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Industry Readiness for Change Report

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Executive summary

Climate change occurs when long-term weather patterns begin to shift and have occurred throughout the Earth's history over extended periods. The current period of climate change is often referred to as "global warming." Human activities that release heat-trapping greenhouse gases, such as carbon dioxide derived from the burning of fossil fuels, are primarily responsible for this increased rate of change. The implications of this global increase in temperature are potentially disastrous and include extreme weather events, rising sea levels and loss of habitat for plants, animals, and humans. In Canada, efforts to reduce carbon emission to the atmosphere, thereby mitigating climate change, include phasing out coal-fired power plants in Ontario, instituting a carbon tax in British Columbia and substituting renewable electrical energy sources for carbon-emitting fossil fuel sources.

– Dr. W.J. Wolfe, B.Sc, M.S, Ph.D, M.B.A

The following Industry Readiness for Change Report will demonstrate an advanced understanding of theories of planned change and change management approaches and their application to climate change as it affects the homeless population in the South Coast region of British Columbia, Canada. The report includes a description of and importance of climate change and how it has impacted the shelter industry. In addition, the author identifies the key challenges of climate change, climate emergencies, and climate hazards. The author identified the issues, critically evaluated how they may affect the change process, and determined that the region is unprepared for change; however, it urgently needs to tackle the challenges.

The critical change interventions adopted were Ulrich and Smallwood Capabilities audit and Kotter's Change model. In addition, however, the author created a circle of communication framework to facilitate the communication of a shared vision of change to better prepare the stakeholders for climate change emergencies. The author concluded that there is an urgent need to reduce human exposure to climate hazards. In preparation for climate change, the industry needs to lower barriers to shelter access. At the same time, it is recommended that the industry increase the security inside the shelters to tackle the avoidance due to fear of crime.

Furthermore, implementing innovative ideas to attract individuals to shelters, such as providing meals and allowing carts and pets. In addition, the author identified an urgent need to reduce homeless migration from outside to the South Coast region. Finally, lowering the temperature in urban areas by planting trees will help prepare for climate hazards in the future.

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1 Introduction

Climate change across British Columba (BC) is projected to increase hazards and impact the health and well-being of communities. The implications of climate change have physical and mental consequences due to atmospheric rivers that cause floods, rising sea levels, and extreme heat events resulting in wildfire events and air pollution (Vancouver Coastal Health 2021a). The following Industry Readiness for Change Report (report) will focus on climate change in the South Coast Region (SCR) and how it affects the homeless. Figure 1 is an illustration of the SCR. The SCR comprises the Fraser Valley Regional District, Metro Vancouver, the City of Vancouver (Vancity), the southern portion of the Sunshine Coast and the southwestern portion of the Squamish-Lillooet regional district; overall, the SCR covers 46,553 square kilometres (BC 2021).

The author will adopt the definition of homeless from the Canadian Observatory on Homeless (COH) that states: The situation of an individual, family or community without stable, safe, permanent, appropriate housing or the immediate prospect, means, and ability to acquire it. It results from systemic or societal barriers, a lack of affordable and appropriate housing, the individual/household's financial, mental, cognitive, behavioural, or physical challenges, and racism and discrimination (COH 2017). Throughout the report, the author refers to climate change as the process of global warming. A climate emergency is a weather situation in which urgent action is required, and a climate hazard is when a climate emergency can harm human health.

Figure 1: South Coast Region of British Columbia, Canada

Source: Developed for this report (Microsoft Bing Images 2021)

Bed-based residential services support individuals with complex physical and mental needs and are delivered in short- and long-term facilities (British Columbia 2021a). The services address the physical, emotional, societal, and intellectual needs of the three vulnerable populations, which are 1) aged care, 2) mental health and addictions, and 3) homelessness shelters and emergency housing (shelters). Bed-based services are critical to the region's economy because they provide safe and supportive lifesaving services to the most vulnerable. The sector represents 325,300 jobs and 49,900 jobs specific to assisting occupations in support of health services, demonstrating the economic importance of the bed base service sector (Statistics Canada 2021).

The report will demonstrate an advanced understanding of theories of planned change and change management approaches as it applies to the effect of climate change on homelessness in the SCR. In addition, the author will assess specific change management issues and recommend strategies utilizing Ulrich and Smallwood's (2004) Capabilities and Competence analysis and Kotter's Change model. Additionally, the author created a Stakeholder circle of communication that aims to convince stakeholders to change methods of managing climate change in the shelter industry and homeless sector to decrease injury to the people by reducing exposure during a climate emergency. The homeless population is identified as those who sleep in shelters, emergency housing, outside or spaces not intended for human habitation (Ramin & Svoboda, 2009). Figure 2 estimates the homeless population of 3154 persons counted; 44% had migrated to the SCR from another area of Canada. The reasoning for the migration of 1388 homeless people was to seek a milder climate, especially in winter, and a better life (Vancity 2020).

The report is limited to public data available on the internet of things. It contains recent news articles that are not peer-reviewed since the report is based on recent climate emergency incidents in the SCR (past 180 days). Additionally, all consequences to the homeless population due to climate change, including displaced homeless due to climate change, could not be addressed in the report because of the time and word count constraints.

Figure 2: Homeless count 2020

South Coast Region	Homeless population
Metro Vancouver	2095
Fraser Valley Regional District	895
The southern portion of the Sunshine Coast	57
Southwestern portion of the Squamish-Lillooet	107
TOTAL	3154

Source: Developed for this report (VCH 2021)

2 Key challenges

The key challenges the SCR homeless population face due to climate change identified in this report are geography, sensitivity, demographics, fear and avoidance, and supply chain. Homeless individuals, particularly those who live outdoors, are vulnerable to climate change because of heat or cold exposure. Additionally, socioeconomic status and inadequate housing conditions are risk factors for vulnerability to heat stress and heatwaves and have been known to cause injury amongst homeless populations (Ramin & Svoboda, 2009). Figure 3 is an illustration the defines injury to the homeless from climate change.

Figure 3: Injury to homeless from climate change

- Physical injury
- Electrocution
- Drowning
- Poisoning: carbon monoxide, mould
- Insect bites
- Disease: cardiovascular, pulmonary
- Infection: bacterial and viral
- Air quality injury
- Dehydration
- Hunger
- Frostbite
- Hypothermia
- Heat exhaustion
- Death

Source: Developed for this report (Creative Cloud 2021)

2.1 Geography

According to Vancouver Coast Health (VCH), determining the vulnerability that climate change has on the health of communities includes the likelihood of exposure, such as the geography of the SCR and the risk relative to inland cities (VCH 2021). The SCR has a diverse geographic landscape; it is situated on the coast of the Pacific Ocean. It has unique features that include river deltas, ice fields, temperate rainforests, coastal mountain ranges, coastal islands, fjords, and inlets (BC 2021). Intense heat, rains, winds, and flooding in BC in 2021 killed hundreds, displaced tens of thousands, destroyed billions of dollars in infrastructure, and disrupted supply chains could have resulted from climate change (New York Times 2021). However, these statistics are unsubstantiated.

2.2 Sensitivity

The sensitivity to an identified hazard due to physiological characteristics such as age and health conditions plays a key role in determining challenges to the homeless because of the increases in temperature, wildfire smoke events, flooding, and ground ozone vulnerability (VCH 2021). According to Ramin and Svoboda (2009), climate change affects homeless individuals because they have higher rates of underlying disease, resulting in increased rates of illness and death (Ramin & Svoboda 2009). Pre-existing psychiatric illness and risk factors such as disease, mental health, alcoholism, and addiction are all characteristics that are more common amongst homeless individuals and are exasperated due to storms, floods, heatwaves, air pollution, and vector-borne diseases (Ramin & Svoboda 2009). Individuals with mental health are especially vulnerable to extreme heat due to difficulty regulating body temperature, and perceived threats of climate change can further trigger stress responses and mental health (Ramin & Svoboda 2009). The heat dome of 2021 recorded triple hospitalizations in Canada's poorest neighbourhood, located in the SCR, with more people admitted to emergency rooms due to heat than anywhere else (Labbe 2021).

2.3 Demographic

Shelters are usually located in poorer neighbourhoods that tend to be more vulnerable to climate change because they have greater exposure to and inferior protection from the elements and are more likely to occupy high-risk urban areas (Warland 2014; Ramin & Svoboda 2009). Fewer trees in the urban neighbourhoods produce habitats that cannot adjust to extreme temperatures. Climate effect occurs in urban areas because the structures are built from concrete, asphalt, and metal; therefore, the structures better absorb heat that is then re-radiated, causing the temperate to be 5–11°C warmer than the surrounding rural regions (Ramin & Svoboda 2009). The Climate Reality Project (2019) argues that the homeless population experiences climate change hazards because of a lack of cold drinking water, insect infestation, and an increase in smog formulated by the ground-level ozone, leading to sensitivity to disease and stroke. People with insecure housing are at a greater risk of climate hazard physical impacts and have more difficulty recovering (Warland 2014).

2.4 Avoidance

To add to the crises, hundreds of homeless individuals will not seek refuge in shelters for various reasons such as a limited supply of beds, bed bugs, insects and pests, and viruses such as COVID 19. Additionally, the individuals have concerns with shelter staff and safety issues due to encroachment of criminal and drug use activity (Howell 2019). Additionally, shelter restrictions can be limiting with curfews and times for admission. Furthermore, homeless individuals do not access shelters because

they cannot bring their carts containing belongings and don't want to abandon their street community or safety net they have counted on during challenging situations. Finally, shelter pet policies often result in shelter avoidance because people do not want to give up their trusting pet companions (Howell 2019).

2.5 Supply chain

Supply chain disruptions that result from damage due to climate change can halt the transportation of goods and initiate panic buying. For example, the flooding hazards in the SCR, supply chain constraints and bottlenecks disrupted the flow of goods, and local grocery stores encountered shortages of meat and dairy products (Lazenby 2021). Although the global supply chain shortages have already disrupted the local supply chain due to delays on imported goods, including food, the flooding has exacerbated the situation (Lazenby 2021). As a result, food banks and food lines that feed the vulnerable in SCR have experienced a surge of need. In addition, the uncertainty surrounding supplies made it more challenging to secure supplies because of a difficulty in buying food due to price increases and purchase limits and a fuel shortage that has reduced capacity to deliver goods (Butler 2021; Hernandez 2021). Additionally, it was reported by Lazenby (2021) that public donations of food are down by one-third due to donor fatigue and competition for donation dollars.

3 Critical evaluation

Critically evaluating the geography of the SCR, Wood (2021) reports that human meddling with geography, such as draining the Sumas Lake 100 years ago and clear-cut industrial logging, has perpetuated the climate emergency in the SCR (Wood 2021; Pawson 2021). In addition, Wood (2021) reports that the regulatory government has a prominent blind spot on the consequences of industrial logging on the severity and frequency of many climate events, such as severe wildfire, water shortage and heatwaves, floods, and landslides. However, advances in weather prediction technology have increased the speed and accuracy of weather warnings by utilizing progressive observation techniques, advanced climate models, and artificial intelligence (Mayango 2021). In addition, communicating forecasts to diverse audiences has improved, as well as public and private partnerships and investments helping to improve human well-being (Alley et al., 2019).

The homeless population has a particular vulnerability to climate change. Shelter populations are physiologically characterized as sensitive and have adaptive capacity characteristics; they don’t have quality housing in neighbourhoods shaded from extreme heat by trees. In contrast, cold-related deaths and respiratory illness in the homeless population may have a minor decrease over the next 25 years due to increased warmth in the winter (Ramin & Svoboda 2009).

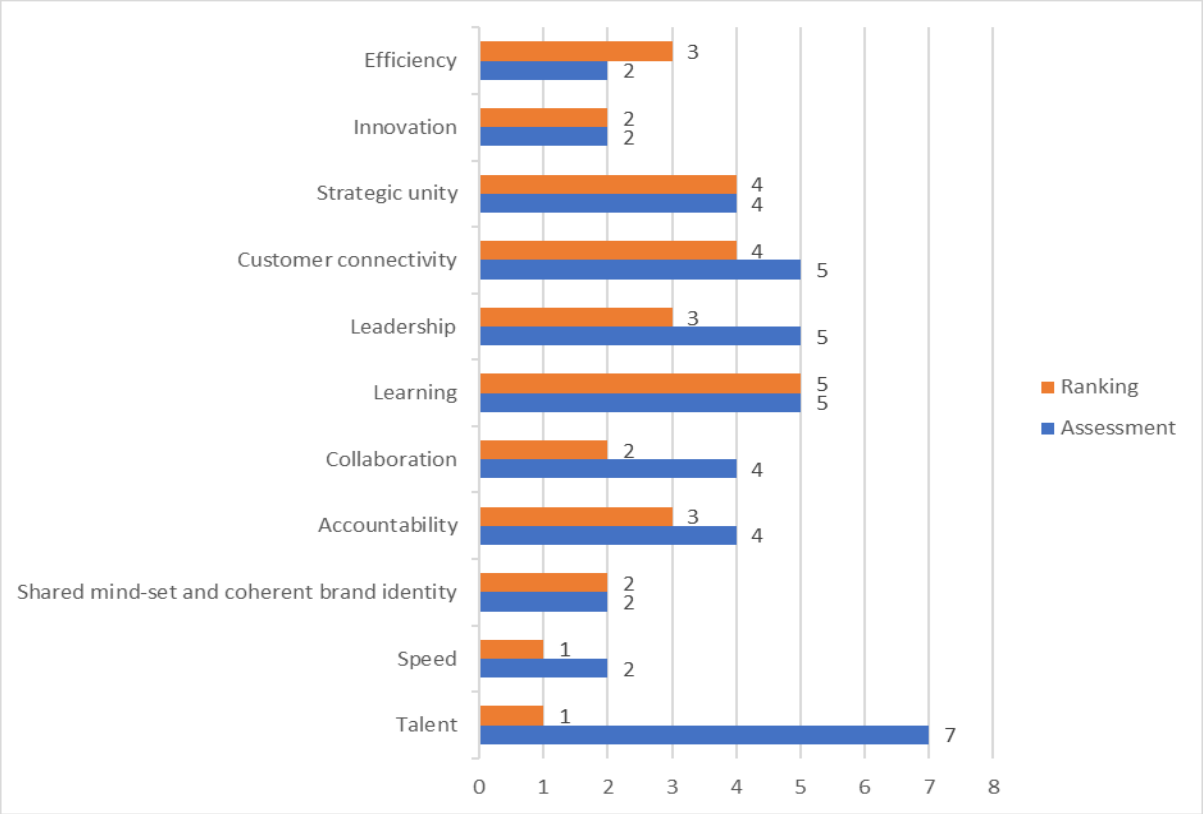
Homeless who migrate to the SCR have access to non-profit support clusters that are accused of "dumping money in, building social housing, and filling it up with people from all around the region and the country … they all get chemically dependent, and it's just more sales for the drug dealers" (Hopper 2017 para. 22). Individuals who have migrated to the SCR for a better climate get caught up in Metro Vancouver's "web of social programs" (Rufo 2020, para 9). Chan (2020) reports that migrated homeless populations' lives got worse because of criminal activity. Additionally, they spend more time in corrections and hospitals and remain homeless and unwell (Chan 2020). In fact, Rufo (2020) indicates that Vancouver's concentration of services has created a death trap for homeless addicts, who travel there to obtain drugs, overdose, and then perish in the streets.

3.1 Preparedness

Climate change is accelerating beyond the region's capacity to manage it. The Canadian Press (2021) reported that too much time had been spent adapting to climate change and not accepting climate change has arrived. Human Rights Watch (HRW) reports inadequate government support, especially the obligation to protect people from reasonably foreseeable threats to life, including climate change (HRW 2021). The HRW reported an inadequacy in emergency operations centres during a climate emergency when record-high temperatures reached up to 49.6°C in parts of BC. All the regions in BC, including the SCR, declared an internal heat emergency; however, the emergency was not made public until the heat dome subsided (HRW 2021). In addition to the heat-dome killing 575 people, months later, a subsequent flooding event pounded the SCR due to an atmospheric river that dropped 300 mm of rain in less than 48 hours (Deol 2021). The flooding event resulted in flash floods and mudslides that killed four people and washed out all four highways, consequently isolating the SCR from the rest of Canada (HRW 2021). The regional governments must change faster, given the staggering disasters across the country (Deol 2021; Canadian Press 2021). For those experiencing homelessness, finding a break from the elements has the homeless citizens facing enormous challenges coping with conditions rarely experienced in the SCR (Rodriguez 2021).

Analyzing the industry preparedness for change, the author circled back to Ulrich and Smallwood's (2004) conducted and capabilities to audit the industry capabilities and the homeless competence. Figure 4 illustrates the finding based on the industry capability (1 for the worst; 10 for best) and the capabilities in terms of the priority for improvement (1 = highest; 10 = lowest). Not surprisingly, audit results indicate that the industry lacks capabilities and has an urgent need for improvement.

Figure 4: Industry capabilities



Source: Developed for this report (Ulrich & Smallwood 2004)

3.2 Kotter's Change model

The author adopted the Kotter Change model and fashioned the model for the industry circumstance, as illustrated in Figure 5. According to the Association for Project Management (APA), the Kotter change model is an eight-step change model for helping individuals deal with transformational change to alter how an industry fundamentally operates (APA 2017). Kotter's methodology is the framework to implement change successfully and involves creating the climate for change, acting, and making the change stick. The frameworks are broken into segments: they are 1) Create a sense of urgency; 2) Build a guiding coalition; 3) Form a strategic vision and initiatives; 4) Enlist a volunteer army; 5) Enable action by removing barriers; 6) Generate short-term wins; 7) Sustain acceleration, and 8) Institutionalize change (APA 2017).

The author has simplified Kotter's model for the report by applying a change sequence that is simple, measurable, achievable, relevant, and time-bound (SMART). The overall aim is to create the climate for change by developing stakeholder communication, enabling quick action to reduce barriers to change, and evaluating the change to make it sick.

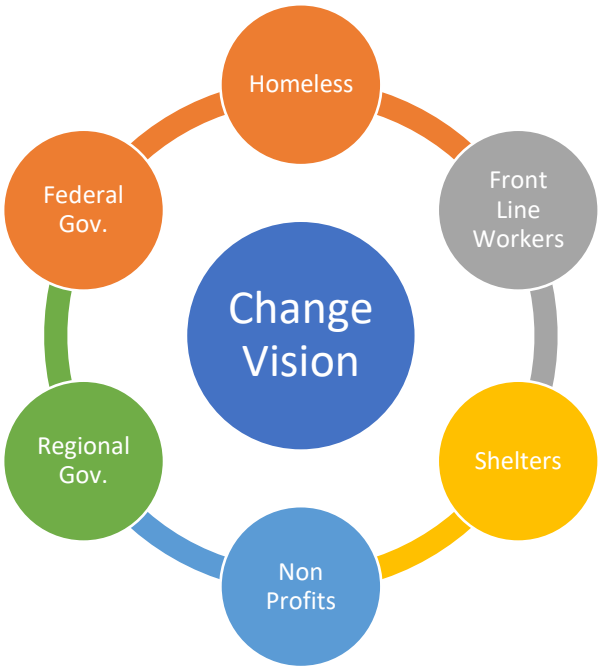
Figure 5: Kotter's change model

Source: Developed for this report (APA 2017)

3.3 Interventions

Stakeholders' communication is the key intervention to prepare for change. A communication loop is necessary for stakeholders to find common ground on a vision for change. According to Smith (2018), appealing to the hearts and minds is crucial and necessary for change. The communication should aim to decrease exposure to climate hazards by reducing the number of homeless people without shelter. Reducing barriers to accessing shelters, decreasing homeless migration from other areas, providing alternative shelter, and implementing innovative ideas to attract people to safety are simple, measurable, achievable, relevant, and time-bound (SMART) solutions. Figure 6 illustrates the stakeholder communication loop that will facilitate the industry communication and buy-in to create a vision for change. The illustration indicates that the change begins with the homeless population, who must accept the help despite concerns identified in the report.

Figure 6: Stakeholder communication loop



Source: Developed for this report (2021)

4 Recommendations

The authors believe that the overall aim should be to reduce the time individuals are exposed to climate hazards by implementing innovative ideas to encourage individuals to access shelters in a climate emergency. For example, providing a meal and beverage, perhaps following the COVID 19 protocol and paying the homeless $5 per night as an incentive to access a shelter (Mijure 2020). In addition, front-line workers must ensure the safety and cleanliness of the shelters – advocating through channels for change such as the news media and HRW. Furthermore, the shelters can ensure safety by building coalitions with enforcement agencies, hiring security trained in handling altercations, strengthening support networks, implementing medical screening to identify disease, utilizing proper bedding encasements, and zero tolerance for criminal and drug activity (Kalenteridis et al., 2021; homelessadvise.com 2021). In addition, by reducing the barrier to access shelters, such as allowing homeless to come with their belongings, and introducing shelters that allow for pets by purchasing safe and comfortable pet crates. Furthermore, ongoing training and supervision are needed, particularly in mental health and mental wellness, to better support the needs of the homeless who access the shelters (Kalenteridis et al., 2021). Finally, to save lives, regional governments must act faster in notifying the public when a climate emergency is imminent.

Reducing exposure to heat by planting well-placed tree canopies in poorer neighbourhoods can save lives. For example, modelling suggests that an individual standing directly under a tree canopy would

experience temperature reductions of more than 16 C (Labbe 2021). In addition, increasing the tree canopy can drive down temperatures across an entire neighbourhood, as can the cooling effect of water passing through the trees (Labbe 2021).

Prioritize direct service providers in the homeless sector and address the non-profit funding resource and policy gaps at the municipal, provincial, and federal level (Kalenteridis et al., 2021). According to BC Housing (2021), regional governments implemented homeless prevention programs that provide rental subsidies for at-risk groups to access private rental housing. However, there are no programs to reduce wait times for the homeless on the streets except the drop-in centres where homeless individuals can wash, do laundry, and access other services (BC Housing 2021). Build the wellness of service providers to respond to their own mental wellness needs and the needs of a vulnerable population through the provision of supervision and ongoing training (Kalenteridis et al., 2021). Finally, permanently increase the federal funding dedicated to securing hotel rooms so that the homeless could self-isolate and practice physical distancing before the availability of vaccines (Miljure 2013).

Finally, effective strategies are needed to address the migration of homeless from outside the SCR to deter them from coming due to the lack of funding and supports for the homeless, particularly during climate emergencies. Realignment of federal policies and priorities is necessary to address the worsening homeless crisis amidst the continuing pandemic and expected climate hazards (Chan 2021). The Federal Government must step in and address both local issues due to the high cost of living resulting in a housing crisis and the level of provincial and interprovincial migration to Vancouver. Ensuring its fair share of funding from the Federal Government, as well as discontinuing the flow of free drugs, might be a step in the right direction

5 Conclusion

In conclusion to this report, it has been identified that halfway through the year 2021, the South Coast Region of British Columbia experienced a series of climate emergencies, including record-breaking heatwaves and subsequent regional flooding. It was argued that the climate emergency of 2021 was due to climate change and the region's geography. The homeless population experienced injuries from the climate hazards because of their sensitivity, demographics, fear and avoidance of shelters, and supply chain disruption. The negative impact caused increased hospitals admissions.

Additionally, Vancouver's long history of pulling troubled souls from outside the region and across the country and the migration that has been fuelled by climate, history, and geography had further impacted the region's ability to help the most vulnerable find shelter. The author conducted an industry audit of capabilities and competence and determined that the industry could not undergo a substantial change; however, it is urgently needed. Utilizing Kotter's change model, the author

simplified the framework to help create a climate for change. An intervention model was created to help achieve stakeholder communication. The communication aims to build a shared vision to enable the industry's transformation and with the overall goal to decrease injury to the homeless by reducing exposure to climate hazards in a climate emergency. The author concluded that decreasing injury to the homeless could be achieved by lowering barriers to access, increasing security, experimenting with innovation to encourage the homeless to access shelter, reducing migration to the region, and planting trees in urban areas. Lastly, the regional governments must accept climate change and alert the public immediately to prevent loss of life to climate hazards.

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