

CHAPTER 5

Behavioural determinants of climate action and commitment to collective change

Because anthropogenic activities have accelerated the Earth's changing climate, it is our responsibility to understand the underlying factors that govern these climate-destructive behaviours and devise interventions that will encourage the collective adoption of sustainable practices.

Chapter Five Highlights

- *Various theoretical frameworks have been applied to understand and conceptualize "the green gap" - the psychological dissonance between environmental intention and climate change action.*
- *Cultural values are key influencers of an individual's beliefs and attitudes which, in turn, shape social behaviours. In the context of climate-related behaviour, collectivism, long-term orientation, and human-nature relationship underly the engagement of pro-environmental practices.*
- *While behavioural modifications fundamentally occur at the level of the individual, effective climate action ultimately emerges from a collective basis when communities work cohesively to enact positive change.*

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■ Introduction

**Behavioural
determinants of
climate change
action and
adaptation**

Intersection between climate change and health

In the wake of climate change and its negative impacts on natural ecosystems and human health, there is an urgent need to develop and implement climate adaptation strategies, as discussed in chapters 3 and 4. These adaptation strategies encompass structural adaptations in response to the physical consequences of climate change, such as constructing floodwalls or designating wildfire zones and must also address the driving force of human behaviour on climate change through the development of psychological adaptation strategies. Because anthropogenic activities have accelerated the earth's changing climate in ways that harm our environment, social systems, economy, and health, it is our responsibility to understand the underlying factors that govern these climate-destructive behaviours and devise interventions that will encourage the adoption of pro-environmental behaviours [1]. Ultimately, organized behavioural change at the individual level will generate positive climate outcomes on a broader scale through collective action.

Rural and Indigenous populations are particularly vulnerable to the adverse health impacts of climate change and ecosystem disruption due to their heavy reliance on the natural environment and climate-dependent industries (e.g. agriculture, fishing, etc.) [1]. Furthermore, these communities are often disadvantaged by health inequities stemming from various historical, social, political, and economic factors that further amplify the harmful effects of climate change and lead to disproportionate consequences to their health and access to resources [2]. This chapter specifically discusses the behavioural determinants of climate-related behaviour and how they intersect with the health of rural communities.

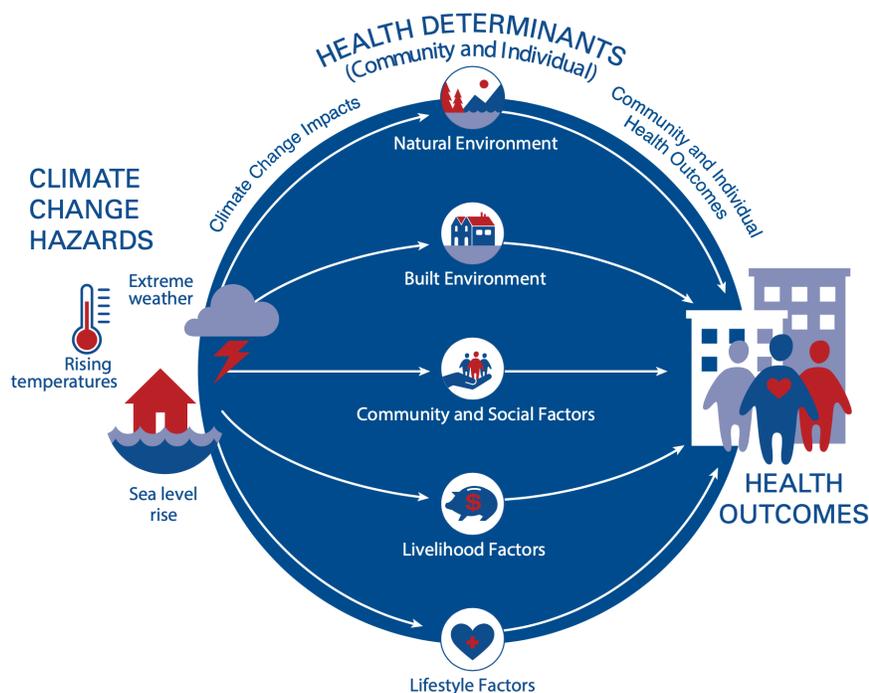


Figure 1. Climate change hazards and their impact on health. Retrieved from https://www2.gov.bc.ca/assets/gov/environment/climate-change/adaptation/health/final_climate_change_and_health_backgrounder_overview.pdf

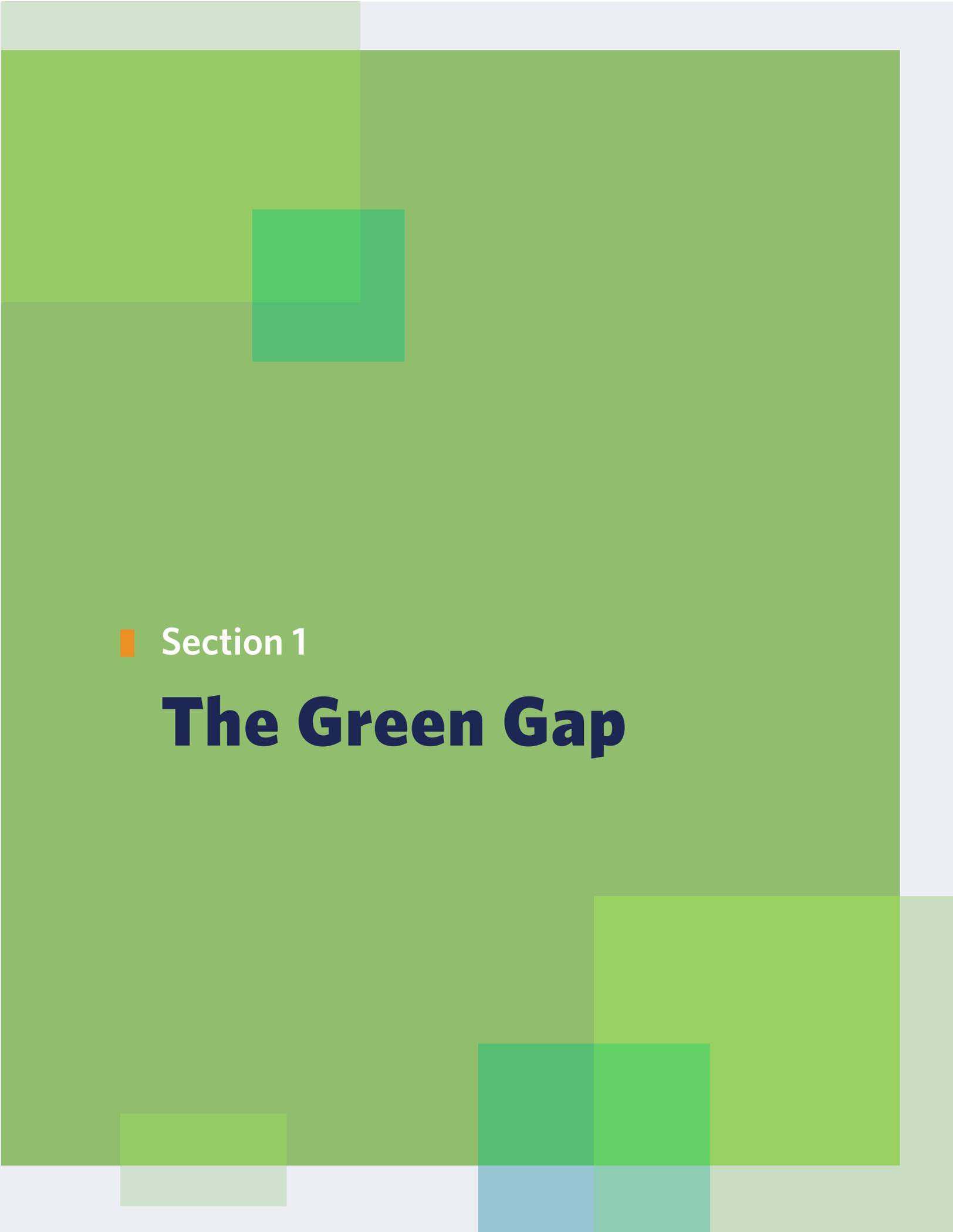
Role of behavioural determinants in modifying climate-related behaviour

Given that anthropogenic activity is the primary driver of climate change, our capacity to cope with climate change and its adverse consequences will require changes to how we, directly and indirectly, engage with our surrounding environment. While the responsibility of enacting this change is often ascribed to macro-level systems, such as government and industry, all layers of social organization must be involved in the process of transforming behaviours that affect our climate [2]. In particular, the effectiveness of encouraging environmentally protective practices at the individual, household, and community levels should not be overlooked.



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It is necessary to identify the factors that provoke and govern human behaviour in order to influence climate-related behaviour on these micro-scales. In the context of climate action and adaptation, these factors are referred to as behavioural determinants. The USAID defines them as the “perceptions, feelings or beliefs shaped by socioeconomic, political, and cultural factors that can support or prevent the adoption of a specific behaviour” [2]. Identifying and analyzing these behavioural determinants will enable the modification of existing environmental-related behaviours, abandonment of harmful ones, and adoption of new practices that will promote adaptive and resilient outcomes [2]. Evidently, understanding these behavioural determinants will play an integral role in increasing pro-environmental behaviour, described as any form of protective action or activity with respect to the environment. Examples of pro-environmental behaviours include sustainable consumption habits, water and energy conservation, eco-friendly transportation, and responsible waste management [3]. Furthermore, it is the development and implementation of targeted interventions that will shape these pro-environmental behaviours.



■ Section 1

The Green Gap

Although there is robust scientific consensus around the existence of anthropogenic climate change, pro-environmental action lags across various sectors such as health, government, academics, and business [4]. At present, the severity of climate change and ecosystem disruption has also garnered wide acceptance by the general public; however, many people have yet to adopt sustainable, adaptive, and resilience-oriented practices [5]. This phenomenon is referred to as the ‘green gap’ – a situation in which environmental concerns and values do not translate into pro-environmental behaviour [6]. While it may have once been assumed that knowledge dissemination of new data would motivate people to change their attitudes and actions, it is clear that the mechanisms underlying behaviour are more complex and influenced by a diverse range of factors.



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Various theoretical frameworks have been applied to understand and conceptualize the psychological dissonance between environmental intention and climate change action. With the support of these tools, scientists, climate experts, psychologists, and policy-makers have the capacity to develop implementation strategies aimed towards transforming pro-environmental values and intention into meaningful action [5]. The application of Bandura's social cognitive theory and Ajzen's theory of planned behaviour to climate-related behaviour is introduced below.

Social cognitive theory

Bandura's social cognitive theory has been widely utilized in the literature to examine the engagement of climate change action or lack of action [23,24]. Self-efficacy, which refers to one's belief in their ability to execute a certain behaviour, has been identified as one of the most important predictors of behaviour change. This is because attitudes towards self-efficacy determine whether actions will be initiated, the amount of effort required, and the extent to which actions will be sustained in the face of challenges [7,8]. As such, it has been implemented in behaviour change interventions in four ways: having successful personal experiences of the task or behaviour; seeing others perform successfully; hearing others profess their faith in one's abilities; and

being in a non-anxious physiological state, all of which contribute to more positive appraisals of one's capabilities [23]. As such, self-efficacy serves as an important tool that could be utilized to tackle large-scale social issues, including climate change, as it determines whether the individual believes they have the ability to contribute to meaningfully mitigating this crisis [2,9].

Outcome expectancy is another component of social cognitive theory that holds particular relevance to climate action [23]. It is defined as an individual's confidence in the extent to which their actions will effectively protect against climate change [24]. When acting in parallel, high efficacy beliefs coupled with positive outcome expectancies are expected to lead to action, productive engagement, and personal satisfaction [23]. On the other hand, low efficacy beliefs combined with low outcome expectancies generally lead to inaction and the belief that no amount of effort will produce the desired outcomes [23].

Theory of planned behaviour (TPB)

Another prominent model that has been used to explain the association between pro-environmental attitudes and engagement of pro-environmental action is the theory of planned behaviour (TPB) [5]. It postulates that any behaviour (i.e., climate action) is directly influenced by an individual's psychological intention to engage in that behaviour. This component is termed behavioural intention and is shaped by three key factors: the individual's attitude towards the behaviour, the perceived social norms surrounding the behaviour, and the degree of perceived control or self-efficacy one has over the behaviour [10]. Research has demonstrated that the TPB can be applied to describe the individual engagement of environmental practices, including the use of public transport, environmentally conscious consumption habits, energy conservation, and recycling [5,6].

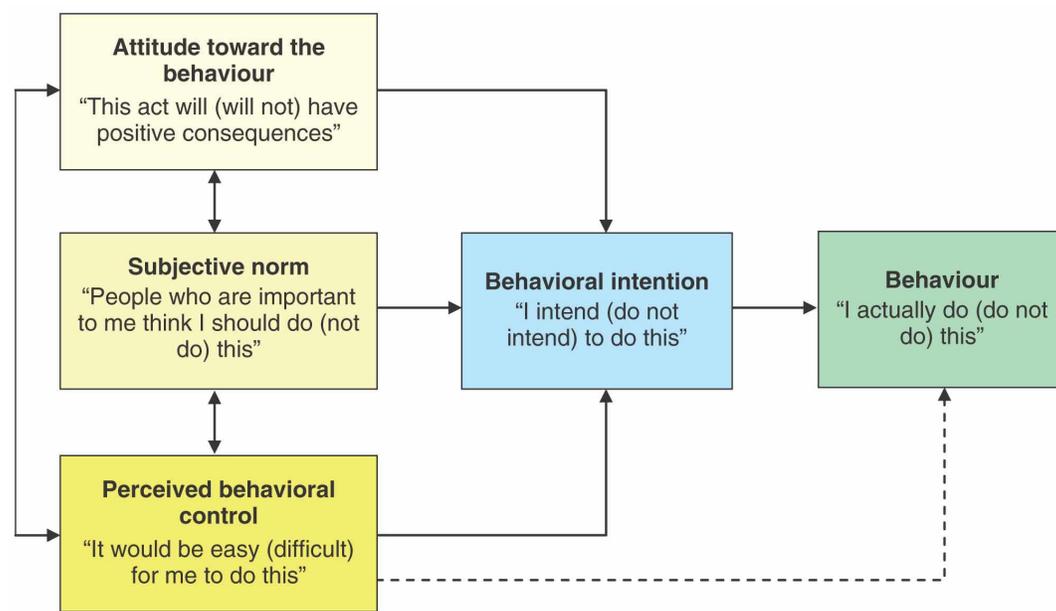
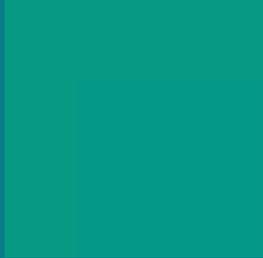


Figure 2. Theory of planned behaviour diagram. Gifford, R.; Kormos, C.; McIntyre, A., Figure 2: Behavioural Drivers of Climate Change, 2011. Retrieved from https://wires.onlinelibrary.wiley.com/doi/full/10.1002/wcc.143?saml_referrer



■ Section 2

**Key cultural values
as influencers of
pro-environmental
behaviour**

There is a large body of knowledge describing the relationship between culture and behaviour, with Hofstede being a prominent leader in the field. He defined culture as “the collective programming of the mind distinguishing the members of one group or category of people from others” and established the Model of Cultural Dimensions. This model emphasizes six main pillars of national culture: power distance; collectivism vs individualism; femininity vs masculinity; uncertainty avoidance; short-term vs long-term orientation; and indulgence vs restraint [11].

Hofstede’s research argues that these cultural values are key influencers of an individual’s beliefs and attitudes which, in turn, shape social behaviours. The application of Hofstede’s cultural dimensions, particularly collectivism vs individualism and long-term vs short-term orientation, can be used to understand and promote pro-environmental behaviour by 1) identifying the dominant cultural orientation at play, 2) determining cultural transformations that will encourage the adoption of sustainable practices, and 3) devising and implementing strategies to drive forward the desired cultural shift [6].

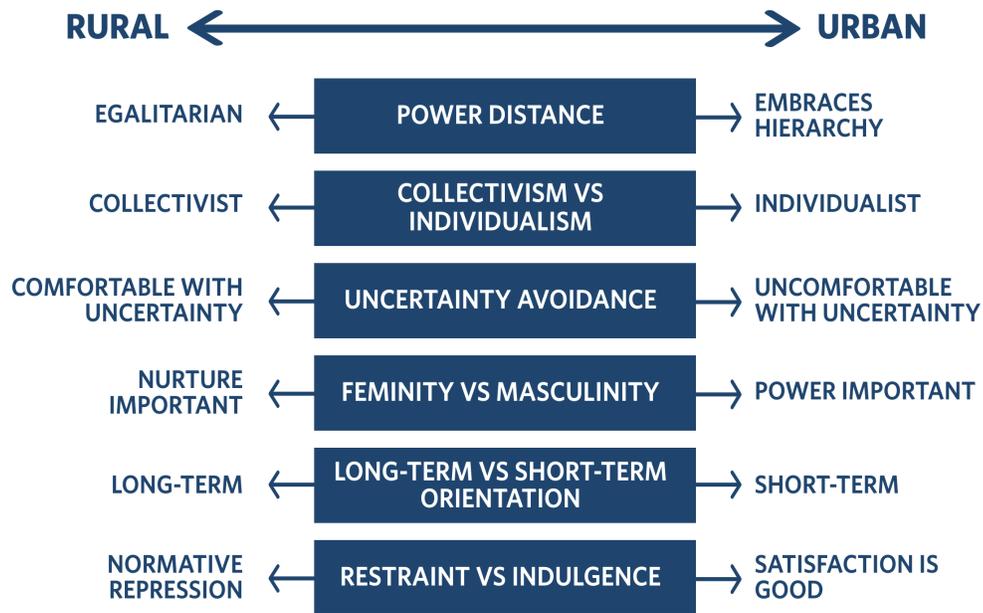


Figure 3. Hofstede's Model of Cultural Dimensions. Adapted from <https://corporatefinanceinstitute.com/resources/knowledge/other/hofstedes-cultural-dimensions-theory/>.

Collectivism

Collectivism and individualism are cultural orientations that describe the degree of interdependence within a society and are based on how individuals relate to the larger community. Collectivistic societies are characterized as highly integrated and cohesive, while individualistic societies have a greater focus on independence and personal benefit, even at the community's expense. In this way, individualism values self-fulfillment over group goals, whereas collectivism centers on harmony and unified well-being.

Based on these defining qualities, individualism is more strongly associated with climate inaction, while collectivism is presumed to play a particularly influential role in shaping pro-environmental behaviour because it corresponds to cooperative values reflected through people's connection to society and their surroundings [12]. On this account, collectivists exhibit increasingly positive attitudes towards civic cooperation and sustainability, which more likely translate into the engagement of climate-conscious behaviour [6]. For instance, individuals in collectivistic societies have demonstrated a greater willingness to pay higher taxes in the interest of protecting the natural environment [13].

Rural communities are predominantly collectivistic in nature due to the influence of several defining characteristics such as small population size, remote geography, and strong social connections [14]. Accordingly, they can draw on the strengths of this dominating cultural orientation to promote the adoption of pro-environmental behaviour and climate adaptation strategies which are key to enhancing transformational resilience at the community level. Through these mechanisms, collectivism acts as a mediating force to increase the coping capacity of rural communities to ecosystem disruption, ultimately contributing to the generation of improved rural health outcomes.

Long-term orientation

Long-term orientation represents the extent to which society engages in forward-looking behaviours such as planning, saving, and conserving, and is related to the prioritization of present sacrifices that will generate future rewards. In contrast, cultures with short-term orientation are driven by immediate gratification and are less focused on the long-term consequences of their actions. They exhibit less concern over future well-being and place a greater emphasis on present needs [6].

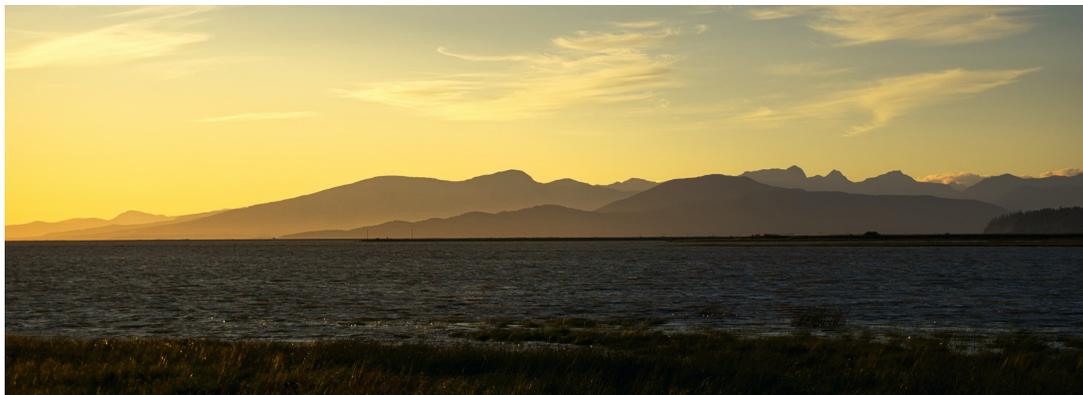


Photo by Masaru Suzuki on Unsplash

Considering that long-term approaches are inherent to sustainability efforts, long-term-oriented societies are more likely to invest resources, time, and energy into environmental protection compared to those characterized by short-term orientation. As such, long-term orientation has been more strongly associated with pro-environmental attitudes and intentions that underpin the engagement of climate-protective behaviours, for example,

making green purchases and implementing corporate policy to meet environmental objectives [12,15]. Long-term orientation has also been linked with increased national success in protecting biodiversity and preventing habitat loss [16].

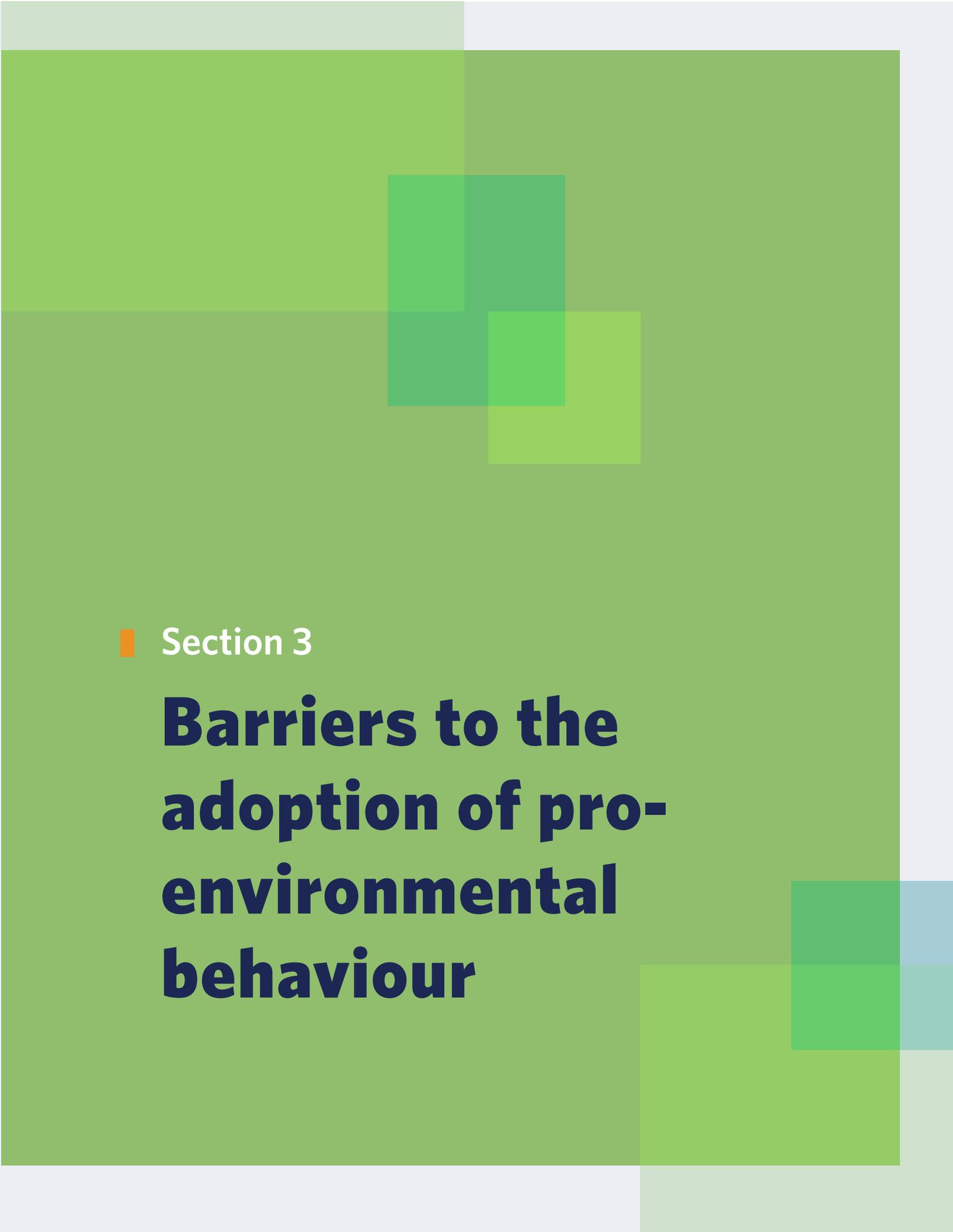
For rural communities, small population sizes and isolated conditions facilitate the necessity for strong connections between people. In particular, rural communities often emphasize intergenerational relationships as these are the avenues by which community knowledge is transferred [17]. This value associated with intergenerational collaboration contributes to a collective understanding that present actions inevitably affect long-term outcomes and future generations down the line, thereby forming the grounds for long-term oriented goals [18]. In the context of climate action, these forward-looking goals should include promoting sustainable practices to protect the environment for generations to come.

Human-nature relationship and connection to place

Aside from Hofstede's cultural dimensions, yet intimately related to collectivism and long-term orientation, is the concept of connection to place. This cultural value describes the close relationship people share with the land, water, and history of their surrounding environment. Connection to place plays a particularly significant role in Indigenous and rural communities as these populations are highly dependent on the natural environment for their livelihoods, health, social structures, and overall well-being [19]. In contrast, urban societies typically reflect a weaker human-nature relationship that stems from human dominance over nature [20]. This can be attributed to the fact that urban settings are more geographically removed from the natural environment, despite the reality that many aspects of urban living, such as food supply, energy sources, and production of goods, heavily rely on the accessibility of natural resources. There is an urgent need for a widespread cultural transformation that revalues our natural systems and acknowledges the need to promote respectful engagement with our environment, including the species we share our planet with. As demonstrated by Indigenous and rural communities, a strong connection to place can serve as a guide to reform many of the current maladaptive attitudes and behaviours towards climate change, improving human health [21].



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■ Section 3

Barriers to the adoption of pro- environmental behaviour

Why do pro-environmental attitudes not consistently lead to “green behaviour”? Research has revealed several barriers associated with the gap between pro-environmental attitudes and pro-environmental behaviour [5,22]. These barriers are organized into two broad categories: structural and psychological barriers. While structural barriers, such as poverty, financial constraints, and lack of leadership, may be overcome with policy and infrastructure improvement, psychological barriers have traditionally been more challenging to capture and address through behavioural intervention strategies [5,23]. Some examples of psychological obstacles with significant relevance to climate action and adaptation include:

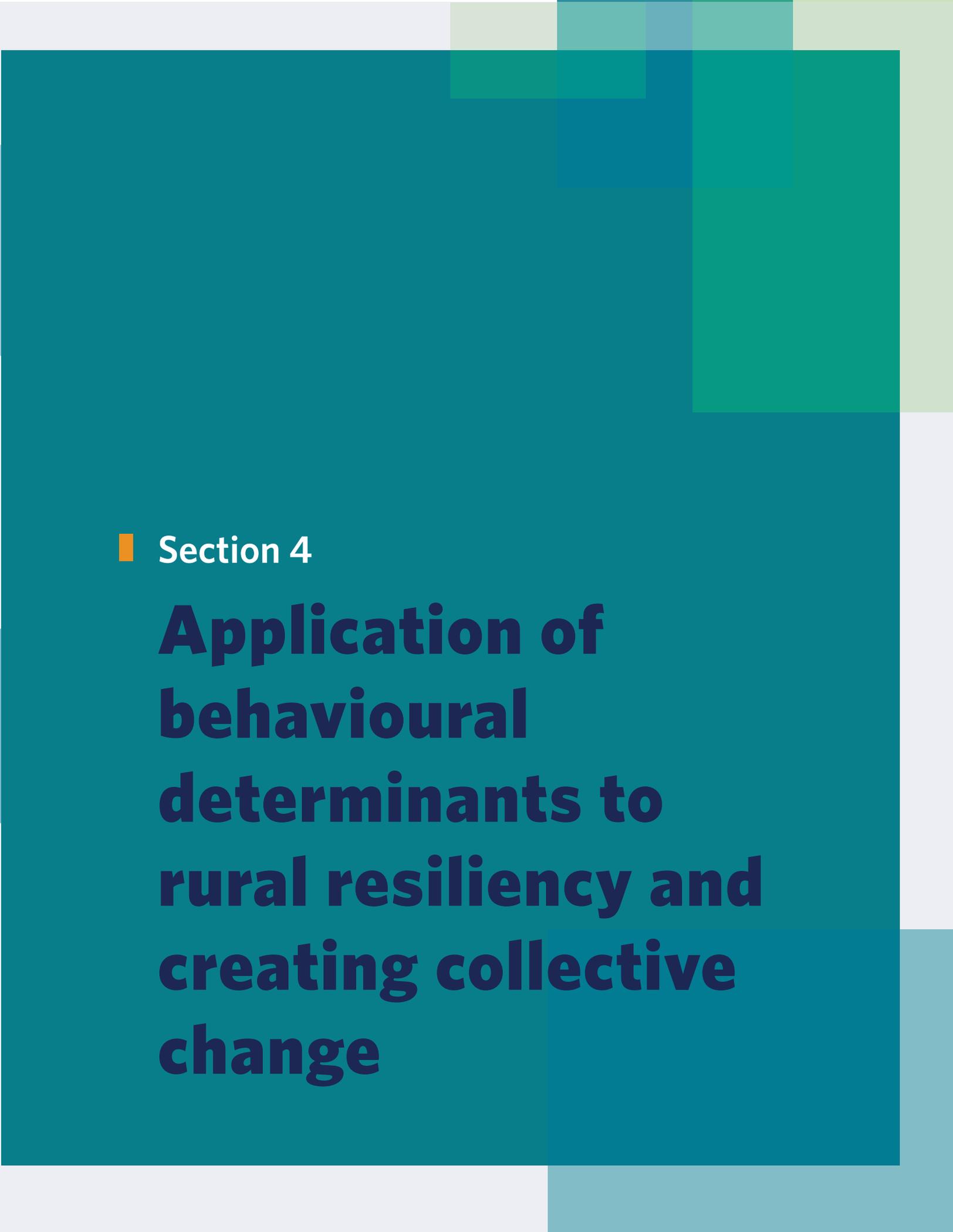
- Prioritization of immediate risks; climate change is commonly perceived as a distant and abstract threat in both the temporal and spatial sense [24].
- Lack of perceived control and helplessness over outcomes; little action is taken when an individual does not believe in its effectiveness [2,24].
- Ignorance and unawareness; there is a lack of knowledge surrounding the realities and severity of climate change [24].
- Denial of personal responsibility and shifting of blame [25].
- Impracticality; there is significant reluctance to make lifestyle changes and expend time, finances, and resources [25].

Not only has overcoming these barriers presented a challenge to scientists and policy-makers, but defining them has also been met with difficulty [5]. This is due in part to their interrelated nature, which prevents them from being examined in isolation. Consequently, it is necessary to understand the interdependencies between barriers in order to explain their origin, development, and persistence, which all contribute to informing intervention strategies [23]. Furthermore, hindrances to climate action and adaptation are dynamic; they are often caused by various underlying factors, including historical events, a wide range of stakeholders, the socioeconomic environment, and the political landscape [23]. In addition, barriers to climate-relevant behaviour are context-specific, further amplified among rural communities that are commonly diverse from one another. Lastly, descriptive research has typically identified barriers, meaning that their origins have not been adequately defined.

Looking forward, additional research, case studies, and meta-analyses are needed to understand the proposed barriers more explicitly and generate systematic explanations for their occurrence [23]. This will require an integrated approach that uses systems-based thinking to establish a clear grasp of the underlying causes of barriers that would offer entry points for reducing or overcoming them [23]. Ultimately, explanatory research on these barriers will inform policy, social programs, and infrastructure development to address structural barriers. This will also play a pivotal role in generating novel behaviour-change strategies to address the psychological barriers of climate change action and adaptation.



Photo by the blowup on Unsplash



■ Section 4

**Application of
behavioural
determinants to
rural resiliency and
creating collective
change**

While behavioural modifications fundamentally occur at the level of the individual, effective climate action ultimately emerges from a collective basis when communities work cohesively to enact positive change [23]. Therefore, it is crucial to coordinate the shift from individual behaviour change to collective action. A part of this solution will involve applying the behavioural determinants of climate-related behaviour from an individual level to a more collective dimension where many people’s combined climate efforts can drive forward cooperative change. The success of this process will also require an integrated approach between sectors such as health authorities, government, businesses, and academic institutions [4].

From individual behaviour to collective action

Earlier, the psychological constructs of Bandura’s social cognitive theory helped us comprehend individual behaviour as it relates to pro-environmental behaviour. By synthesizing the concepts of self-efficacy and outcome expectancy, we can better understand the movement from individual behaviour change to collective action. Collective outcome expectancy is defined as a measure of people’s judgements of whether collective action can help achieve the collective goal [23]. In other words, it brings into question whether “individuals believe that collective actions can have a significant impact on the collective problem is likely to contribute to their decision-making in the context of large-scale problems” [23]. Collective outcome efficacy can be related to perceptions of how well the outcomes of collective actions will help to meet collective goals. These statements can be worded ‘If ... (collective behaviour), then ... (achievement of collective goal)’ [23].

Thinking ahead, with consideration to social cognitive theory as a tool to encourage collective behaviour against climate change, an important takeaway is to modify climate change messaging, highlighting the successes and progress of populations rather than the shortcomings that have given rise to low self-efficacy [26].

Social norms as a driver of collective action

Beyond this, social norms can be manipulated to favour collective action around climate change [27]. Social norms refer to predominant behavioural patterns within a group, supported by a shared understanding of acceptable actions and sustained through social interactions within that group [28]. Anthropogenic activities that are damaging to the climate are embedded in our social norms, such as driving, flying, meat consumption, and plastic use, to name a few [26].



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In theory, changing the social norms around negative climate behaviour can serve as a potential solution; however, they are often rigid and difficult to manipulate. This is where dynamic norms may function as a potential solution, examining how trends in norms or changes in others' behaviours and beliefs over time can be utilized to move the current, static social norms to those that are more sustainable [26]. While an example of a static norm is 'most people eat meat,' the alternative dynamic norm could be 'more and more people are reducing how much meat they eat.' As such, dynamic norms imply ongoing and progressive changes in trends, whereas static norms are perceived as comparatively stagnate. An example of this can be found in a study where "people conserved more water in a laboratory setting when they learned that a growing minority of people conserved water as compared to learning simply that a minority did" [29]. Thus, it is suggested that some of the main drivers fueling interest in sustainable behaviour were related to their knowledge of other people's change in behaviour and the expectation of this trend continuing forward.



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As such, if more sustainable behaviours were framed to suggest the eventual establishment of these behaviours as the norm (pre-conformity), people may show a stronger inclination to make these changes [30]. Overall, mechanisms consequently reveal individuals' sensitivity to information about changes in collective behaviour and give individuals the power to enact social change rather than conforming to current negative norms.

As stated previously, rural populations are generally more collectivist. This is a positive characteristic that may generate collective action against climate change in these populations due to a stronger sense of social trust in communities, and thus serving as motivation to change norms and behaviour. However, it remains important not to overgeneralize rural populations as to "avoid the perspective of a simple and homogeneous group of actors may constitute a crucial element that will determine whether or not individuals engage in adaptation"[24].



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Conclusion ■

A behavioural science perspective on individual and collective action to climate change is valuable in understanding the anthropogenic drivers of environmental degradation and how to mitigate them while identifying which adaptation strategies can be implemented to build rural resiliency [5]. Embedded within these processes is a need for collective cultural transformation, which will only become more apparent over time as our health, social systems, and economy continue to endure the growing adverse impacts of anthropogenic climate change. With smaller population sizes and a dominant culture of collectivism, long-term orientation, and strong human-nature relationship, rural communities may serve as guiding points to promote the engagement of pro-environmental behaviours leading to sustainable climate adaptation strategies. Evidently, a complex adaptive systems approach to coping with the impacts of climate change is necessary to protect human health and the well-being of our communities.

We must explore alternative ways of seeing the world, which will inspire novel approaches to supporting adaptation strategies for rural communities and their services in response to a changing environment. In the next chapter, we will discuss the impacts of Climate Change and Ecosystem Disruption in rural BC through the lens of Two-Eyed Seeing, the strengths-based practice of integrating Indigenous and Western ways of knowing for the benefit of all.



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