2089

**. Correlation is significant at the 0.01 level (2-tailed).

Intention and climate change behaviour:

The last hypothesis of the study considered the relationship between the intention of people and climate change behaviour. The Chi-square value of (p= .000) indicates a strong association between the variables. In addition, the Spearman value of .376 shows the presence of a positive and significant correlation between intention and behaviour. Based on this, the H11 has been accepted.

Table 18: Chi-square intention and climate change behavior

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1006.634[a]	517	.000
Likelihood Ratio	719.494	517	.000
Linear-by-Linear Association	2.221	1	.136
N of Valid Cases	2089		

a. 459 cells (79.7%) have expected count less than 5. The minimum expected count is .00.

Table 19: Spearman correlation intention and climate change behavior

Correlations

			Intention	Climate Change Behavior
Spearman's rho	Intention	Correlation Coefficient	1.000	.376**
		Sig. (2-tailed)	.	.000
		N	2089	2089
	Climate Change Behavior	Correlation Coefficient	.376**	1.000
		Sig. (2-tailed)	.000	.
		N	2089	2104

**. Correlation is significant at the 0.01 level (2-tailed).

[1]

4.3 Statistical results interpretation

The Theory of Planned Behaviour (TPB) posits that human behaviour is shaped by three core constructs: attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). This study's statistical tests comprising Chi-square and Spearman Correlation analysis, offered insights into how these constructs relate to intentions and behaviours.

[1] A concern that initially arose during the statistical analysis phase of this study was the observation of p-values reported as 0.00 in the output. A consultation with the university's statistics support team, clarified that such results are theoretically plausible, particularly in studies involving large datasets. Given the sample size in this research exceeds 2,000 respondents, even relatively small differences can yield statistically significant results. Consequently, the p-value being reported as 0.00 simply indicates an extremely strong level of statistical significance — so small that it rounds to zero in the output — and is not indicative of an error or anomaly in the analysis.

Table 20: Findings and Results

Constructs/Variables	Variable item examples from Survey	Result summary
1. Socio-Demographics	Age group, education, income, languages, race, geographical location, gender	Significant associations: Age, education, income, location & gender with intention Insignificant associate: Race & Language with intention Weak Positive correlation: Age & Education with Intention Weak negative correlation: Income with Intention
2. Attitude	Attitude 1: There is no need to make changes in my life because humans are not the main cause of climate change. Attitude 2: It is important to (him/her/them) to protect the environment. Indicate how much this person is like you.	Significant weak to moderate correlation between Attitudes and Intention.
3. Social Norm	Social Norm 1: In your opinion, what percentage of your friends and family believe climate change is a threat that requires urgent action? Social Norm 2: People who are close to me generally expect that I do my part to help limit climate change. : Please indicate how strongly you agree or disagree with the statement.	Significant moderate correlation between Social norms and Intention.
4. Perceived behaviour control	Perceived Behaviour Control 1: I believe my actions can have a positive effect on climate change. Perceived Behaviour Control 2: If we act collectively, we can have a positive effect on climate change.	Significant weak to moderate correlation between PBC and Intention.
5. Behaviours	Behaviour 1: Taken a long flight in the last two months Behaviour 2: Used an electric bicycle or electric scooter to get around in the last two months	Significant moderate correlation between Intention and Behaviours.

	Behaviour 4: Looked for information about the risks of an extreme weather event in your local area, including potential health impacts in the last two months	
6. Intention	Intention 1: I am the type of person who acts in an environmentally friendly way. Intention 2: I am willing to make substantial changes in my life to help limit climate change.	

For H1, a significant association has been established between age and intention, the evidence of which is also present in the earlier literature. H2 was concerned with gender and intention, and the study's findings have supported acceptance of the hypothesis. Beldad and Hegner (2018) have used the TPB model to investigate the link between gender and the purchase intention and found that gender differences lead to different degrees of intention to purchase the specific product. The role of gender is also evident within the context of purchasing green services as a reflection of eco-friendly behavior (Moon, 2021). For H3 the association between income and intentions was also established through the results. Income emerges as a negative predictor, suggesting that higher financial stability leads to lower intentions for pro-environmental behaviours. In the previous literature such as Liu et al (2020) intention to engage in green behaviours is dependent on the income level of people. The main conclusion drawn from these studies is that changes in income levels affect the way people view the threat of climate change. The intention and the resultant behavior for protecting the environment is also affected by income differences, as people with higher income tend to make less eco-friendly choices such as their energy expenditure (Matthies & Merten, 2022).

The results for H4 have provided insight into the link between region and intentions. According to Sinaga and Sitorus (2023) the willingness to adopt eco-friendly practices such as paid plastic campaigns is influenced by the region of people. It has been reported that people from some regions have a more open attitude towards the paid plastic plan, while in specific regions the plan wasn't able to reach similar levels of success, hinting at the differences of intention of the people. The next hypothesis (H5) related to education and intentions has also been accepted. Education, however, reveals mixed impacts, as those with basic or intermediate levels of education display lower intentions, indicating that specific educational content may be more important than the level of education itself (Kollmuss & Agyeman, 2002).

The analysis presented above has indicated the acceptance of all the hypotheses except H6 (language and intention), and H7 (race & intention). The literature shows that language and racial background has some effect on the way people respond to environmentally friendly behaviour, guided by their intentions to follow the normative cues (Kumar & Nayak, 2022). The cultural and language difference at times does not create massive impact on the intention, as observed by (Liu et al., 2020), which can lead to inconclusive results or the rejection of the hypotheses.

The association between social norms and intentions (H8) was also found to be significant, which is also evident in the pertinent literature. Subjective norms, measured as social norms in this study, show significant correlations with intentions, indicating that social pressure or the perceived expectations from important others positively influence pro-environmental intentions. This is consistent with TPB's assertion that social norms significantly contribute to the formation of behavioural intentions (Ajzen, 1991).

The findings for H9 attitudes and intention are also supported by relevant researchers such as Gansser & Reich (2023), who used TPB and found that a positive attitude towards adopting sustainable practices was a guiding force for shaping favourable intentions among the people. It has also been reported that the attitude was also impacted by the way people negatively viewed the absence of pro-environment inclination. The desire to avoid this negative image encouraged the people to have a stronger intention to take climate-friendly initiatives.

The link between perceived behavioural control and intentions has also been evident through the study results (H10). The analysis of relevant literature further provides support for these findings. Perceived behavioural control (PBC) also plays a key role in influencing intentions. The positive correlation between Perceived Behavioural Control and Intention demonstrates that when individuals feel their collective efforts can be effective, their intention to act is significantly stronger. In contrast, the negative correlations involving Perceived Behavioural control highlight that disempowering beliefs significantly diminish intentions. These findings support Ajzen's (2002) assertion that PBC not only reflects an individual's confidence in their ability to perform a behaviour but also the perceived ease or difficulty in doing so.

H11 has concluded the presence of significant association between intentions and behaviours. This finding is aligned with previous literature emphasising attitude as a strong predictor of intention (Conner & Armitage, 1998). Positive attitude strengthens the intention to act in an environmentally friendly way, however unfavourable attitudes significantly weakens intentions. Furthermore, the relationship between intentions and actual behaviours demonstrated varying strengths of correlation. For instance, the correlation between Intention and Behaviour reveals a strong positive association as shown by (Sultan et al., 2020). This

suggests that individuals who express strong pro-environmental intentions are indeed more likely to engage in behaviours that align with those intentions. On the other hand, some researchers have found that there are weaker correlations between intention and behaviour which suggest that in some cases, intentions do not fully translate into consistent behaviour, highlighting potential gaps between expressed intentions and real-world actions (Alhamad & Donyai, 2021).

In conclusion, the statistical analysis supports the constructs of the Theory of Planned Behavior, demonstrating significant relationships between most of the demographic factors (excluding language and race), attitudes, perceived behavioural control, social norms, intentions, and behaviours. While the correlations generally align with TPB predictions, the varying strengths of these relationships suggest that intentions are not always directly translated into behaviours. The findings highlight the complexity of behaviour formation and the influence of external factors, suggesting that a comprehensive understanding of pro-environmental behaviour requires considering both individual beliefs and broader socio-cultural dynamics.

Chapter 5: Conclusions, Contributions, and Recommendation

5.1 Contribution to the academic literature

This research contributes significantly to academic literature by rigorously testing the Theory of Planned Behavior (TPB) within the context of climate change, specifically in a Canadian setting. While the TPB has been extensively validated across various domains (Ajzen, 1991), its application in the context of environmental behaviour remains underexplored, particularly when accounting for a broad spectrum of demographic predictors. The present study addresses this gap by incorporating variables like race, income, education, and ethnic background, which have often been overlooked in previous studies (Whitmarsh & O'Neill, 2010). In doing so, this research provides a more nuanced understanding of the factors that influence pro-environmental behaviour within a diverse population.

A key contribution of this study is the validation of the TPB framework in Canadian environmental contexts. By examining the relationships between attitudes, perceived behavioural control, social norms, intentions, and behaviours, the findings confirm that the core constructs of TPB hold true even today in motivating climate-related actions among Canadians. For instance, the significant correlations between subjective norms and intentions indicate that social pressures and expectations strongly influence Canadians' willingness to engage in environmental behaviours. Moreover, the inclusion of demographic variables, such as race and education, reveals important insights into how different segments of the population perceive and act upon environmental concerns (Kollmuss & Agyeman, 2002).

This level of granularity is essential for developing targeted interventions and policies that address specific barriers faced by various demographic groups.

The research findings suggest that while the Theory of Planned Behaviour (TPB) continues to be a widely accepted and robust framework for predicting behavioural intentions, it is not without its limitations—particularly in today's complex socio-cultural landscape. In an era marked by rapid globalization, pervasive social media influence, and increasingly diverse cultural and psychological dynamics, human behaviour is shaped by far more than just attitudes, perceived norms, and behavioural control. The study revealed that none of the TPB constructs showed a particularly strong relationship with behavioural intentions, indicating that these three dimensions alone are insufficient to fully explain the underlying motivations driving climate-related intentions.

Moreover, the gap between intention and actual behaviour persists. The findings reinforce what many behavioural scientists have argued in recent years: intentions, while useful as predictors, do not always guarantee action. External barriers, shifting social contexts, and personal psychological factors—such as anxiety, skepticism, or a sense of futility—can obstruct the path from intention to meaningful pro-environmental behaviour. As such, the study underscores the importance of expanding TPB to include other influential variables and acknowledges the theory's need to evolve in order to remain relevant in understanding the increasingly multifaceted drivers of behaviour in the modern world.

The results offered both expected patterns and a few noteworthy surprises regarding . As anticipated, education showed a positive association with pro-environmental intentions—those with higher educational attainment tended to report stronger willingness to act on climate change. This aligns with global literature suggesting that greater access to

information and resources empowers individuals to engage in environmentally responsible behaviours.

However, there were some surprising elements. Age, for instance, did not follow a clear linear trend. While previous studies often suggest that younger populations are more environmentally engaged, the findings indicated that older adults in Canada also reported strong intentions, possibly due to a heightened sense of responsibility or life experience influencing long-term thinking. Gender differences were modest but consistent, with women showing slightly higher pro-environmental intentions, supporting prior research on gendered environmental concern.

Interestingly, two of the most surprising findings in the study were the statistically insignificant relationships between language and race with climate change intentions. Given the multicultural and multilingual makeup of Canada, it was anticipated that racial and linguistic identity might play a more pronounced role in shaping environmental attitudes and intentions. However, the results suggest that neither language spoken nor racial background significantly influenced intentions to engage in pro-environmental behaviours within the dataset. This outcome was unexpected, particularly as previous literature has pointed to cultural norms, community identity, and minority representation as influential factors in environmental engagement. One potential explanation could be the homogeneity in climate messaging or lack of tailored outreach across different cultural or linguistic groups in Canada such as the survey representation comprising 79.4% of Caucasian race. Alternatively, it may also reflect the limitations of the survey design, such as underrepresentation of certain racial or linguistic minorities or the framing of questions in a way that didn’t capture cultural nuance.

Geographical location revealed disparities as well—representation gaps in territories like Nunavut limited generalizability in those areas, but they also point to a larger issue of inclusivity in national-level datasets.

5.2 Contribution and recommendation to practitioners

This research offers valuable contributions to practitioners, particularly those involved in policy development, environmental advocacy, and community engagement. By applying the Theory of Planned Behavior (TPB) within a Canadian context and incorporating a broad range of demographic predictors, this study provides practical insights that can inform targeted interventions aimed at promoting pro-environmental behaviour. Practitioners, such as policymakers, public health officials, and community organisers, can use these findings to design strategies that are not only theoretically sound but also culturally and demographically sensitive, ultimately enhancing the effectiveness of their programs.

One of the key takeaways for practitioners is the identification of significant demographic predictors, such as income, education, and race, which influence pro-environmental intentions and behaviours. Previous interventions often adopt a one-size-fits-all approach, overlooking the unique challenges and motivations that different communities face. The study's results emphasise the need for differentiated approaches. For example, the finding that higher income levels are associated with stronger pro-environmental intentions suggests that affordability and financial incentives could be effective levers for encouraging sustainable practices among lower-income populations. Similarly, the study highlights how cultural values and community norms play a role in shaping environmental attitudes and behaviours, offering practitioners a pathway to engage specific communities through culturally relevant messaging and initiatives. For policymakers,

the study provides evidence supporting the integration of social norms into public campaigns. The strong correlation between social norms and environmental intentions suggests that emphasising collective responsibility and showcasing community leaders who model pro-environmental behaviour can be effective strategies. This aligns with the broader behavioural science literature, which shows that people are more likely to adopt behaviours they perceive as socially accepted or expected (Cialdini, 2003). Practitioners can leverage this insight by creating programs that amplify positive social norms, thereby encouraging widespread adoption of sustainable practices.

The research also reveals critical gaps between intentions and behaviours, indicating that while people may express strong intentions to act sustainably, actual behaviour change is often limited. This points to the need for interventions that not only motivate intention but also address practical barriers to action. For example, providing easier access to low-carbon transportation options, creating incentives for behaviour change, or addressing misconceptions about the difficulty of sustainable practices could bridge this gap. Practitioners should focus on designing programs that reduce friction and make it simpler for individuals to align their actions with their intentions. Based on the findings, several recommendations for practitioners emerge. First, interventions should be inclusive, accounting for the diverse demographic and cultural landscape within Canada. Tailoring programs to different communities can enhance relevance and effectiveness. Second, leveraging social norms through community engagement and peer influence can be a powerful tool in motivating pro-environmental behaviour. Finally, addressing the intention-behaviour gap by focusing on accessibility, convenience, and reducing barriers is crucial for translating positive intentions into meaningful action.

In summary, this research provides a foundation for practitioners to design more effective and targeted environmental interventions. By considering the varied factors that influence behaviour, including demographic predictors and social dynamics, practitioners can develop strategies that better resonate with diverse audiences, leading to more sustained and impactful environmental outcomes.

5.3 Limitations of the study

While this study provides valuable insights into pro-environmental behaviour and the application of the Theory of Planned Behavior (TPB) within a Canadian context, it also has several limitations that should be acknowledged. First, the study relies on self-reported data, which can introduce biases such as social desirability bias. Participants might overreport behaviours or intentions they perceive as socially desirable, especially in the context of environmental issues. This limitation is common in research that involves survey-based methods, as respondents may not always provide entirely accurate accounts of their behaviours or intentions. Secondly, the cross-sectional design of the study restricts its ability to infer causality. While correlations between variables, such as social norms and intentions, can be identified, the study cannot establish whether these relationships are causal or merely associative. Longitudinal research would be needed to determine the directionality of these relationships and how they evolve over time. Another limitation is the potential oversimplification of complex behaviours into single constructs. For example, the study measures broad behaviours like “using public transportation” without considering the full range of factors influencing that behaviour, such as the quality of available services, convenience, or personal preferences. This oversimplification may mask the subtleties and complexities inherent in pro-environmental behaviours.

Moreover, while the study incorporates a wide range of demographic variables, it is possible that other relevant factors were not captured. For instance, psychological traits such as environmental identity, political ideology, religious affiliations or even mental health status could play significant roles in shaping environmental intentions and behaviours but were not within the scope of this analysis. The study's geographic and cultural focus on Canada also limits the generalizability of the findings. Cultural attitudes toward the environment, the accessibility of sustainable options, and government policies vary significantly across countries, and the results may not be directly applicable to other contexts. Future research would need to replicate these findings in different cultural and geographic settings to determine their broader relevance. Additionally, the study's reliance on the TPB framework, while robust, might exclude other theoretical perspectives that could provide additional explanatory power. For example, integrating insights from social practice theory or the value-belief-norm (VBN) theory might offer a more holistic understanding of the drivers behind environmental behaviours. Lastly, the intention-behaviour gap remains a challenge. Even though the study identifies significant relationships between intentions and behaviours, the strength of these relationships is generally weak, indicating that intentions alone are not sufficient predictors of actual behaviour. This gap suggests that other mediating factors, such as habits, contextual barriers, or competing priorities, might be critical but were not fully explored in this research.

5.4 Recommendations for future research

Several recommendations for future research emerge from this study. First, while this research successfully applies the Theory of Planned Behavior (TPB) within a Canadian context and incorporates various demographic factors, further studies could explore additional variables that may influence pro-environmental behaviour. For instance, future

research could examine the role of psychological factors, such as environmental anxiety or perceived moral obligations, which have gained increasing attention in recent years but were not central to this analysis. This study primarily focuses on a cross-sectional approach, analysing data at a single point in time. Longitudinal research would provide deeper insights into how pro-environmental intentions and behaviours evolve over time, particularly in response to changes in environmental policy, social norms, or significant life events. Tracking the stability or fluctuation of these behaviours could reveal critical tipping points or identify periods when interventions are most effective.

Moreover, while this research has introduced a wider range of demographic predictors, such as race, income, and education, future studies should explore intersectionality more thoroughly. The interaction between these demographic factors could reveal even more nuanced insights. For example, understanding how race and income jointly influence pro-environmental behaviours might offer more targeted solutions for specific groups within Canada. Additionally, there is a need to explore the intention-behaviour gap further. Despite strong intentions, actual behaviour often remains inconsistent with pro-environmental goals. Future research could delve deeper into the structural and contextual barriers that prevent individuals from acting on their intentions. Studies might examine the influence of factors like availability of resources, geographic accessibility to sustainable options, or even the role of competing life priorities.

Another potential avenue for future research is the impact of social media and digital platforms on shaping environmental attitudes and behaviours. Given the increasing influence of online communities and digital activism, exploring how these platforms can either reinforce or undermine pro-environmental intentions would be valuable. Understanding how digital engagement compares to face-to-face community initiatives in promoting sustainable

actions could provide critical insights for practitioners. Finally, expanding the research beyond the Canadian context to include comparative studies across different cultural settings would enhance the generalizability of the findings. The effectiveness of TPB constructs and the relative influence of demographic factors might vary across countries or regions with different socio-political environments. Comparative studies could also offer insights into which policy approaches are most transferable across diverse contexts.

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Appendix

Questions included in the study:

Demographics:

IDs

Wave

Age

Gender

Regions in Canada

Language

Income

Race

Education

Social Norm:

Social Norm 1: In your opinion, what percentage of your friends and family believe climate change is a threat that requires urgent action?

Social Norm 2: People who are close to me generally expect that I do my part to help limit climate change. : Please indicate how strongly you agree or disagree with the statement.

Attitude:

Attitude 1: There is no need to make changes in my life because humans are not the main cause of climate change.

Attitude 2: It is important to (him/her/them) to protect the environment. Indicate how much this person is like you.

Attitude 3: Most people like me care about climate change: Please indicate how strongly you agree or disagree with the statement.

Perceived Behavioural Control:

Perceived Behaviour Control 1: I believe my actions can have a positive effect on climate change.

Perceived Behaviour Control 2: If we act collectively, we can have a positive effect on climate change.

Perceived Behaviour Control 3: Taking actions related to climate change will not work because it is a natural phenomenon.

Intention:

Intention 1: I am the type of person who acts in an environmentally friendly way.

Intention 2: I am willing to make substantial changes in my life to help limit climate change.

Behaviour:

Behaviour: Taken a long flight in the last two months

Behaviour: How frequently have you taken a short flight (fewer than 5 hours), in the last two months?

Behaviour: Used public transport in the last two months

Behaviour: Used active transportation (running, walking, biking) to get around in the last two months

Behaviour: Used an electric bicycle or electric scooter to get around in the last two months

Behaviour: Used a private vehicle (e.g car) to get around in the last two months

Behaviour: Looked for information about the risks of an extreme weather event in your local area, including potential health impacts in the last two months

Behaviour: Looked for information about the future impacts of climate change in your local area in the last two months

Behaviour: Looked for support from a friend, family member or trained professional for help in dealing with negative emotions related to weather or climate change in the last two months

Behaviour: How frequently have you repaired products or had someone else repair them for you, in the last two months?

Behaviour: How frequently have you bought or traded things second-hand instead of new, in the last two months?

Behaviour: How frequently have you talked with family or friends about climate change or its impacts, in the last two months?

Behaviour: How frequently have you posted on social media about climate change to support action on this issue, in the last two months?

Behaviour: How frequently have you attended a climate change demonstration or rally to support action on this issue, in the last two months?

Questionnaire from Wave 1-8

Variable	Label	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8
sample_id	sample_id -- Unique survey identifier	X	X	X	X	X	X	X	X
wave	wave -- Survey wave	X	X	X	X	X	X	X	X
phone_source	phone_source -- phone_source	X	X	X	X	X	X	X	X
survey_language	survey_language -- Language survey was taken in.	X	X	X	X	X	X	X	X
longitudinal	longitudinal -- longitudinal		X	X	X	X	X	X	X
age_group	age_group -- Age group	X	X	X	X	X	X	X	X
a0_1	a0_1 -- Your level of education : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?		X	X	X	X	X	X	
a0_2	a0_2 -- Whether you have children under 18 : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?		X	X	X	X	X	X	
a0_3	a0_3 -- Your employment status : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?		X	X	X	X	X	X	
a0_4	a0_4 -- Your household income : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?		X	X	X	X	X	X	
a0_5	a0_5 -- Your place of residence : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?		X	X	X	X	X	X	

a0_6	a0_6 -- Whether you own or rent your home : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?	X	X	X	X	X	X
a0_7	a0_7 -- The number of people who live in your home : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?	X	X	X	X	X	X
a0_8	a0_8 -- The language you most often speak at home : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?	X	X	X	X	X	X
a0_9	a0_9 -- None of the above : Thank you for agreeing to continue your participation in this study. Have any of the following changed since you last answered this survey?	X	X	X	X	X	X
a0_M1	a0_M1. Have any of the following changed since you last answered this survey in [month/year]?			X	X	X	X
a0_M2	a0_M2. Have any of the following changed since you last answered this survey in [month/year]?			X	X	X	X
a0_M3	a0_M3. Have any of the following changed since you last answered this survey in [month/year]?			X	X	X	X
a0_M4	a0_M4. Have any of the following changed since you last answered this survey in [month/year]?			X	X	X	X

a0_M5	a0_M5. Have any of the following changed since you last answered this survey in [month/year]?				X	X	X	X	
a0_M6	a0_M6. Have any of the following changed since you last answered this survey in [month/year]?				X	X	X	X	
a0_M7	a0_M7. Have any of the following changed since you last answered this survey in [month/year]?				X	X	X	X	
a0_M8	a0_M8. Have any of the following changed since you last answered this survey in [month/year]?				X	X	X	X	
a1	a1 -- In what year were you born?	X	X	X	X	X	X	X	X
a1a	a1a -- In which of the following age categories do you belong?	X	X	X	X	X	X	X	X
a2	a2 -- What was your sex at birth?	X	X	X	X	X	X	X	X
a3	a3 -- What is your gender?	X	X	X	X	X	X	X	X
a3_3_	a3_3_ -- Or, please specify your gender:: What is your gender?	X	X	X	X	X	X	X	X
region	region -- Region for weighting	X	X	X	X	X	X	X	X
a4	a4 -- In which province or territory do you live?	X	X	X	X	X	X	X	X
a5	a5 -- Which best describes the building where you live?	X	X	X	X	X	X	X	X
a6	a6 -- Are your living quarters...	X	X	X	X	X	X	X	X
bcorder	bcorder -- Order sections B and C were shown.	X	X	X	X	X	X	X	X
b2_a	b2_a -- Worried : How do you currently feel about the issue of climate change?	X	X	X	X	X	X	X	X
b2_b	b2_b -- Hopeful : How do you currently feel about the issue of climate change?	X	X	X	X	X	X	X	X
b2_c	b2_c -- Overwhelmed: How do you currently feel about the issue of climate change?				X				

b2_d	b2_d -- Confused : How do you currently feel about the issue of climate change?	X		X		X	X	X	X
b2_e	b2_e -- Anxious : How do you currently feel about the issue of climate change?	X	X	X	X	X	X	X	X
b2_f	b2_f -- Angry : How do you currently feel about the issue of climate change?		X	X	X	X	X	X	
b2_g	b2_g -- Numb: How do you currently feel about the issue of climate change?				X				
b2_h	b2_h -- Helpless: How do you currently feel about the issue of climate change?							X	
b2a	b2a -- In your opinion, what percentage of Canadians currently feels very or extremely worried about the issue of climate change?						X		
b1_a	b1_a -- I believe that climate change is real. : Please rate your agreement or disagreement with the following statements about the issue of climate change.	X		X		X		X	X
b1_b	b1_b -- The main cause of climate change is human activity. : Please rate your agreement or disagreement with the following statements about the issue of climate change.	X		X		X		X	X
b1_c	b1_c -- Climate change will bring about serious negative consequences. : Please rate your agreement or disagreement with the following statements about the issue of climate change.	X		X		X		X	X

b1_d	b1_d -- My local area will be influenced by climate change. : Please rate your agreement or disagreement with the following statements about the issue of climate change.	X		X		X		X	X
b1_e	b1_e -- It will be a long time before the consequences of climate change are felt. : Please rate your agreement or disagreement with the following statements about the issue of climate change.	X		X		X		X	X
b1_f	b1_f -- There is solid evidence that the average temperature on Earth has been getting warmer over the past four decades. : Please rate your agreement or disagreement with the following statements.		X		X		X		
b1_g	b1_g -- Climate change will harm me personally. : Please rate your agreement or disagreement with the following statements.		X		X		X		
b1_h	b1_h -- My province or territory has already felt negative effects from climate change. : Please rate your agreement or disagreement with the following statements.		X		X		X		
b1_i	b1_i -- I have personally experienced the effects of climate change. : Please rate your agreement or disagreement with the following statements.		X		X		X		
b1_j	b1_j -- Climate change is a threat that requires urgent action. : Please rate your agreement or disagreement with the following statements.		X		X		X		

b1_k	b1_k -- Earth's climate is not changing. : Please rate your agreement or disagreement with the following statements.	X		X			X				
b13a	b13a -- How important is the issue of global warming to you personally?										X
b13b	b13b -- How worried are you about global warming?										X
b13c	b13c -- How much do you think global warming will harm you personally?										X
b13d	b13d -- How much do you think global warming will harm future generations of people?										X
b11	b11 -- Overall, how would you describe your level of knowledge about climate change?					X					
b1b	b1b -- In your opinion, what percentage of the Earth's warming since the 1950s has been caused by human activity, like burning fossil fuels:	X									
b1c_a	b1c_a -- Climate change is a crisis today (i.e., in 2022): Please rate your agreement or disagreement with the following statements about the issue of climate change.			X							
b1c_b	b1c_b -- Climate change will be a crisis 10 years from now (i.e., in 2032) : Please rate your agreement or disagreement with the following statements about the issue of climate change.			X							
b1d_a	b1d_a -- Climate change is an emergency today (i.e., in 2022): Please rate your agreement or disagreement with the following			X							

	statements about the issue of climate change.					
b1d_b	b1d_b -- Climate change will be an emergency 10 years from now (i.e., in 2032): Please rate your agreement or disagreement with the following statements about the issue of climate change.			X		
b3_a	b3_a -- Climate scientists: In your opinion, what percentage of people in each of the following groups believes climate change is a threat that requires urgent action?	X			X	
b3_c	b3_c -- Canadians: In your opinion, what percentage of people in each of the following groups believes climate change is a threat that requires urgent action?	X			X	
b3_d	b3_d -- Your friends and family: In your opinion, what percentage of people in each of the following groups believes climate change is a threat that requires urgent action?	X			X	
b3_e	b3_e -- Economists: In your opinion, what percentage of people in each of the following groups believes climate change is a threat that requires urgent action?				X	
b5_b	b5_b -- Regular people in Canada : To what extent do you think the following groups should be doing more or less to help limit climate change?	X				X
b5_d	b5_d -- Private industry in Canada : To what extent do you think the following groups should be doing	X				X

	more or less to help limit climate change?			
b5_e	b5_e -- The Government of Canada : To what extent do you think the following groups should be doing more or less to help limit climate change?	X	X	X
b5_h	b5_h -- International organizations (e.g. United Nations, World Trade Organization) : To what extent do you think the following groups should be doing more or less to help limit climate change?	X		X
b8_a	b8_a -- Flooding : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X		
b8_b	b8_b -- Periods of excessive heat (e.g., extreme heat waves, heat domes) : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X		
b8_c	b8_c -- Droughts : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X		
b8_d	b8_d -- Severe wind storms : Over the LAST TWO YEARS, how many times have you personally experienced any of the following	X		

	extreme weather-related events in your local Canadian area?	
b8_e	b8_e -- Hurricanes : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X
b8_f	b8_f -- Periods of excessive cold (e.g., extreme cold snaps, polar vortex) : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X
b8_g	b8_g -- Wildfires (including forest fires) : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X
b8_h	b8_h -- Wildfire smoke : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X
b8_i	b8_i -- Landslides : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X

b8_j	b8_j -- Tornadoes : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X						
b8_k	b8_k -- Ice storms : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X						
b8_l	b8_l -- Power outages related to weather events : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X						
b8_m	b8_m -- Shortages of essential supplies (e.g., food, fuel, water) related to weather events : Over the LAST TWO YEARS, how many times have you personally experienced any of the following extreme weather-related events in your local Canadian area?	X						
b8a_a	b8a_a -- I have personally experienced more extreme weather in the past year than normal. : Please rate your agreement or disagreement with the following statement		X					
b8b_1	b8b_1 -- Flooding : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you		X	X	X	X	X	X

	personally experienced in your local Canadian area?						
b8b_2	b8b_2 -- Periods of excessive heat (e.g., heat waves, heat domes) : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_3	b8b_3 -- Droughts : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_4	b8b_4 -- Severe wind storms : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_5	b8b_5 -- Hurricanes : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_6	b8b_6 -- Periods of excessive cold (e.g., cold snaps, polar vortex) : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_7	b8b_7 -- Wildfires (including forest fires) : Over the LAST TWO MONTHS, which of the following extreme	X	X	X	X	X	X

	weather-related events have you personally experienced in your local Canadian area?						
b8b_8	b8b_8 -- Wildfire smoke : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_9	b8b_9 -- Landslides : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_10	b8b_10 -- Tornadoes : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_11	b8b_11 -- Ice storms : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_12	b8b_12 -- Power outages related to weather events : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_13	b8b_13 -- Shortages of essential supplies (e.g., food, fuel, water) related to weather events : Over the LAST TWO MONTHS, which of the following extreme	X	X	X	X	X	X

	weather-related events have you personally experienced in your local Canadian area?						
b8b_14	b8b_14 -- None of the above : Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M1	b8b_M1 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M2	b8b_M2 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M3	b8b_M3 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M4	b8b_M4 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M5	b8b_M5 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X

b8b_M6	b8b_M6 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M7	b8b_M7 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M8	b8b_M8 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M9	b8b_M9 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M10	b8b_M10 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X	X	X	X
b8b_M11	b8b_M11 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X	X		X	X
b8b_M12	b8b_M12 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you	X	X			X	X

	personally experienced in your local Canadian area?					
b8b_M13	b8b_M13 -- Over the LAST TWO MONTHS, which of the following extreme weather-related events have you personally experienced in your local Canadian area?	X	X		X	X
b12_a	b12_a -- Your personal health and wellbeing: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_b	b12_b -- The health and wellbeing of Canadians: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_c	b12_c -- The health and wellbeing of marginalized or vulnerable Canadians: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_d	b12_d -- Your household finances: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_e	b12_e -- Canada's economic growth: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_f	b12_f -- The stability of Canada's democratic institutions: In your opinion, how much of a threat, if any, are climate change and its future impacts to…				X	
b12_g	b12_g -- The maintenance of law and order in Canada: In your opinion,				X	

	how much of a threat, if any, are climate change and its future impacts to…			
b12_h	b12_h -- Canada's natural environment, including the variety of plants, animals and other forms of life: In your opinion, how much of a threat, if any, are climate change and its future impacts to…			X
b12_i	b12_i -- The rights and freedoms of Canadians: In your opinion, how much of a threat, if any, are climate change and its future impacts to…			X
b12_j	b12_j -- Canada's national security: In your opinion, how much of a threat, if any, are climate change and its future impacts to…			X
b9a_a	b9a_a -- Don't litter for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carbon dioxide, methane).	X		
b9a_b	b9a_b -- Avoid one long-haul flight (of five or more hours) : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carbon dioxide,	X		
b9a_c	b9a_c -- Switch from a sport utility vehicle (SUV) to public transit for one year : Based on what you may have seen, read or heard, please categorize the	X		

	following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions	
b9a_d	b9a_d -- Recycle as much as possible for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carbon dioxide, methane).	X
b9a_e	b9a_e -- Switch from a midsize conventional car to a midsize hybrid car for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissio	X
b9a_f	b9a_f -- Eat a vegan diet for one year, instead of a diet that regularly includes meat and other animal products : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing a	X
b9a_g	b9a_g -- Use canvas bags instead of plastic shopping bags for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carb	X

b9a_h	b9a_h -- Buy only local food for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carbon dioxide, methane).	X
b9a_i	b9a_i -- Hang-dry clothing rather than using a dryer for one year : Based on what you may have seen, read or heard, please categorize the following actions as high, medium, or low impact in terms of reducing annual greenhouse gas emissions (e.g., carbon di	X
b10_a	b10_a -- Many NASA scientists admit that climate change is caused by changes in Earth's solar orbit: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_b	b10_b -- Canada's national carbon price has tripled the cost of gasoline at the pump since 2019: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_c	b10_c -- Global average temperatures haven't increased in the last 20 years: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X

b10_d	b10_d -- The impacts of climate change in Canada will be overwhelmingly positive because it is a cold country: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_e	b10_e -- Climate change is a conspiracy created by foreign governments: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_f	b10_f -- Canada's annual greenhouse gas emissions were relatively stable for 20 years before the pandemic: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_g	b10_g -- 2020 was the second warmest year since measurements began in the 1850s: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_h	b10_h -- Oil companies have had evidence of human-caused climate change since the 1970s: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X

b10_i	b10_i -- The Arctic is warming at a rate almost twice the global average: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?		X	
b10_j	b10_j -- Some regions will become much snowier as the Earth warms: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?		X	
b10_k	b10_k -- The COVID-19 pandemic was started as a deliberate attempt by activists to stop climate change by forcing lockdowns: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?			X
b10_l	b10_l -- Globally, 100 corporations are responsible for 70% of all greenhouse gas emissions: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?			X
b10_m	b10_m -- Higher gas prices over the last few months have mostly been caused by the national price on carbon pollution: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?			X

b10_n	b10_n -- Natural gas is as clean an energy source as wind or solar: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_o	b10_o -- The noise from wind turbines causes cancer: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_p	b10_p -- Solar panels emit more greenhouse gases during manufacturing than they end up saving: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_q	b10_q -- Adapting to the impacts of climate change is cheaper than preventing it: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_r	b10_r -- Some scientists think that climate change will make pandemics like COVID-19 more frequent: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_s	b10_s -- Climate change is expected to contribute to the extinction of a large number of animal species: To the best of your knowledge, how accurate or inaccurate are the	X

	claims in the following statements?	
b10_t	b10_t -- Record cold temperatures can still occur in a world that is warming overall: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_u	b10_u -- The North Atlantic Treaty Organization (NATO) thinks climate change is a national security threat: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_v	b10_v -- Most climate models are generally accurate in their estimates of long-term changes in global temperature: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_w	b10_w -- Canada has higher average greenhouse gas emissions per person than China: To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X
b10_x	b10_x -- More than two thirds of Canada's electricity comes from renewable sources (like wind, solar, hydro): To the best of your knowledge, how accurate or inaccurate are the claims in the following statements?	X

b8c	b8c -- Compared to usual, how much extreme weather have you personally experienced in your local Canadian area over the LAST TWO YEARS?	X
b13_a_1	b13_a_1 -- I did: Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_a_2	b13_a_2 -- Someone else I know did: Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_a_3	b13_a_3 -- Neither: Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_a_9999	b13_a_9999 -- Prefer not to say: Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_a_M1	b13_a_M1. Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of	X

	the following as a result of a wildfire or wildfire smoke?	
b13_a_M2	b13_a_M2. Loss of, or damage to, a home or other personal property: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_b_1	b13_b_1 -- I did: Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_b_2	b13_b_2 -- Someone else I know did: Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_b_3	b13_b_3 -- Neither: Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_b_9999	b13_b_9999 -- Prefer not to say: Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X

b13_b_M1	b13_b_M1. Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_b_M2	b13_b_M2. Injury or other negative impacts on physical health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_c_1	b13_c_1 -- I did: Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_c_2	b13_c_2 -- Someone else I know did: Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_c_3	b13_c_3 -- Neither: Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_c_9999	b13_c_9999 -- Prefer not to say: Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a		X

	result of a wildfire or wildfire smoke?	
b13_c_M1	b13_c_M1. Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_c_M2	b13_c_M2. Negative impacts on mental health: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_d_1	b13_d_1 -- I did: Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_d_2	b13_d_2 -- Someone else I know did: Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_d_3	b13_d_3 -- Neither: Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X

b13_d_9999	b13_d_9999 -- Prefer not to say: Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_d_M1	b13_d_M1. Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_d_M2	b13_d_M2. Negative impacts on work/employment/financial stability: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_e_1	b13_e_1 -- I did: Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_e_2	b13_e_2 -- Someone else I know did: Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_e_3	b13_e_3 -- Neither: Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know	X

	experienced any of the following as a result of a wildfire or wildfire smoke?	
b13_e_9999	b13_e_9999 -- Prefer not to say: Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_e_M1	b13_e_M1. Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_e_M2	b13_e_M2. Evacuation of home and/or community: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13a_1	b13a_1 -- Looked for information about wildfire risk in your local area: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_2	b13a_2 -- Looked for information about actions you could take to protect your home, property, or community from wildfire: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_3	b13a_3 -- Taken action to protect yourself or others from the health impacts of wildfire smoke: In the LAST	X

	FIVE YEARS or so, have you taken any of the following wildfire-related actions?	
b13a_4	b13a_4 -- Made sure that structures on your property (e.g., roof, gutters, deck(s)) are regularly cleared of leaves and other debris: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_5	b13a_5 -- Made changes to your yard/land that will reduce the chances of wildfire reaching buildings on your property: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_6	b13a_6 -- Made structural changes to your home or other buildings on your property that will increase their resistance to wildfire: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_9999	b13a_9999 -- None of the above: In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_M1	b13a_M1 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X
b13a_M2	b13a_M2 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?	X

b13a_M3	b13a_M3 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?								X
b13a_M4	b13a_M4 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?								X
b13a_M5	b13a_M5 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?								X
b13a_M6	b13a_M6 -- In the LAST FIVE YEARS or so, have you taken any of the following wildfire-related actions?								X
b13b2	b13b2 -- Prior to this survey, how familiar were you with FireSmart™?								X
b11a	b11a -- Which one of these gases contributes to global warming?								X
b11b	b11b -- What are the processes leading to global warming?								X
b11k	b11k -- As global average temperature rises...								X
b11i	b11i -- Which of the following is NOT a greenhouse gas?								X
b11d	b11d -- Among the following groups of countries, which has the largest per capita emissions of greenhouse gases?								X
c1_a	c1_a -- I have made substantial changes in my life to help limit climate change. : Please rate your agreement or disagreement with the following statements.	X						X	
c1_b	c1_b -- I am willing to make substantial changes in my life to help limit climate change. : Please rate your agreement or disagreement with	X	X	X	X	X	X	X	X

	the following statements.				
c1_c	c1_c -- There is no need to make changes in my life because humans are not the main cause of climate change. : Please rate your agreement or disagreement with the following statements.	X			
c2	c2 -- In your opinion, what percentage of Canadians would somewhat or strongly agree that they are willing to make substantial changes in their lives to help limit climate change?				X
c1f1	c1f1 -- In your own words, please explain your willingness to make changes in your life to help limit climate change.		X		
c1f1_coded_1	c1f1_coded_1 -- Buy ecologically friendly products (clothing, food, etc.) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.		X		
c1f1_coded_2	c1f1_coded_2 -- Change means of transportation (electric car, public transportation, etc.) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.		X		
c1f1_coded_3	c1f1_coded_3 -- Home improvements (insulation, solar panels, etc.) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.		X		

c1f1_coded_4	c1f1_coded_4 -- Gardening more / grow own food / eat local : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_5	c1f1_coded_5 -- Purchase more reusable products / reduce waste / no single use-plastics : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_6	c1f1_coded_6 -- Recycle more : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_7	c1f1_coded_7 -- Support causes, politicians, & companies that act against climate change : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_8	c1f1_coded_8 -- Willing to pay more for clean energy / products : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_9	c1f1_coded_9 -- Willing to make changes (non-specific) / healthy lifestyle : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X

c1f1_coded_10	c1f1_coded_10 -- Comments about the environment (earth dying, resources depleted, etc.) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_11	c1f1_coded_11 -- Big polluters (China, companies, etc.) need to change to make an impact : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_12	c1f1_coded_12 -- Use less power/heat/water (turn down thermostat, shower less, turn off lights) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_13	c1f1_coded_13 -- Make it more affordable to make changes to limit climate change (provide incentives) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_14	c1f1_coded_14 -- Those polluting need to pay for the solution (be taxed or fined) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X

c1f1_coded_15	c1f1_coded_15 -- Negative comments about electric vehicles (can't afford/EVs are not without a carbon footprint/unreliable) : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_20	c1f1_coded_20 -- Other comments : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f1_coded_21	c1f1_coded_21 -- Not sure / Don't know / Refused : (Coded) In your own words, please explain your willingness to make changes in your life to help limit climate change.	X
c1f2	c1f2 -- In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_1	c1f2_coded_1 -- Don't think changes would make a difference : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_2	c1f2_coded_2 -- Not my responsibility : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_3	c1f2_coded_3 -- Fossil fuels are still the best option : (Coded) In your own words, please explain your unwillingness to make changes in	X

	your life to help limit climate change.	
c1f2_coded_4	c1f2_coded_4 -- My impact is negligible : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_5	c1f2_coded_5 -- Too expensive : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_6	c1f2_coded_6 -- Other people/countries need to change first : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_7	c1f2_coded_7 -- Climate change is not caused by people / a scam : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_8	c1f2_coded_8 -- I already do enough : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_9	c1f2_coded_9 -- Don't want/need more taxes : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X
c1f2_coded_20	c1f2_coded_20 -- Other comments : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.	X

c1f2_coded_21	c1f2_coded_21 -- Not sure / Don't know / Refused : (Coded) In your own words, please explain your unwillingness to make changes in your life to help limit climate change.			X				
c2a_a	c2a_a -- Taken a long flight (five or more hours). : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X
c2a_b	c2a_b -- Taken a short flight (fewer than five hours). : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X
c2a_c	c2a_c -- Used public transportation (e.g., bus, train) to get around. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X
c2a_d	c2a_d -- Used active transportation (e.g., walking, running, biking) to get around. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X
c2a_e	c2a_e -- Used an electric bicycle or electric scooter to get around. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X
c2a_f	c2a_f -- Used a private vehicle (e.g., your own car), a cab or a ride-hailing service (e.g., Uber, Lyft) to get around. : In the LAST TWO MONTHS, how	X	X	X	X	X	X	X

c2a_g	frequently or infrequently have you done the following things? c2a_g -- Repaired products, or had someone else repair them for you, to extend their lifespan (e.g., clothing, household items, electronics, etc.). : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X
c2a_h	c2a_h -- Bought (or traded) things second-hand instead of new. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X
c2a_i	c2a_i -- Talked with family or friends about climate change or its impacts. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	
c2a_j	c2a_j -- Posted on social media about climate change to support action on this issue. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	
c2a_k	c2a_k -- Attended a climate change demonstration or rally to support action on this issue. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	
c2a_l	c2a_l -- Bought things new instead of buying second-hand, trading or repairing. : In the LAST TWO		X	

	MONTHS, how frequently or infrequently have you done the following things?									
c2a_m	c2a_m -- Spent time outside in parks or other natural spaces. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?					X	X			X
c2a_n	c2a_m -- Repaired products, or had someone else repair them for you, to extend their lifespan (e.g., home appliances like fridges or hair dryers, electronics, power tools, etc.).: In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?									X
c2b_a	c2b_a -- Made efforts to reduce the amount of plastic you use. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X		
c2b_b	c2b_b -- Recycled household products (e.g., paper, plastic, glass, metal) rather than throwing them in the garbage. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X		
c2b_e	c2b_e -- Made efforts to eat a more plant-based diet. : In the LAST TWO MONTHS, how frequently or infrequently have you done the following things?	X	X	X	X	X	X	X		
c2b_f	c2b_f -- Made efforts to reduce wasted food (e.g., by shopping more carefully or meal planning). : In the	X	X	X	X	X	X	X		

c2b_g	LAST TWO MONTHS, how frequently or infrequently have you done the following things? c2b_g -- Set the thermostat higher in summer or lower in winter to save energy. : In the	X	X	X	X	X	X	X
c3a_a	LAST TWO MONTHS, how frequently or infrequently have you done the following things? c3a_a -- A hybrid vehicle: Please indicate whether you have each of the following:	X		X				X
c3a_b	c3a_b -- An electric vehicle: Please indicate whether you have each of the following:	X		X				X
c3a_c	c3a_c -- A gasoline- or diesel-powered vehicle: Please indicate whether you have each of the following:	X		X				X
c3a_d	c3a_d -- An electric bicycle or scooter.: Please indicate whether you have each of the following:	X						X
c3a_e	c3a_e -- LED bulbs in most lights in your home/residence.: Please indicate whether you have each of the following:	X						X
c3a_f	c3a_f -- A plug-in hybrid vehicle: Please indicate whether you have each of the following:			X				
c3f	c3f -- To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?			X				
c3f_coded_1	c3f_coded_1 -- More efficient / keeps consistent temperature : (Coded) To your knowledge, what are the advantages or			X				

	disadvantages of using a heat pump to heat and cool your home?	
c3f_coded_2	c3f_coded_2 -- Reduces the cost of heating/cooling : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X
c3f_coded_3	c3f_coded_3 -- Environmentally friendly / no fossil fuels used : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X
c3f_coded_4	c3f_coded_4 -- Energy saving : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X
c3f_coded_5	c3f_coded_5 -- Other positive mentions : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X
c3f_coded_6	c3f_coded_6 -- Can't be used in certain types of housing / Not practical for my area : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X
c3f_coded_7	c3f_coded_7 -- Expensive to run / expensive to maintain : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?	X

c3f_coded_8	c3f_coded_8 -- They don't work / not warm enough in winter : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3f_coded_9	c3f_coded_9 -- Uses electricity : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3f_coded_10	c3f_coded_10 -- Noisy : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3f_coded_11	c3f_coded_11 -- Draws heat from the ground / reference to geothermal : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3f_coded_20	c3f_coded_20 -- Other comments : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3f_coded_21	c3f_coded_21 -- Not sure / Don't know / I've heard of but don't know about them : (Coded) To your knowledge, what are the advantages or disadvantages of using a heat pump to heat and cool your home?		X		
c3b_f	c3b_f -- An air-source or geothermal heat pump. : Please note whether you have each of the	X		X	X

	following in your home/residence							
c3b_g	c3b_g -- A solar water heater. : Please note whether you have each of the following in your home/residence	X			X			X
c3b_h	c3b_h -- A smart or adaptive thermostat (e.g., Nest). : Please note whether you have each of the following in your home/residence	X			X			X
c3b_i	c3b_i -- Solar panels. : Please note whether you have each of the following in your home/residence	X			X			X
c3b_j	c3b_j -- Energy efficient windows or doors (ENERGY STAR certified models or better). : Please note whether you have each of the following in your home/residence	X			X			X
c3b_k	c3b_k -- New or improved insulation (in the last 5 years). : Please note whether you have each of the following in your home/residence	X			X			X
c3b_l	c3b_l -- A sump pump. : Please note whether you have each of the following in your home/residence	X			X			X
c3e	c3e -- Have you ever heard of a heat pump (for heating and cooling your home)?			X				
c4_1	c4_1 -- Looked for information about the risks of an extreme weather event in your local area, including potential health impacts. : In the LAST TWO MONTHS, have you done any of the following things?	X	X	X	X	X	X	X
c4_2	c4_2 -- Looked for information about the future impacts of climate change in your local area. : In the LAST TWO	X	X	X	X	X	X	X

	MONTHS, have you done any of the following things?							
c4_3	c4_3 -- Looked for support from a friend, family member, or trained professional for help in dealing with negative emotions related to weather or climate change, whether in general or in response to a specific weather event. : In the LAST TWO MONTHS, have	X	X	X	X	X	X	X
c4_4	c4_4 -- Taken action to protect your home against weather-related risks (e.g., used sandbags to protect against flooding, improved the drainage around your home, replaced the insulation or roofing materials, raised the level of your home). : In the LAST TW	X	X	X	X	X	X	X
c4_5	c4_5 -- Left your home because of weather-related risks (e.g., flooding, wildfire, ice storm, etc.). : In the LAST TWO MONTHS, have you done any of the following things?	X	X	X	X	X	X	X
c4_8	c4_8 -- None of the above : In the LAST TWO MONTHS, have you done any of the following things?	X	X	X	X	X	X	X
c4_M1	c4_M1. In the LAST TWO MONTHS, have you done any of the following things?		X	X	X	X	X	X
c4_M2	c4_M2. In the LAST TWO MONTHS, have you done any of the following things?		X	X	X	X	X	X
c4_M3	c4_M3. In the LAST TWO MONTHS, have you done any of the following things?		X	X	X	X	X	X
c4_M4	c4_M4. In the LAST TWO MONTHS, have you done any		X	X	X	X	X	X

	of the following things?							
c4_M5	c4_M5. In the LAST TWO MONTHS, have you done any of the following things?		X	X	X	X	X	X
c5	c5 -- In the LAST TWO MONTHS, have you been able to afford enough energy (e.g., electricity, natural gas, gasoline, wood fuel) to meet your daily needs?	X	X	X	X	X	X	X
c6_a	c6_a -- Home/tenant insurance for flood-related risks. : Please indicate whether you have each of the following	X			X			X
c6_b	c6_b -- Home/tenant insurance for other weather-related risks (wildfire, wind, ice damage). : Please indicate whether you have each of the following	X			X			X
c6_c	c6_c -- An emergency supply kit in your home (e.g., with water, non-perishable food, batteries, first aid kit, etc.). : Please indicate whether you have each of the following	X			X			X
c6_d	c6_d -- A disaster emergency plan that all members of your family know about (e.g., with a safe meeting place, contact numbers, etc.). : Please indicate whether you have each of the following	X			X			X
c13	c13 -- For the next three questions, think about a park (or other natural space) close to your home where you would want to spend time. How would you normally get there from your home?					X		

c13_97_	c13_97_ -- Other (please specify): For the next three questions, think about a park (or other natural space) close to your home where you would want to spend time. How would you normally get there from your home?		X
c13a	c13a -- Using the method of transportation you chose in the previous question, how long would it take to get there from your home?		X
c13b	c13b -- When comparing this park (or natural space) to others in your part of the country, how would you rate its overall quality?		X
c7	c7 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X	
c7_recoded_1	c7_recoded_1 -- Purchase/look for sustainable merchandise/manufacturers : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X	
c7_recoded_2	c7_recoded_2 -- Support local farmers/purchase foods locally : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X	
c7_recoded_3	c7_recoded_3 -- Carpool/drive less : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X	

c7_recoded_4	c7_recoded_4 -- Reduce/try to avoid single use items : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_5	c7_recoded_5 -- Make efforts to reduce climate change (no specifics mentioned) : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_6	c7_recoded_6 -- Reduce seafood or meat consumption : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_7	c7_recoded_7 -- Teach my children about it/discuss with kids/discuss with friends or family : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_8	c7_recoded_8 -- Upgraded household items for efficency/Looking into home efficencies (new stove, re-wriring, new roof, etc.) : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_9	c7_recoded_9 -- Research about items related to climate change : In the LAST TWO MONTHS, were there any other actions that you took	X

	with climate change in mind? If so, please specify.	
c7_recoded_10	c7_recoded_10 -- Reduce shopping for unnecessary items : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_11	c7_recoded_11 -- Planted own garden, planted trees : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_12	c7_recoded_12 -- Reduce energy consumption : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_13	c7_recoded_13 -- Compost : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_14	c7_recoded_14 -- Comments against climate change (negative comments, hoax, etc.) : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_15	c7_recoded_15 -- Would like to purchase energy efficent/environmentally friendly products : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X

c7_recoded_16	c7_recoded_16 -- Limit water usage : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_17	c7_recoded_17 -- Started walking/walk more : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_20	c7_recoded_20 -- Other : In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind? If so, please specify.	X
c7_recoded_M1	c7_recoded_M1 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind?	
c7_recoded_M2	c7_recoded_M2 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind?	
c7_recoded_M3	c7_recoded_M3 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind?	
c7_recoded_M4	c7_recoded_M4 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind?	
c7_recoded_M5	c7_recoded_M5 -- In the LAST TWO MONTHS, were there any other actions that you took with climate change in mind?	

c7a_a	c7a_a -- Environmentally-friendly products and services are easy to access where I live : For the following set of questions, environmentally friendly means choosing items or acting in ways that are less harmful to land, air, water, and/or wildlife compare	X	
c7a_b	c7a_b -- Environmentally-friendly options (like electric cars and heat pumps) are too expensive compared to the alternatives : For the following set of questions, environmentally friendly means choosing items or acting in ways that are less harmful to land	X	
c7a_c	c7a_c -- I find it easy to maintain an environmentally-friendly lifestyle where I live : For the following set of questions, environmentally friendly means choosing items or acting in ways that are less harmful to land, air, water, and/or wildlife compared	X	
c7a_d	c7a_d -- I don't know how to act in environmentally-friendly ways : For the following set of questions, environmentally friendly means choosing items or acting in ways that are less harmful to land, air, water, and/or wildlife compared to available alterna	X	
c7b_a	c7b_a -- Turn off the lights when they are not in use.: How willing, if at all, are you to take each of the following		X

	actions to save energy?	
c7b_b	c7b_b -- Set the thermostat lower than usual in the winter.: How willing, if at all, are you to take each of the following actions to save energy?	X
c7b_c	c7b_c -- Air dry laundry instead of using a tumble dryer.: How willing, if at all, are you to take each of the following actions to save energy?	X
c7b_d	c7b_d -- Use a water efficient shower head.: How willing, if at all, are you to take each of the following actions to save energy?	X
c7c_a	c7c_a -- Turning off the lights when they are not in use.: How effective, if at all, do you think each of the following measures are in saving energy?	X
c7c_b	c7c_b -- Setting the thermostat lower than usual in the winter.: How effective, if at all, do you think each of the following measures are in saving energy?	X
c7c_c	c7c_c -- Air drying laundry instead of using a tumble dryer.: How effective, if at all, do you think each of the following measures are in saving energy?	X
c7c_d	c7c_d -- Using a water efficient shower head.: How effective, if at all, do you think each of the following measures are in saving energy?	X
c6a_c	c6a_c -- An emergency supply kit in your home (e.g., with water, non-perishable food, batteries, first aid kit, etc.).: Please	X

	indicate whether you have each of the following:					
c6a_e	c6a_e -- A cooling system in your home (e.g., air conditioner, heat pump).: Please indicate whether you have each of the following:					X
c6a_f	c6a_f -- A rainwater harvesting system for your home (e.g., rain barrel).: Please indicate whether you have each of the following:					X
c6a_g	c6a_g -- A driveway that you de-paved (e.g., converted to a gravel or turf driveway).: Please indicate whether you have each of the following:					X
c6a_h	c6a_h -- Trees that you planted to create more shade for your home.: Please indicate whether you have each of the following:					X
c6b_a	c6b_a -- My household is prepared for the impacts of climate change: Please rate your agreement or disagreement with the following statements:					X
c6b_b	c6b_b -- My community is prepared for the impacts of climate change: Please rate your agreement or disagreement with the following statements:					X
c1a	c1a -- How much more, if anything, would you be able or willing to pay for products and services that help limit climate change?		X	X		
c8_c	c8_c -- Supporting workers and their communities in transitioning local economies away from coal, oil, and gas production. : How much do you support or oppose	X			X	

		the following environmental policies?									
c8_d	c8_d -- Protecting and restoring ecosystems in Canada (e.g., forests, wetlands, coasts). : How much do you support or oppose the following environmental policies?	X					X				
c8_e	c8_e -- Reducing the cost of environmentally-friendly goods (e.g., rebates on electric vehicles or subsidies for energy-efficient equipment and retrofits). : How much do you support or oppose the following environmental policies?	X									
c8_g	c8_g -- Setting a national price on carbon pollution for industries and households in Canada that increases the cost of climate-unfriendly products/services.: How much do you support or oppose the following environmental policies?	X		X		X		X		X	
c8_h	c8_h -- Setting a global price on carbon pollution (i.e., a global carbon tax) that would apply equally to the largest-emitting countries (e.g., China, United States, India, and other "G20" countries like Canada, etc.). : How much do you support or oppose	X		X			X				
c8_i	c8_i -- Limiting overall greenhouse gas emissions that come from the production of oil and gas in Canada. : How much do you support or oppose the following	X				X		X			

	environmental policies?			
c8_k	c8_k -- Helping make vital infrastructure (e.g., the electrical grid, cell phone towers, highways) more resistant to extreme weather events.: How much do you support or oppose the following environmental policies?	X		X
c8_l	c8_l -- Increasing the amount of greenspace in cities and towns. : How much do you support or oppose the following environmental policies?	X		X
c8_m	c8_m -- Compensating people affected by weather-related disasters (e.g. farmers, homeowners, businesses, etc.). : How much do you support or oppose the following environmental policies?	X		X
c8_n	c8_n -- Compensating developing countries for losses and damage created by climate change. : How much do you support or oppose the following environmental policies?	X		X
c8_o	c8_o -- Strengthening partnerships with First Nations, Inuit, and Metis to protect nature and respect their traditional knowledge. : How much do you support or oppose the following environmental policies?	X		X

c8_p	c8_p -- Funding large-scale projects that capture carbon emissions from oil production and store it underground or use it in other industrial applications : How much do you support or oppose the following environmental policies?	X	X			
c8_q	c8_q -- Creating a low-cost national flood insurance program for residents of high-risk areas who cannot access or cannot afford private flood insurance : How much do you support or oppose the following environmental policies?	X				
c8_t	c8_t -- Planting two billion trees in the next ten years to increase Canada's forest cover : How much do you support or oppose the following environmental policies?	X				X
c8_u	c8_u -- Charging a fee on goods imported into Canada from countries that have weaker climate change standards (also known as a border carbon adjustment) : How much do you support or oppose the following environmental policies?	X				
c8_v	c8_v -- Banning the sale of gas and diesel-powered cars and light duty trucks by 2035 : How much do you support or oppose the following environmental policies?	X			X	
c8_w	c8_w -- Funding Indigenous-led conservation efforts : How much do you	X				

	support or oppose the following environmental policies?		
c8_x	c8_x -- Creating a 'right to repair' law that requires manufacturers to supply manuals/spare parts so that products can be repaired: How much do you support or oppose the following environmental policies?	X	
c8_y	c8_y -- Funding the development of technologies to 'engineer' the Earth's climate as a last-resort option to limit further climate change : How much do you support or oppose the following environmental policies?	X	
c8_z	c8_z -- Subsidizing farmers for actions they take to protect and enhance carbon stored in the soil : How much do you support or oppose the following environmental policies?	X	
c8_aa	c8_aa -- Subsidizing farmers to purchase energy-efficient equipment that reduces their carbon footprint : How much do you support or oppose the following environmental policies?		X
c8_ab	c8_ab -- Subsidizing large oil and gas producers to purchase energy-efficient equipment that reduces their carbon footprint : How much do you support or oppose the following environmental policies?		X

c8_ac	c8_ac -- Creating a sales mandate to ensure that by 2026, at least 20% of new cars and light-duty trucks sold will be zero-emission vehicles like electric cars : How much do you support or oppose the following environmental policies?		X		
c8_ad	c8_ad -- Subsidizing the purchase of zero-emission vehicles like electric cars : How much do you support or oppose the following environmental policies?		X		X
c8_ae	c8_ae -- Building a national network of charging stations for electric vehicles : How much do you support or oppose the following environmental policies?		X		
c8_af	c8_af -- Increasing the national price on carbon pollution (i.e., a carbon tax) each year to limit further climate change : How much do you support or oppose the following environmental policies?		X	X	
c8_ag	c8_ag -- Generating all electricity in Canada from energy sources (like wind, hydro) that do not directly produce greenhouse gases, by the year 2035.: How much do you support or oppose the following environmental policies?			X	
c8_ah	c8_ah -- Generating all electricity in Canada from energy sources (like wind, hydro, nuclear) that do not directly produce greenhouse gases, by the year 2035.: How much			X	

	do you support or oppose the following environmental policies?					
c8_aj	c8_aj -- Creating a 'right to repair' law that requires manufacturers to supply manuals so that products can be repaired by consumers or third party companies.: How much do you support or oppose the following environmental policies?					X
c8_ak	c8_ak -- Creating a 'right to repair' law that requires manufacturers to supply spare parts so that products can be repaired by consumers or third party companies.: How much do you support or oppose the following environmental policies?					X
c8_al	c8_al -- Funding wildfire prevention efforts in the communities most vulnerable to wildfires (e.g., rural areas, remote Indigenous communities).: How much do you support or oppose the following environmental policies?					X
c8a	c8a -- In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you support this policy?		X			

c8a_coded_1	c8a_coded_1 -- Forces companies to reduce consumption : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons	X
c8a_coded_2	c8a_coded_2 -- Makes people consider alternate methods : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons	X
c8a_coded_3	c8a_coded_3 -- Use the tax money to combat climate change : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reas	X
c8a_coded_4	c8a_coded_4 -- It is fair : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you support this p	X
c8a_coded_5	c8a_coded_5 -- It is effective : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on	X

	carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you support t		
c8a_coded_6	c8a_coded_6 -- We have to try something : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you		X
c8a_coded_7	c8a_coded_7 -- It will spark change/innovation : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for whi		X
c8a_coded_8	c8a_coded_8 -- Will reduce emissions/fossil fuel consumption/pollution : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are		X
c8a_coded_9	c8a_coded_9 -- Those polluting need to pay for the solution : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main re		X

c8a_coded_20	c8a_coded_20 -- Other comments : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you support t	X
c8a_coded_21	c8a_coded_21 -- Not sure / Don't know / Refused : (Coded) In the previous set of questions, you indicated that you somewhat or strongly support a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for wh	X
c8b	c8b -- In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you oppose this policy?	X
c8b_coded_1	c8b_coded_1 -- Against more taxes : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you oppose	X

c8b_coded_2	c8b_coded_2 -- It will do more harm than good : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which	X
c8b_coded_3	c8b_coded_3 -- Doesn't work : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you oppose this p	X
c8b_coded_4	c8b_coded_4 -- I don't contribute enough to climate change to be paying for it : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). Wh	X
c8b_coded_5	c8b_coded_5 -- Unfair - rich people aren't impacted as much / I can't afford it : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). W	X

c8b_coded_6	c8b_coded_6 -- We don't need to/can't change : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which		X
c8b_coded_7	c8b_coded_7 -- Don't trust the governments intentions : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons f		X
c8b_coded_8	c8b_coded_8 -- We already pay too much in taxes : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for whi		X
c8b_coded_9	c8b_coded_9 -- Climate change is not caused by people/it is a scam/hoax : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are		X
c8b_coded_10	c8b_coded_10 -- Those polluting need to pay for the solution (be taxed or fined) : (Coded) In the previous set of questions, you indicated that you		X

	somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax').		
c8b_coded_11	c8b_coded_11 -- Unless big industry makes changes, we are not having an impact : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). Wh		X
c8b_coded_12	c8b_coded_12 -- Negative comments about electric vehicles (can't afford/Evs are not without a carbon footprint/unreliable) : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (		X
c8b_coded_20	c8b_coded_20 -- Other comments : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for which you oppose thi		X
c8b_coded_21	c8b_coded_21 -- Not sure / Don't know / Refused : (Coded) In the previous set of questions, you indicated that you somewhat or strongly oppose a national price on carbon pollution (sometimes referred to as a 'carbon tax'). What are the main reasons for whi		X

c8c_1	c8c_1 -- Limiting further climate change: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_2	c8c_2 -- Adapting to the impacts of climate change, like extreme weather: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_3	c8c_3 -- Protecting and restoring nature: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_4	c8c_4 -- Growing Canada's economy: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_5	c8c_5 -- Reducing the cost of living: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_6	c8c_6 -- Strengthening the health care system: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_7	c8c_7 -- Creating jobs: If the Government of Canada were to support the following goals, which of them would you prioritize?	X

c8c_8	c8c_8 -- Advancing Indigenous reconciliation: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_9	c8c_9 -- Fighting COVID-19: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_10	c8c_10 -- Reducing taxes: If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_M1	c8c_M1 -- If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_M2	c8c_M2 -- If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_M3	c8c_M3 -- If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_M4	c8c_M4 -- If the Government of Canada were to support the following goals, which of them would you prioritize?	X
c8c_M5	c8c_M5 -- If the Government of Canada were to support the following goals, which of them	X

	would you prioritize?	
c8d_a	c8d_a -- Limiting further climate change: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X
c8d_b	c8d_b -- Adapting to the impacts of climate change, like extreme weather: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X
c8d_c	c8d_c -- Protecting and restoring nature: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X
c8d_d	c8d_d -- Growing Canada's economy: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X
c8d_e	c8d_e -- Reducing the cost of living: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X
c8d_f	c8d_f -- Strengthening the health care system: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X

c8d_g	c8d_g -- Creating jobs: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X			
c8d_h	c8d_h -- Advancing Indigenous reconciliation: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X			
c8d_i	c8d_i -- Fighting COVID-19: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X			
c8d_j	c8d_j -- Reducing taxes: If you had 10 cheques of $1 million each, how would you distribute them among your priorities? The total across all items should be 10.	X			
c8e	c8e -- In the past two months, have you heard, read, or seen anything related to the Climate Action Incentive Payment (CAIP)?		X		
c8f	c8f -- To the best of your knowledge, has anyone in your household received a Climate Action Incentive Payment (CAIP) in the past two months?		X		
c8g_a	c8g_a -- Setting a national price on carbon pollution (sometimes referred to as a ‘carbon tax'): In your opinion, what percentage of Canadians somewhat or strongly supports the following policies?				X

c8g_b	c8g_b -- Banning the sale of gas and diesel-powered cars and light duty trucks by 2035: In your opinion, what percentage of Canadians somewhat or strongly supports the following policies?		X
c8g_c	c8g_c -- Subsidizing the purchase of zero-emission vehicles like electric cars: In your opinion, what percentage of Canadians somewhat or strongly supports the following policies?		X
c14	c14 -- Does your home have a lawn that you (or someone in your household) maintains using a lawn mower?	X	
c14a	c14a -- What kind of lawn mower do you (or someone in your household) currently use?	X	
c14a_5_	c14a_5_ -- Other (Please specify): What kind of lawn mower do you (or someone in your household) currently use?	X	
c14b	c14b -- Regardless of what you currently use, if you were to purchase a new lawn mower for your household today, what kind would you buy?	X	
c14b_5_	c14b_5_ -- Other (Please specify): Regardless of what you currently use, if you were to purchase a new lawn mower for your household today, what kind would you buy?	X	
c14c	c14c -- To your knowledge, what are the advantages of owning a battery-powered lawn mower? (Please focus on advantages only,	X	

	disadvantages will be asked in the following question).	
c14c_coded_1	c14c_coded_1 -- Fewer emissions / less carbon dioxide: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_2	c14c_coded_2 -- More environmentally friendly (general): To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_3	c14c_coded_3 -- Quieter: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_4	c14c_coded_4 -- No cord / more mobile: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_5	c14c_coded_5 -- Cheaper to run / don't have to pay for gas: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_6	c14c_coded_6 -- Lighter / easier to push: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_7	c14c_coded_7 -- Less / easier maintenance: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_8	c14c_coded_8 -- More energy efficent: To your knowledge, what are	X

	the advantages of owning a battery-powered lawn mower?	
c14c_coded_9	c14c_coded_9 -- Don't need to use gas: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_10	c14c_coded_10 -- Battery is rechargeable: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_11	c14c_coded_11 -- Safer: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_12	c14c_coded_12 -- Easier to use / start: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_13	c14c_coded_13 -- More convenient: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_14	c14c_coded_14 -- More powerful / faster (e.g., high torque): To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_15	c14c_coded_15 -- Reliability: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_16	c14c_coded_16 -- No unpleasant smell / less smelly: To your knowledge, what are the advantages of owning a	X

	battery-powered lawn mower?	
c14c_coded_17	c14c_coded_17 -- Less expensive (general comments, e.g., low cost, less cost): To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_20	c14c_coded_20 -- Refusal / Don't know: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_21	c14c_coded_21 -- None / Nothing / There aren't any: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_22	c14c_coded_22 -- Other: To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_M1	c14c_coded_M1 -- To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_M2	c14c_coded_M2 -- To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_M3	c14c_coded_M3 -- To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14c_coded_M4	c14c_coded_M4 -- To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X

c14c_coded_M5	c14c_coded_M5 -- To your knowledge, what are the advantages of owning a battery-powered lawn mower?	X
c14d	c14d -- To your knowledge, what are the disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_1	c14d_coded_1 -- They aren't good for large yards: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_2	c14d_coded_2 -- Battery charge doesn't last long enough: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_3	c14d_coded_3 -- Not as powerful as a gas mower / not powerful enough: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_4	c14d_coded_4 -- Cost of lawnmower: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_5	c14d_coded_5 -- Cost of batteries: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_6	c14d_coded_6 -- Environmental impact of batteries / mining lithium: To your knowledge, what are the main disadvantages of owning a	X

	battery-powered lawn mower?	
c14d_coded_7	c14d_coded_7 -- Battery needs charged / time to charge batteries: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_8	c14d_coded_8 -- Requires electricity / cost of electricity: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_9	c14d_coded_9 -- Heavier: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_10	c14d_coded_10 -- Safety concerns: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_11	c14d_coded_11 -- Need to replace batteries / limited lifespan of batteries: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_12	c14d_coded_12 -- Reliability concerns: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_13	c14d_coded_13 -- Maintenance issues / costs: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X

c14d_coded_14	c14d_coded_14 -- Other battery issues (e.g., overheating, winterization, etc.): To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_20	c14d_coded_20 -- Other: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_21	c14d_coded_21 -- Refusal / Don't know: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_22	c14d_coded_22 -- None / Nothing: To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_M1	c14d_coded_M1 -- To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_M2	c14d_coded_M2 -- To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_M3	c14d_coded_M3 -- To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_M4	c14d_coded_M4 -- To your knowledge, what are the main disadvantages of owning a battery-powered lawn mower?	X
c14d_coded_M5	c14d_coded_M5 -- To your knowledge, what are the main disadvantages of	X

	owning a battery-powered lawn mower?		
c15split	Flag variable for different sentences shown in C15.	X	
c15	c15 -- Based on your opinion, please complete the following sentence using the one or two words that first come to mind.	X	
c15a	c15a -- In your opinion, is it more important to limit climate change or to grow Canada's economy?	X	
c16_a	c16_a -- Distributes the costs of climate action fairly across Canadians: Do you agree or disagree that carbon pricing…		X
c16_b	c16_b -- Is effective at reducing Canada's greenhouse gas emissions: Do you agree or disagree that carbon pricing…		X
c16_c	c16_c -- Is cost-efficient in reducing Canada's greenhouse gas emissions: Do you agree or disagree that carbon pricing…		X
c16_d	c16_d -- Helps the Canadian economy to grow: Do you agree or disagree that carbon pricing…		X
c16_e	c16_e -- Reduces air pollution: Do you agree or disagree that carbon pricing…		X
c16_f	c16_f -- Costs your household more than you receive in payments: Do you agree or disagree that carbon pricing…		X
c16a_a	c16a_a -- Provide larger carbon price payments to lower-income households than higher-income households.: How much would you		X

	support or oppose a national price on carbon if you found out that the money collected were used to…	
c16a_b	c16a_b -- Fund environmental projects (e.g., public transport, cycling paths, tree planting).: How much would you support or oppose a national price on carbon if you found out that the money collected were used to…	X
c16a_c	c16a_c -- Provide equal carbon price payments (i.e., refunds) to all eligible households.: How much would you support or oppose a national price on carbon if you found out that the money collected were used to…	X
c17	c17 -- Have you ever heard of offset credits (also known as carbon credits or carbon offsets)?	X
c17b_a	c17b_a -- Allowing industry to use offset credits to comply with mandatory regulations for reducing their greenhouse gas emissions.: How much do you support or oppose the following environmental policies?	X
c17b_b	c17b_b -- Allowing industry to use offset credits to comply with voluntary goals for reducing their greenhouse gas emissions.: How much do you support or oppose the following environmental policies?	X
c17c_a	c17c_a -- It is important to reduce my greenhouse gas emissions when I travel or attend events: Please rate	X

	your agreement or disagreement with the following statements:	
c17c_b	c17c_b -- I would buy offset credits if available when purchasing products or services: Please rate your agreement or disagreement with the following statements:	X
c17c_c	c17c_c -- Using carbon offset credits for products leads people to buy more: Please rate your agreement or disagreement with the following statements:	X
c17c_d	c17c_d -- Using carbon offset credits for flights leads people to travel more: Please rate your agreement or disagreement with the following statements:	X
c17c_e	c17c_e -- Carbon offsets are an effective way to reduce total greenhouse gas emissions: Please rate your agreement or disagreement with the following statements:	X
c18_a	c18_a -- Major home appliances (e.g., dishwasher, washing machine, etc.): For each group, how important is repairability compared to other factors like cost, design, brand, features, and quality?	X
c18_b	c18_b -- Small home appliances (e.g., toaster, hair dryer, etc.): For each group, how important is repairability compared to other factors like cost, design, brand, features, and quality?	X

c18_c	c18_c -- Home electronics (e.g., computers, smartphones, televisions, etc.): For each group, how important is repairability compared to other factors like cost, design, brand, features, and quality?			X
c18_d	c18_d -- Electric power tools (e.g., hand or yard tools, like a drill, lawnmower, etc.): For each group, how important is repairability compared to other factors like cost, design, brand, features, and quality?			X
c11	c11 -- How long ago, if ever, did you last buy or sign a lease on a personal vehicle (e.g., your own car)?	X		
c11r	c11r -- (Recoded) How long ago, if ever, did you last buy or sign a lease on a personal vehicle (e.g., your own car)?	X		
c11_3_	c11_3_ -- Other (Please specify number of years ago): How long ago, if ever, did you last buy or sign a lease on a personal vehicle (e.g., your own car)?	X		
c11a	c11a -- Was that vehicle new or used?	X		
c11b	c11b -- What class of vehicle was it?	X		
c11b_97_	c11b_97_ -- Other (please specify): What class of vehicle was it?	X		
c11c	c11c -- What type of vehicle was it (i.e., in terms of motor/engine)?	X		
c11c_97_	c11c_97_ -- Other (please specify): What type of vehicle was it (i.e., in terms of motor/engine)?	X		

c11d	c11d -- Have you ever owned or leased an electric vehicle that's not a hybrid?	X
c11d_r	c11d_r -- (Recoded) Have you ever owned or leased an electric vehicle that's not a hybrid?	X
c11e	c11e -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_1	c11e_coded_1 -- Cheaper to operate / Cheaper than gas: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_2	c11e_coded_2 -- Zero emissions / less emissions / less greenhouse gases: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_3	c11e_coded_3 -- Better for the environment / less pollution: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_4	c11e_coded_4 -- Doesn't use fossil fuels / non-renewable resources: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_5	c11e_coded_5 -- Less maintenance / cheaper to maintain: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_6	c11e_coded_6 -- Quiet: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_7	c11e_coded_7 -- More efficient / fuel efficient: To your knowledge, what are	X

	the main advantages of owning or leasing an electric vehicle?	
c11e_coded_8	c11e_coded_8 -- They're cool / fun / neat / more with the times: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_9	c11e_coded_9 -- Still too expensive to buy: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_10	c11e_coded_10 -- Better performance (e.g., torque, more power, reliability, superior technology, etc.): To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_11	c11e_coded_11 -- Government rebates/subsidies/incentives for purchase of electric vehicle: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_12	c11e_coded_12 -- Negative comments about electric vehicles/lithium batteries: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_20	c11e_coded_20 -- Don't know: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_21	c11e_coded_21 -- None / Nothing / There aren't any: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_22	c11e_coded_22 -- Other: To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X

c11e_coded_M1	c11e_coded_M1 -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_M2	c11e_coded_M2 -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_M3	c11e_coded_M3 -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_M4	c11e_coded_M4 -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11e_coded_M5	c11e_coded_M5 -- To your knowledge, what are the main advantages of owning or leasing an electric vehicle?	X
c11f	c11f -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_1	c11f_coded_1 -- Expensive to purchase: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_2	c11f_coded_2 -- Expensive to maintain/repair: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_3	c11f_coded_3 -- Lack of charging stations / charging infrastructure: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_4	c11f_coded_4 -- Range isn't long enough / have to stop to recharge / can't go long distances: To your	X

	knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	
c11f_coded_5	c11f_coded_5 -- Fears about performance in cold weather: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_6	c11f_coded_6 -- Battery disposal will be an issue/harmful for environment: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_7	c11f_coded_7 -- Charging time: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_8	c11f_coded_8 -- Towing capacity: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_9	c11f_coded_9 -- Battery replacement concerns (refers to concerns about the battery needing replaced, not holding a charge): To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_10	c11f_coded_10 -- Requires mining/mineral extraction for batteries: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_11	c11f_coded_11 -- Lack of availability of electric vehicles: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X

c11f_coded_12	c11f_coded_12 -- Electric vehicles are still bad for the environment (excludes battery comments): To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_13	c11f_coded_13 -- Grids won't handle the demand: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_14	c11f_coded_14 -- New/unproven technology: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_20	c11f_coded_20 -- Don't know: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_21	c11f_coded_21 -- None / Nothing / There aren't any: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_22	c11f_coded_22 -- Other: To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_M1	c11f_coded_M1 -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_M2	c11f_coded_M2 -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X
c11f_coded_M3	c11f_coded_M3 -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?	X

c11f_coded_M4	c11f_coded_M4 -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?		X		
c11f_coded_M5	c11f_coded_M5 -- To your knowledge, what are the main disadvantages of owning or leasing an electric vehicle?		X		
c9_a	c9_a -- Solar energy : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_b	c9_b -- Wind energy : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_c	c9_c -- Hydro energy (e.g., hydroelectric dams) : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_d	c9_d -- Bioenergy (e.g., ethanol, biodiesel, wood pellets) : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_e	c9_e -- Coal : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_f	c9_f -- Oil : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X
c9_g	c9_g -- Natural gas : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X

c9_h	c9_h -- Nuclear energy : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X	
c9_i	c9_i -- Geothermal energy : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X	
c9_j	c9_j -- Ocean energy (e.g., waves, tides) : Please indicate whether you support or oppose further development of the following energy resources in Canada.	X			X	
c13c	c13c -- Do you have a park (or other natural space), where you would generally want to spend time, within a five minute walk from your home?					X
c13d	c13d -- You indicated that you do not have a park (or other natural space) where you would generally want to spend time within a five minute walk of your home. Please tell us a bit more about what you mean by that and why.					X
c13d_coded_1	c13d_coded_1 -- Parks I would use are further away (10-15 minutes): Please tell us a bit more about why you don't have a park near you.					X
c13d_coded_2	c13d_coded_2 -- Parks nearby are too small: Please tell us a bit more about why you don't have a park near you.					X
c13d_coded_3	c13d_coded_3 -- I live in a rural/remote area, live on a farm: Please tell us a bit more about why you don't have a park near you.					X

c13d_coded_4	c13d_coded_4 -- I live in a subdivision/city without access to a park: Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_5	c13d_coded_5 -- Area is unsafe (rough neighbourhood, drug addicts, homeless people, muggers): Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_6	c13d_coded_6 -- Comments about seasonality (ex. It's winter): Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_8	c13d_coded_8 -- Cleanliness concerns (ex., needles, pet waste): Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_10	c13d_coded_10 -- Park nearby is meant for children / just a playground: Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_11	c13d_coded_11 -- Park is lacking in shade: Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_12	c13d_coded_12 -- Closest greenspace is a school or golf course: Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_13	c13d_coded_13 -- Parks nearby are not appealing / lacking of things to do / low quality: Please tell us a bit more about why you don't have a park near you.	X
c13d_coded_20	c13d_coded_20 -- Other: Please tell us a bit more about why you don't have a park near you.	X

c13d_coded_21	c13d_coded_21 -- No comment/don't know: Please tell us a bit more about why you don't have a park near you.								X
c13d_coded_M1	c13d_coded_M1 -- Please tell us a bit more about why you don't have a park near you.								X
c13d_coded_M2	c13d_coded_M2 -- Please tell us a bit more about why you don't have a park near you.								X
c13d_coded_M3	c13d_coded_M3 -- Please tell us a bit more about why you don't have a park near you.								X
c15b	c15b -- If the federal government had a budget surplus, should it use it to reduce taxes or increase spending on social services?								X
c15b2	c15b2 -- If the federal government had a budget surplus, should it use it to reduce taxes or increase spending on social services?								X
d1_a	d1_a -- It is important to [him/her/them] to protect the environment. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X		X	X	X	X	X	
d1_b	d1_b -- It is important to [him/her/them] to respect nature. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X							
d1_c	d1_c -- It is important to [him/her/them] to take care of those who are worse off. : Below you will find brief descriptions of	X							

	different people. Please read each description carefully and indicate how much this person is like you.							
d1_d	d1_d -- It is important to [him/her/them] that there is no war or conflict. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X						
d1_e	d1_e -- It is important to [him/her/them] to have fun. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X		X	X	X	X	X
d1_f	d1_f -- It is important to [him/her/them] to enjoy life's pleasures. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X						
d1_g	d1_g -- It is important to [him/her/them] to have authority over others. : Below you will find brief descriptions of different people. Please read each description carefully and indicate how much this person is like you.	X						
d1_h	d1_h -- It is important to [him/her/them] to work hard and be ambitious. : Below you will find brief descriptions of different people. Please read each description carefully	X						

	and indicate how much this person is like you.						
d1_i	d1_i -- It is important to [him/her/them] to prevent environmental pollution. : Please read each description carefully and indicate how much this person is like you.	X					
d1_j	d1_j -- It is important to [him/her/them] to be in unity with nature. : Please read each description carefully and indicate how much this person is like you.	X					
d1_k	d1_k -- It is important to [him/her/them] that every person has equal opportunities. : Please read each description carefully and indicate how much this person is like you.	X	X	X	X	X	X
d1_l	d1_l -- It is important to [him/her/them] that every person is treated justly. : Please read each description carefully and indicate how much this person is like you.	X					
d1_m	d1_m -- It is important to [him/her/them] to be helpful to others. : Please read each description carefully and indicate how much this person is like you.	X					
d1_n	d1_n -- It is important to [him/her/them] to do things [he/she/they] enjoys. : Please read each description carefully and indicate how much this person is like you.	X					

d1_o	d1_o -- It is important to [him/her/them] to have control over others' actions. : Please read each description carefully and indicate how much this person is like you.	X	X	X	X	X	X		
d1_p	d1_p -- It is important to [him/her/them] to be influential. : Please read each description carefully and indicate how much this person is like you.	X							
d1_q	d1_q -- It is important to [him/her/them] to have money and possessions. : Please read each description carefully and indicate how much this person is like you.	X							
d1_r	d1_r -- It is important to [him/her/them] to keep up with the latest technology. : Please read each description carefully and indicate how much this person is like you.	X							
d4a_a	d4a_a -- I always find beauty in nature: Please rate your agreement or disagreement with the following statements.								X
d4a_c	d4a_c -- Being in nature makes me very happy: Please rate your agreement or disagreement with the following statements.								X
d4a_d	d4a_d -- Spending time in nature is very important to me: Please rate your agreement or disagreement with the following statements.								X
d4a_h	d4a_h -- I am the type of person who acts in an environmentally-friendly way: Please rate your agreement								X

	or disagreement with the following statements.								
d4a_i	d4a_i -- I sometimes feel uncomfortable, anxious, or fearful in nature: Please rate your agreement or disagreement with the following statements.								X
d2_a	d2_a -- Most people like me care about climate change. : Please indicate how strongly you agree or disagree with the following statements.	X							
d2_b	d2_b -- Most of my friends and family are taking action to help limit climate change. : Please indicate how strongly you agree or disagree with the following statements.	X	X	X	X	X	X	X	X
d2_c	d2_c -- People who are close to me generally expect that I do my part to help limit climate change. : Please indicate how strongly you agree or disagree with the following statements.	X	X	X	X	X	X	X	X
d2_d	d2_d -- Most people like me care about protecting nature. : Please indicate how strongly you agree or disagree with the following statements.	X							
d2_e	d2_e -- Most people like me know that climate change is part of a natural cycle. : Please indicate how strongly you agree or disagree with the following statements.	X							
d3_a	d3_a -- I believe my actions can have a positive effect on climate change. : Please rate your agreement or disagreement with the following statements.	X	X	X	X	X	X	X	X

d3_b	d3_b -- If we act collectively, we can limit further climate change. : Please rate your agreement or disagreement with the following statements.	X			X	X	X	
d3_c	d3_c -- Taking actions related to climate change will not work because it is a natural phenomenon. : Please rate your agreement or disagreement with the following statements.	X						
d4	d4 -- Please give your opinion on the following statement. I am the type of person who acts in an environmentally-friendly way.	X					X	
d5	d5 -- All things considered, how satisfied are you with your life as a whole?	X		X			X	X
d5a	d5a -- To what extent do you feel that the things you do in your life are worthwhile?							X
d5b	d5b -- Would you say your health is… ?							X
d6_b	d6_b -- Your family and friends : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X					X	
d6_d	d6_d -- The Government of Canada : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X					X	
d6_e	d6_e -- Your provincial/territorial government : To what extent do you trust or distrust the following people/groups to make good decisions	X					X	

	about climate change?					
d6_f	d6_f -- Your local or municipal government : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X				X
d6_h	d6_h -- Non-renewable energy companies (e.g., oil, gas, coal) : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X				X
d6_i	d6_i -- Renewable energy companies (e.g., wind, solar, hydro) : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X				X
d6_l	d6_l -- Environmental groups or non-profits : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X				X
d6_m	d6_m -- Scientists : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X				X
d6c_b	d6c_b -- Your family and friends : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?			X	X	
d6c_d	d6c_d -- The Government of Canada : To what extent do you trust or distrust the			X	X	

	following people/groups to make good decisions about climate change?		
d6c_e	d6c_e -- Your provincial/territorial government : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X	X
d6c_f	d6c_f -- Your local or municipal government : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X	X
d6c_m	d6c_m -- Scientists : To what extent do you trust or distrust the following people/groups to make good decisions about climate change?	X	
d6c_n	d6c_n -- Government scientists: To what extent do you trust or distrust the following people/groups to make good decisions about climate change?		X
d6c_o	d6c_o -- Industry scientists: To what extent do you trust or distrust the following people/groups to make good decisions about climate change?		X
d6c_p	d6c_p -- Academic or university scientists: To what extent do you trust or distrust the following people/groups to make good decisions about climate change?		X

d6c_q	d6c_q -- Non-profit or think tank scientists: To what extent do you trust or distrust the following people/groups to make good decisions about climate change?		X
d6a_a	d6a_a -- Your family and friends : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X	
d6a_b	d6a_b -- The Government of Canada : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X	
d6a_c	d6a_c -- Your provincial/territorial government : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X	
d6a_d	d6a_d -- Your local or municipal government : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X	
d6a_e	d6a_e -- Non-renewable energy companies (e.g., oil, gas, coal) : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X	

d6a_f	d6a_f -- Renewable energy companies (e.g., wind, solar, hydro) : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X			
d6a_g	d6a_g -- Environmental groups or non-profits : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X			
d6a_h	d6a_h -- Scientists : In general, to what extent do you trust or distrust the following people/groups to make good decisions in the best interest of Canadians?	X			
d6b_a	d6b_a -- The federal government is competent enough to deal with climate change. : Please rate your agreement or disagreement with the following statements.	X	X	X	X
d6b_b	d6b_b -- The federal government distorts facts in its favor regarding climate change. : Please rate your agreement or disagreement with the following statements.	X			
d6b_c	d6b_c -- The federal government changes policies regarding climate change without good reasons. : Please rate your agreement or disagreement with the following statements.	X			
d6b_d	d6b_d -- The federal government is too influenced by industry regarding climate change. : Please rate your agreement or	X	X	X	X

	disagreement with the following statements.					
d6b_e	d6b_e -- The federal government listens to what ordinary people think about climate change. : Please rate your agreement or disagreement with the following statements.		X	X	X	X
d6b_f	d6b_f -- I feel that the way the federal government makes decisions about climate change is fair. : Please rate your agreement or disagreement with the following statements.		X			
d6b_g	d6b_g -- The federal government provides all relevant information about climate change to the public. : Please rate your agreement or disagreement with the following statements.		X			
d6b_h	d6b_h -- The federal government is wasting money on climate change. : Please rate your agreement or disagreement with the following statements.		X			
d6b_i	d6b_i -- The federal government spends money efficiently on climate change initiatives. : Please rate your agreement or disagreement with the following statements.			X	X	X
d6d	d6d -- Please indicate whether, in general, you trust or distrust the Canadian federal government.				X	
d6e_a	d6e_a -- The federal government is competent enough to deal with climate change.: Please rate your agreement or disagreement with the following statements about the				X	

d6e_d	Canadian federal government: d6e_d -- The federal government is too influenced by industry regarding climate change.: Please rate your agreement or disagreement with the following statements about the Canadian federal government:		X
d6e_e	d6e_e -- The federal government listens to what ordinary people think about climate change.: Please rate your agreement or disagreement with the following statements about the Canadian federal government:		X
d6e_f	d6e_f -- I feel that the way the federal government makes decisions about climate change is fair.: Please rate your agreement or disagreement with the following statements about the Canadian federal government:		X
d6e_g	d6e_g -- The federal government provides all relevant information about climate change to the public.: Please rate your agreement or disagreement with the following statements about the Canadian federal government:		X
d6e_i	d6e_i -- The federal government spends money efficiently on climate change initiatives.: Please rate your agreement or disagreement with the following statements about the Canadian federal government:		X
d6e_j	d6e_j -- The federal government cares about ordinary Canadians.: Please rate your agreement or disagreement		X

	with the following statements about the Canadian federal government:				
d6f	d6f -- To what extent do you trust or distrust the Government of Canada to make decisions about climate change that are in the best interest of Canada?				X
d7_a	d7_a -- Canadian TV and radio channels (including their websites) (e.g., CBC, Global, CTV) : How often do you come across information about climate change from the following sources?	X		X	
d7_b	d7_b -- Non-Canadian TV and radio channels (including their websites) (e.g., CNN, Fox News, BBC) : How often do you come across information about climate change from the following sources?	X		X	
d7_c	d7_c -- Newspapers and magazines (including their websites) (e.g., Globe & Mail, National Post, New York Times) : How often do you come across information about climate change from the following sources?	X		X	
d7_d	d7_d -- Conversations with family, friends and colleagues : How often do you come across information about climate change from the following sources?	X		X	
d7_e	d7_e -- Government websites (federal, provincial or municipal) : How often do you come across information about climate change from the following sources?	X		X	

d7_f	d7_f -- Podcasts : How often do you come across information about climate change from the following sources?	X					X
d7_g	d7_g -- Facebook, Twitter, or Reddit : How often do you come across information about climate change from the following sources?	X					X
d7_h	d7_h -- Instagram, TikTok or Youtube : How often do you come across information about climate change from the following sources?	X					X
d7_n	d7_n -- Scientific or technical reports : How often do you come across information about climate change from the following sources?	X					X
d7_m	d7_m -- Other social media platforms : How often do you come across information about climate change from the following sources?	X					X
d7a_a	d7a_a -- Canadian TV and radio channels (including their websites) (e.g., CBC/Radio Canada, CTV, TVA, Téle-Québec) : In general, how often do you use the following sources of information?		X	X	X	X	
d7a_b	d7a_b -- Non-Canadian TV and radio channels (including their websites) (e.g., CNN, BBC, Euronews, France 24) : In general, how often do you use the following sources of information?		X	X	X	X	
d7a_c	d7a_c -- Newspapers and magazines (including their websites) (e.g., Globe & Mail,		X	X	X	X	

	National Post, Le Devoir, La Presse) : In general, how often do you use the following sources of information?				
d7a_d	d7a_d -- Conversations with family, friends and colleagues : In general, how often do you use the following sources of information?	X	X	X	X
d7a_e	d7a_e -- Government websites (federal, provincial or municipal) : In general, how often do you use the following sources of information?	X	X	X	X
d7a_f	d7a_f -- Podcasts : In general, how often do you use the following sources of information?	X	X	X	X
d7a_g	d7a_g -- Facebook, Twitter, or Reddit : In general, how often do you use the following sources of information?	X			
d7a_h	d7a_h -- Instagram, TikTok or Youtube : In general, how often do you use the following sources of information?	X			
d7a_i	d7a_i -- Scientific or technical reports : In general, how often do you use the following sources of information?	X	X	X	X
d7a_j	d7a_j -- Other social media platforms : In general, how often do you use the following sources of information?	X			
d7a_k	d7a_k -- Facebook : In general, how often do you use the following sources of information?		X	X	
d7a_l	d7a_l -- Twitter : In general, how often do you use the following sources of information?		X	X	
d7a_m	d7a_m -- Reddit : In general, how often do you use the following sources of information?		X	X	

d7a_n	d7a_n -- Instagram : In general, how often do you use the following sources of information?		X	X		
d7a_o	d7a_o -- TikTok : In general, how often do you use the following sources of information?		X	X		
d7a_p	d7a_p -- YouTube : In general, how often do you use the following sources of information?		X	X		
d7a_q	d7a_q -- Reddit or Twitter : In general, how often do you use the following sources of information?					X
d7a_r	d7a_r -- Facebook or Instagram : In general, how often do you use the following sources of information?					X
d7a_s	d7a_s -- TikTok or YouTube : In general, how often do you use the following sources of information?					X
d7b	d7b -- How closely, if at all, have you been following news on climate change over the past month?				X	
d7e	d7e -- In your own words, please list the main sources that you use when looking for information about climate change.				X	
d7e_coded_1	d7e_coded_1 -- TV: Please list the main sources that you use when looking for information about climate change.				X	
d7e_coded_2	d7e_coded_2 -- Radio: Please list the main sources that you use when looking for information about climate change.				X	
d7e_coded_3	d7e_coded_3 -- Newspapers: Please list the main sources that you use when looking for information about climate change.				X	

d7e_coded_4	d7e_coded_4 -- Magazines: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_5	d7e_coded_5 -- Environmental organizations (David Suzuki, etc.): Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_6	d7e_coded_6 -- Social media (Facebook, Twitter, Reddit, etc.): Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_7	d7e_coded_7 -- Websites (YouTube, specific websites) / Internet: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_8	d7e_coded_8 -- News organization (CTV, CBC, CNN, BBC, etc.) - media not specified: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_9	d7e_coded_9 -- Climate experts / climate scientists: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_10	d7e_coded_10 -- Books: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_11	d7e_coded_11 -- Podcasts: Please list the main sources that you use when looking for information about climate change.	X

d7e_coded_12	d7e_coded_12 -- Scientific/academic journals/papers/studies: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_13	d7e_coded_13 -- E-mail lists/newsletters: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_14	d7e_coded_14 -- Documentaries: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_15	d7e_coded_15 -- News Apps: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_16	d7e_coded_16 -- Family/friends/word of mouth: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_20	d7e_coded_20 -- Other: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_21	d7e_coded_21 -- Refusal / Don't know: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_22	d7e_coded_22 -- None / Nothing: Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_M1	d7e_coded_M1 -- Please list the main sources that you use when looking for information about climate change.	X

d7e_coded_M2	d7e_coded_M2 -- Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_M3	d7e_coded_M3 -- Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_M4	d7e_coded_M4 -- Please list the main sources that you use when looking for information about climate change.	X
d7e_coded_M5	d7e_coded_M5 -- Please list the main sources that you use when looking for information about climate change.	X
d7c_a	d7c_a -- Television news: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_b	d7c_b -- Radio, podcasts and other broadcasts: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_c	d7c_c -- Newspapers and other journalism (including news websites): To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_d	d7c_d -- Canadian federal government briefings and/or websites: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_e	d7c_e -- Provincial/Territorial government briefings and/or websites: To what extent do you trust or distrust the following sources	X

	for information on climate change?	
d7c_f	d7c_f -- International weather and climate authorities (e.g. World Meteorological Organization): To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_g	d7c_g -- Workers in climate-dependent sectors (e.g. farmers, foresters): To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_h	d7c_h -- Scientists: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_i	d7c_i -- Social media (e.g. Facebook, Twitter, YouTube, Instagram, TikTok): To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_j	d7c_j -- Celebrities: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_k	d7c_k -- Online search engines (e.g. Google): To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_l	d7c_l -- Friends and family: To what extent do you trust or distrust the following sources for information on climate change?	X
d7c_m	d7c_m -- Work/school colleagues: To what extent do you trust or distrust the	X

	following sources for information on climate change?		
d7d_a	d7d_a -- Facebook: In the past month, how often did you use each of the following platforms?		X
d7d_b	d7d_b -- Twitter: In the past month, how often did you use each of the following platforms?		X
d7d_c	d7d_c -- Instagram: In the past month, how often did you use each of the following platforms?		X
d7d_d	d7d_d -- TikTok: In the past month, how often did you use each of the following platforms?		X
d7d_e	d7d_e -- Reddit: In the past month, how often did you use each of the following platforms?		X
d7d_f	d7d_f -- YouTube: In the past month, how often did you use each of the following platforms?		X
d8_a	d8_a -- Much of our lives are being controlled by plots hatched in secret places : Please rate your agreement or disagreement with the following statements.	X	
d8_b	d8_b -- Even though we live in a democracy, a few people will always run things anyway : Please rate your agreement or disagreement with the following statements.	X	
d8_c	d8_c -- The people who really ‘run' the country are not known to the voters : Please rate your agreement or disagreement with the following statements.	X	

d8_d	d8_d -- Big events like wars, recessions, and the outcomes of elections are controlled by small groups of people who are working in secret against the rest of us. : Please rate your agreement or disagreement with the following statements.	X	
d8a_a	d8a_a -- I think that many very important things happen in the world, which the public is never informed about.: For each of the statements below, please use the scale (0%-100%) to indicate how likely it is that the statement is true.		X
d8a_b	d8a_b -- I think that politicians usually do not tell us the true motives for their decisions.: For each of the statements below, please use the scale (0%-100%) to indicate how likely it is that the statement is true.		X
d8a_c	d8a_c -- I think that government agencies closely monitor all citizens.: For each of the statements below, please use the scale (0%-100%) to indicate how likely it is that the statement is true.		X
d8a_d	d8a_d -- I think that events which superficially seem to lack a connection are often the result of secret activities.: For each of the statements below, please use the scale (0%-100%) to indicate how likely it is that the statement is true.		X

d8a_e	d8a_e -- I think that there are secret organizations that greatly influence political decisions.: For each of the statements below, please use the scale (0%-100%) to indicate how likely it is that the statement is true.	X
d9_a	d9_a -- It is important to be loyal to your beliefs even when evidence is brought to bear against them.: Please indicate the extent to which you agree with the following statements.	X
d9_b	d9_b -- Whether something feels true is more important than evidence.: Please indicate the extent to which you agree with the following statements.	X
d9_c	d9_c -- Just because evidence conflicts with my current beliefs does not mean my beliefs are wrong.: Please indicate the extent to which you agree with the following statements.	X
d9_d	d9_d -- There may be evidence that goes against what you believe but that does not mean you have to change your beliefs.: Please indicate the extent to which you agree with the following statements.	X
d9_e	d9_e -- Even if there is concrete evidence against what you believe to be true, it is OK to maintain cherished beliefs.: Please indicate the extent to which you agree with the following statements.	X

d9_f	d9_f -- Regardless of the topic, what you believe to be true is more important than evidence against your beliefs.: Please indicate the extent to which you agree with the following statements.					X			
d10	d10 -- How concerned are you about the spread of misinformation and disinformation online (i.e. news information about important topics that is verifiably false)?					X			
d12	d12 -- Below are five descriptions summarizing different ways in which Canadians think about climate change. Select the description that you think most closely resembles your own thinking.								X
e1	e1 -- What is the highest level of formal education that you have completed?	X	X	X	X	X	X	X	X
e2	e2 -- Which of the following best describes the place where you now live?	X	X	X	X	X	X	X	X
e3a	e3a -- Are you a parent?	X	X	X	X	X	X	X	X
e3b	e3b -- Are any of your children under 18?	X	X	X	X	X	X	X	X
e4	e4 -- Which of the following categories best describes your current employment status?	X	X	X	X	X	X	X	X
e5	e5 -- Where were you born?	X	X	X	X	X	X	X	X
e5_2_	e5_2_ -- Born outside Canada (please specify the country) : Where were you born?	X	X	X	X	X	X	X	X
immigration_year	immigration_year -- Year of immigration	X	X	X	X	X	X	X	X
e13	e13 -- In what year did you immigrate to Canada?	X	X	X	X	X	X	X	X
e6	e6 -- Are you an Aboriginal person, that is, First Nations, Métis or Inuk (Inuit)? First	X	X	X	X	X	X	X	X

	Nations includes Status and Non-Status Indians.								
e7_1	e7_1 -- White : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_2	e7_2 -- South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.) : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_3	e7_3 -- Chinese : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_4	e7_4 -- Black : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_5	e7_5 -- Filipino : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_6	e7_6 -- Latin American : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_7	e7_7 -- Arab : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_8	e7_8 -- Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Thai, Laotian, etc.) : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_9	e7_9 -- West Asian (e.g., Iranian, Afghan, etc.) : You may belong to one or more racial or cultural groups on	X	X	X	X	X	X	X	X

	the following list. Are you...?								
e7_10	e7_10 -- Korean : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_11	e7_11 -- Japanese : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_12	e7_12 -- Other : You may belong to one or more racial or cultural groups on the following list. Are you...?	X	X	X	X	X	X	X	X
e7_9999 / e7_13	e7_9999 -- Prefer not to say: You may belong to one or more racial or cultural groups on the following list. Are you...	X	X	X	X	X	X	X	X
e7_M1	e7_M1 -- You may belong to one or more racial or cultural groups on the following list. Are you...?		X	X	X	X	X	X	X
e7_M2	e7_M2 -- You may belong to one or more racial or cultural groups on the following list. Are you...?		X	X	X	X	X	X	X
e7_M3	e7_M3 -- You may belong to one or more racial or cultural groups on the following list. Are you...?		X	X	X	X	X	X	X
e7_M4	e7_M4 -- You may belong to one or more racial or cultural groups on the following list. Are you...?		X		X		X	X	X
e7_M5	e7_M5 -- You may belong to one or more racial or cultural groups on the following list. Are you...?							X	X
e7_M6	e7_M6 -- You may belong to one or more racial or cultural groups on the following list. Are you...?							X	X
e7_12_	e7_12_ -- Other - (Please specify) : You may belong to one or more racial or	X	X	X	X	X	X	X	X

	cultural groups on the following list. Are you...?								
population_group	population_group -- Population group	X	X	X	X	X	X	X	X
e8	e8 -- Which of the following categories best describes your total household income in 2021. That is, the total income of all persons in your household combined, before taxes?	X	X	X	X	X	X	X	X
household_size	household_size -- Household size	X	X	X	X	X	X	X	X
e9	e9 -- How many people live in your home, including yourself?	X	X	X	X	X	X	X	X
e11	e11 -- Which language do you speak most often at home?	X	X	X	X	X	X	X	X
e11_33_	e11_33_ -- Other (please specify) : Which language do you speak most often at home?	X	X	X	X	X	X	X	X
e12	e12 -- Finally, what are the first three characters of your postal code?	X	X	X	X	X	X	X	X
c3g	c3g -- While your identity is not disclosed, our records show that you previously reported having a heat pump in your home, and then reported not having one in a later survey. What best describes the reason for this change?					X			
c3g_97_	c3g_97_ -- Other (Please specify) : To help us improve how we ask questions and better understand the answers we receive, we would like to ask you one last follow-up question. While your identity is not disclosed, our records show that you previously repor					X			

followup	followup -- Would you like to participate in the next follow up survey in a couple of months? Some questions will be different, and the survey could be shorter. Your continued participation will be greatly appreciated.	X	X	X	X	X	X
f1	f1 -- Thank you for taking the time to complete this survey. What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X	
f1_coded_1	f1_coded_1 -- Survey was good / Satisfied / General positive comments: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X	
f1_coded_2	f1_coded_2 -- Questions were easy to answer / easy to complete: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X	
f1_coded_3	f1_coded_3 -- Glad subject is being asked about / Good topic: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X	
f1_coded_4	f1_coded_4 -- Questions were thought provoking: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X	

f1_coded_5	f1_coded_5 -- Survey was a good length: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_6	f1_coded_6 -- Negative comments about survey subject / climate change: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_7	f1_coded_7 -- Survey was biased: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_8	f1_coded_8 -- Survey was too long: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_9	f1_coded_9 -- Some questions confusing / had to be read multiple times: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_10	f1_coded_10 -- Survey response option change suggestions (e.g., need opt out, neutral option): What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_11	f1_coded_11 -- Survey question suggestions (topics that should be covered or are missing): What was	X

	your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	
f1_coded_12	f1_coded_12 -- Comments/concerns about misinformation: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_13	f1_coded_13 -- User interface improvements/technical issues: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_14	f1_coded_14 -- Questions did not provide enough information or were too general/needed more context: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_15	f1_coded_15 -- Negative comments about the government/prime minister/politicians: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_20	f1_coded_20 -- Other: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?	X
f1_coded_21	f1_coded_21 -- Prefer not to say/ Refusal / Don't know: What was your level of satisfaction with the survey experience? What did you like,	X

f1_coded_22	and what would you suggest improving? f1_coded_22 -- None / Nothing / No comment: What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
f1_coded_M1	f1_coded_M1 -- What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
f1_coded_M2	f1_coded_M2 -- What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
f1_coded_M3	f1_coded_M3 -- What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
f1_coded_M4	f1_coded_M4 -- What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
f1_coded_M5	f1_coded_M5 -- What was your level of satisfaction with the survey experience? What did you like, and what would you suggest improving?					X			
bnr_e5	bnr_e5 -- Place of birth	X	X	X	X	X	X	X	X
bnr_e3a	bnr_e3a -- Children at Home	X	X	X	X	X	X	X	X
bnr_e3b	bnr_e3b -- Children Under 18	X	X	X	X	X	X	X	X
bnr_e4	bnr_e4 -- Employment	X	X	X	X	X	X	X	X
bnr_e2	bnr_e2 -- Size of Community	X	X	X	X	X	X	X	X
gender	gender -- Gender	X	X	X	X	X	X	X	X
bnr_a6	bnr_a6 -- Home ownership	X	X	X	X	X	X	X	X

bnr_b2_worried	bnr_b2_worried -- Worried about climate change	X	X	X	X	X	X	X	X
bnr_c1_substantial	bnr_c1_substantial -- Have made substantial changes in life	X			X			X	
bnr_c2b_plastic	bnr_c2b_plastic -- Reduce plastic use	X	X	X	X	X	X	X	
bnr_hybrid	bnr_hybrid -- Hybrid/EVs	X	X	X	X			X	
bnr_c3b_thermostat	bnr_c3b_thermostat -- Smart Thermostat	X			X			X	
bnr_d3a_efficacy	bnr_d3a_efficacy -- Self-efficacy	X	X	X	X	X	X	X	X
bnr_d4	bnr_d4 -- Environmental Identity	X			X			X	
bnr_d6_govt	bnr_d6_govt -- Trust in Government of Canada (W1 D6, W2 D6a)	X		X	X	X		X	X
bnr_b1_climate	bnr_b1_climate -- Belief in Climate Change	X		X	X	X		X	X
bnr_c7a_easy	bnr_c7a_easy -- Easy to maintain environmentally-friendly lifestyle		X		X				
bnr_b1_temp	bnr_b1_temp -- Belief in solid evidence of increasing temperature		X		X				
bnr_b1_urgent	bnr_b1_urgent -- Climate change requires urgent action		X		X				
bnr_b1b	bnr_b1b -- Percent human caused		X		X				
bnr_c2b_plantbased	bnr_c2b_plantbased -- Plant-based diet		X	X	X	X	X	X	
bnr_c3a_b	bnr_c3a_b -- Electric Vehicle			X	X			X	
bnr_c1_b	bnr_c1_b -- Willing to make substantial changes			X	X	X	X	X	X
bnr_EV	bnr_ev -- Electric Vehicle				X				
bnr_c2b_plantbased2	Plant-based diet (2 levels)					X	X	X	
bnr_b11	bnr_b11 -- Self-Assessed CC Knowledge					X	X		
bnr_d7b	bnr_d7b -- Followed News on CC					X			
bnr_b2a	bnr_b2a -- Percentage of Canadians that feel very or extremely worried about climate change						X		
bnr_c2	bnr_c2 -- Percentage of Canadians willing to make substantial changes to limit climate change						X		

bnr_c8g_a	bnr_c8g_a -- Percentage of Canadians that support setting a national price on carbon pollution	X
bnr_c8g_b	bnr_c8g_b -- Percentage of Canadians that support banning the sale of gas and diesel-powered cars and light duty trucks by 2035	X
bnr_c8g_c	bnr_c8g_c -- Percentage of Canadians that support subsidizing the purchase of zero-emission vehicles like electric cars	X
bnr_b12_a	bnr_b12_a -- Threat of climate change to your personal health and wellbeing	X
bnr_b12_b	bnr_b12_b -- Threat of climate change to the health and wellbeing of Canadians	X
bnr_b12_c	bnr_b12_c -- Threat of climate change to the health and wellbeing of marginalized or vulnerable Canadians	X
bnr_b12_d	bnr_b12_d -- Threat of climate change to your household finances	X
bnr_b12_e	bnr_b12_e -- Threat of climate change to Canada's economic growth	X
bnr_b12_f	bnr_b12_f -- Threat of climate change to the stability of Canada's democratic institutions	X
bnr_b12_g	bnr_b12_g -- Threat of climate change to the maintenance of law and order in Canada	X
bnr_b12_h	bnr_b12_h -- Threat of climate change to Canada's natural environment, including the variety of plants, animals and other forms of life	X
bnr_b12_i	bnr_b12_i -- Threat of climate change to the rights and	X

	freedoms of Canadians								
bnr_b12_j	bnr_b12_j -- Threat of climate change to Canada's national security						X		
bnr_c15a	bnr_c15a -- Importance of limiting climate change						X		
bnr_c8_carbonprice	National Carbon Price							X	X
bnr_d12	Self-reported Climate Persona								X
wildfire_1	I did: Wildfire-Related Actions								X
wildfire_2	Someone else I know did: Wildfire-Related Actions								X
bnr_b13b2	Firesmart Familiarity								X
bnr_b11abkid	Science of Climate Change								X
bnr_c6a_f	Cooling System								X
bnr_c6b_b	Community Prepared for Climate Change								X
bnr_c17	Heard of Offset Credits								X
bnr_c8_g	National Price on Carbon Support/Opposition								X
bnr_c16_a	Carbon Pricing Fairness								X
bnr_c16_b	Carbon Pricing Effectiveness								X
bnr_c17c_e	Offset Credit Effectiveness								X
bnr_c13c	Have a Park								X
bnr_c15b2	Budget Surplus								X
bnr_d4a_d	Importance of Time in Nature								X
bnr_d5a	Worthwhile Life								X
bnr_d5b	Self-reported Health Rating								X
C12a_flag	Flag for whether respondents saw C12a question series						X		
last_contact	last_contact -- Date survey was completed	X	X	X	X	X	X	X	
c16split	C16split -- Random split for C16								X
c18asplit	C18asplit -- Random split for C18a								X
c18bsplit	C18bsplit -- Random split for C18b								X
c7split	C7split -- Random split for C7b								X
d12split	D12split -- Random split for D12								X

survey_length	survey_length - Length of survey (in seconds)	X	X	X	X	X	X	X		X
intake_wave	intake_wave -- intake_wave			X	X	X	X	X		X
b13_did_1	b13_did_1 -- Loss of, or damage to, a home or other personal property: NET Did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?									X
b13_did_2	b13_did_2 -- Injury or other negative impacts on physical health: NET Did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?									X
b13_did_3	b13_did_3 -- Negative impacts on mental health: NET Did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?									X
b13_did_4	b13_did_4 -- Negative impacts on work/employment/financial stability: NET Did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?									X
b13_did_5	b13_did_5 -- Evacuation of home and/or community: NET Did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?									X

b13_me_1	b13_me_1 -- Loss of, or damage to, a home or other personal property: NET I did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_me_2	b13_me_2 -- Injury or other negative impacts on physical health: NET I did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_me_3	b13_me_3 -- Negative impacts on mental health: NET I did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_me_4	b13_me_4 -- Negative impacts on work/employment/financial stability: NET I did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X
b13_me_5	b13_me_5 -- Evacuation of home and/or community: NET I did: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?	X

b13_else_1	b13_else_1 -- Loss of, or damage to, a home or other personal property: NET Someone else: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_else_2	b13_else_2 -- Injury or other negative impacts on physical health: NET Someone else: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_else_3	b13_else_3 -- Negative impacts on mental health: NET Someone else: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_else_4	b13_else_4 -- Negative impacts on work/employment/financial stability: NET Someone else: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b13_else_5	b13_else_5 -- Evacuation of home and/or community: NET Someone else: In the LAST FIVE YEARS or so, have you and/or anyone you know experienced any of the following as a result of a wildfire or wildfire smoke?		X
b11_correct_1	b11_correct_1 -- Methane contributes to global warming:		X

b11_correct_2	Science of Climate Change b11_correct_2 -- Gases in the atmosphere lead to global warming:								X
b11_correct_3	Science of Climate Change b11_correct_3 -- Global precipitation increases as global temperatures rise:								X
b11_correct_4	Science of Climate Change b11_correct_4 -- Nitrogen is NOT a greenhouse gas:								X
b11_correct_5	Science of Climate Change b11_correct_5 -- Australia, United States and Canada have the largest per capita emissions:								X
weight1	Science of Climate Change weight1 -- Weight by age, sex, and region	X	X	X	X	X	X	X	X
original_id	original_id -- original_id		X	X	X	X	X	X	
bnr_c3b_heatpump	Heat Pump							X	
bnr_c6_flood	Home insurance against flooding							X	
Count of variables		**213**	**197**	**279**	**294**	**329**	**215**	**234**	**247**