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Only a Matter of Time:

The Impacts of the Cascadia Subduction Zone and Colonialism on  
Indigenous Communities in Vancouver Island

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### **Abstract**

The Cascadia Subduction Zone is a fault line that runs seven hundred miles off of the coast of the Pacific Northwest, where two borders of tectonic plates meet and have been subducting for centuries (Schulz, 2015). This fault line poses the threat of an impending earthquake and tsunami, as the subduction zone will eventually give way to the enormous amounts of pressure on the undersea plates, triggering what Schulz calls a “seven-hundred-mile liquid wall that will reach the Northwest coast, on average, fifteen minutes after the earthquake begins” (2015). The devastation this earthquake and tsunami duo will unleash upon coastal British Columbia and the Pacific Northwest will inevitably be catastrophic, with approximately 7,000,000 people being at risk of exposure to this disaster and an estimated 71,000 people living directly in the inundation zone (Schulz, 2015). Kenneth Murphy, who directs the Federal Emergency Management Agency’s Region X, the division responsible for Oregon, Washington, Idaho, and Alaska, stated, “Our operating assumption is that everything west of Interstate 5 will be toast;” under this premise it is of utmost importance for us to consider those who are most vulnerable to the risks associated with a disaster of this size (Schulz, 2015). In this paper, I will be focusing on the potential effects that a natural disaster triggered by the Cascadia Subduction Zone could have on those living on Vancouver Island, specifically the Indigenous peoples who have populated the area for centuries. The colonial history of Canada has made this population especially vulnerable to disaster by means of actions of injustice, the destruction of culture, and limitation of access to resources. The Indigenous populations on Vancouver Island have been made far more susceptible to the negative impacts of natural disasters, and

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I will highlight the risks they face due to these vulnerabilities.

### **Culture, Social Capital, and Life on the Island**

While researching this subject, I spoke to a friend who grew up living in multiple areas of Vancouver Island and is Indigenous himself. It seemed as though those who were born on the Island and are of Indigenous descent live in a mixture of traditional and modern ways, engaging in hunting and fishing practices native to their culture and heritage within the land. Many families share multi-generational households, and people on the Island often do not move far from where they grew up. Small communities on the coast and within reserves create a sense of belonging and integration between people, as the culture on the Island and types of jobs and resources available rely greatly on codependence. Within this culture, knowledge of the risks at hand due to the topographical and coastal location of the communities leads to an awareness of the dangers associated with the nearby ocean. Lack of access to far-off cities and essential services, as well as minimal exits from the Island, create a feeling of isolation and self-sustainability. In fact, Indigenous knowledge of these risks and dangers is what led to the uncovering of the Cascadia Subduction Zone's pattern in which the subducting plates react. Recurrence of earthquakes came to light when in "1964 Chief Louis Nookmis, of the Huu-ay-aht First Nation, in British Columbia, told a story, passed down through seven generations, about the eradication of Vancouver Island's Pachena Bay people" (Schulz, 2015). In telling the story, the chief spoke of an earthquake and subsequent tsunami which aided in the dating of the fault line's reaction to around 1700, which was the last known time that the Cascadia Subduction Zone had triggered a natural disaster. According to seismologists, this means that we

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are currently 315 years into a 243-year cycle (Shulz, 2015). The Cascadia Subduction Zone is far overdue for a release of pressure which would trigger an earthquake and sequential tsunami, and the knowledge of this and the risks at hand have become integrated into the understandings and way of life for Indigenous people on Vancouver Island.

My friend implied that authorities do not let the citizens along the coast forget about the potential risks; earthquake and tsunami drills are frequent, occurring in schools two to three times a year, and false alarms become more normalized the longer one stays there. The hazards at hand have become part of everyday life, and he described to me that although his grandfather may not have known what an emergency kit was, he always had a blanket, water, food, and tools in his truck, just in case. Preparedness is not simply explained to citizens in a pamphlet outlining safety procedures; it is a way of life and a mindset wherein one does not underestimate the power of the earth around them. People on the Island look to authority figures as to whether or not to take an earthquake or tsunami warning seriously; yet there is little trust in the government to provide adequate services and resources regarding natural disasters. Self-efficacy regarding preparedness is cultural, and it is unlikely for an islander to ignore natural warning signs such as receding waters or stronger than normal tremors, and support within small communities is widely available as both Indigenous and non-Indigenous people are likely to help one another.

Response to a disaster can be bolstered by social capital and the means by which people facilitate their networks and resources in order to aid one another. Social capital is described as “socially embedded resources that actors draw upon through

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their social ties for instrumental purposes,” and in disasters, this social capital can be utilized to achieve specific goals and aims in order to utilize many types of support (Elliott et al., 2010). In this, differing types of social capital can be examined. For instance, ‘bonding’ social capital occurs within inward-oriented social networks amongst similar individuals, whereas ‘bridging’ social capital occurs amongst socially differing types of people in an outward-oriented fashion. On the Island, bonding social capital is most likely to be observed, as it often occurs already in everyday life (Elliott et al., 2010). While bridging social capital would be of great aid regarding resources and services, the inherent distrust between Indigenous peoples and the government makes this seem less likely. As well as this distrust in the government, individuals in rural areas on the island are not likely to come into contact with those who live in larger urban areas, as those in cities are less likely to be prepared for disasters or to venture out to rural coastal areas to aid others. Yet it is not impossible for this to happen, and in times of disaster the best in people can be brought out through altruistic actions and bridging behaviours.

### **The Social-Psychological Effects of Disaster**

Special attention should be given to Indigenous peoples and those residing in the rural areas on Vancouver Island in terms of the social-psychological effects of disasters and the ways in which poor circumstances may affect these groups. Access to social workers, counselors, and therapists is limited on the Island, and the “pull yourself up by your bootstraps” mentality my friend described seems to be integrated within the culture. For example, my friend told me that he would be likely to go to his neighbour for help with his car, but he would never ask her how she is *truly* feeling or

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inquire about her personal problems. While this may be anecdotal and specific to one person, cultural norms surrounding mental health are stigmatized enough, and reduced access to support further complicates things. In the city, you can walk down the busy urban street to go to your psychologist appointment, which is much easier than traveling across the entire island to go to an hour-long counseling session. This is relevant to the Cascadia Subduction Zone's potential effects on Vancouver Island as it can be related to the case of Buffalo Creek, West Virginia, which experienced a flood in February of 1972. We should be concerned that the residents of Vancouver Island may experience similar collective trauma as those who lived in Buffalo Creek at the time of the flood, as the destruction of their homes and land is not only a loss of property but a loss of social relations and organization as well as the normalcy and routine one relies on. The similarities and shared ontological security within communities on the Island may mean that the residents are more likely to band together and seek refuge in one another. In doing so, residents could experience drastic social reorganization, as the separation between those who lost everything and those who suffered minimal damages may cause a divide between these two groups as they all seek to rebuild their lives. The spirit and morality of the community may also be diminished at this time, as the realization that nothing will return to the way it once was thus further adds to the collective trauma that will become integrated into the community dynamics. Deviating from former social norms is to be expected in various communities on Vancouver Island following a disaster, as residents attempt to reconnect to the communality they once shared, which may realistically only drive them further away from their former idyllic lives and organization. The disorientation and impermanence of

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time, place, and objects that were once part of the daily routine can lead to confusion and a loss of a frame of reference between oneself and others (Erikson, 1998). We ought to be concerned about this, as a divide between before and after the disaster may cause a blurring of logic, a loss of meaning, and an uprooting of values that once held the community together, and this compounding of individual and collective loss and trauma experienced can lead to a complex struggle among those left in the wake of a disaster (Erikson, 1998). Erikson details this battle eloquently, stating, “people have heavy loads of grief to deal with, strong feelings of inadequacy to overcome, blighted lives to restore—and they must do all these things without much in the way of personal resources or self-confidence...The inability of people to come to terms with their own isolated selves is counterpointed by an inability to relate to others on an interpersonal, one-to-one basis” (1998, p.159). This isolation found in the experience of loss of communality is especially treacherous in a post-disaster context, as relatability and reliance upon one another is exactly what a community needs to move forward and survive and is essential in the rebuilding of various communities on the Island in a post-disaster context.

### **Colonialism and the Biopolitics of Disposability**

When addressing Indigenous peoples within Canada, it is necessary to consider the ways in which colonialism, racism, and the biopolitics of disposability have come to influence treaties, the placements of reserves, the allocation of resources, and the attention paid to inequality. Following a disaster due to the Cascadia Subduction Zone, Vancouver Island will inevitably face catastrophic damages. Unfortunately, vulnerability to disaster is inherently linked to race and class, due to a “long history of racist and

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exclusionary practices which have marginalized and spatially segregated groups of people deemed intrinsically inferior by those holding political and economic power” (Bolin & Kurtz, 2018, p. 182). Indigenous peoples who live in communities along the coast of the island are inherently linked to topics regarding environmental justice, as this intersection between race, class, and environmental hazards creates a burden of preparation and response upon the people most greatly affected by these outcomes. Disparities in geographical allocation is a physical representation of inequality, and Indigenous peoples in Canada have a long history of being forced off of their land and sequestered to areas that were otherwise deemed unfavourable. In the case of communities on Vancouver Island, many reserves are in vulnerable locations. This henceforth supports the argument that “natural” disasters are not the divinely created and entirely unavoidable calamities that government agencies attempt to construe them as; rather, they reflect an inherent intersection between social, political, and economic relations to race and class that determines which people and properties are expendable in a disaster (Bolin & Kurtz, 2018). The Canadian government has long since proven their stance on reconciliation through the building of pipelines upon unceded land, a destructive history involving residential schools, and attempts at assimilation, which have created vast mistrust between Indigenous peoples and the government themselves. In fact, “in 1884, a total of 800,000 hectares of land was given to the E&N Railway Company as payment to build a 115-km rail line on Vancouver Island between the settlements of Esquimalt and Nanaimo,” with the land in question belonging to numerous Indigenous communities (Ekers, 2019, p. 271). The land upon which the railway companies built was unceded but had since become privately owned



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finance capital. Deregulation in the forestry industry and the settler-colonial practices within Vancouver Island also exemplify the ways in which mistrust has grown and evolved over the decades of imperialistic policies, which have placed Indigenous peoples at odds with the ruling governments. In the case of Vancouver Island, it does not seem as though it will simply be a coincidence that the areas that will be most damaged by a tsunami and earthquake are those which legally belong to Indigenous peoples, nor that aid will realistically take days to reach them. Indigenous peoples have a strong connection to their land and heritage, and it is concerning that their ontological security will be further threatened and damaged by this potential disaster. Limited amounts of precautions taken and the distrust between the government and individuals predisposes further vulnerabilities upon those who have been marginalized for their identities since before Canada was even created.

This disparity not only exists on a racial level, as wealth is also of great concern within coastal British Columbia. Real estate prices within Vancouver and surrounding areas are astronomically high, and seeing as wealth inequality already determines the location of one's home, business, and other owned property, this disparity would only further widen after a disaster. In the case of Vancouver Island, those who live closer to the coast and flatter topography of the ocean shore will incur the most damages to their property, while the residents on higher ground, who are further inland or reside on the mainland itself, will incur less damage. Howell and Elliott examine the phenomena wherein less-privileged residents often suffer the most economic losses, along with social and cultural resources, after hazards hit, while "more-privileged residents, by contrast, tend to recover more quickly and may even benefit financially" (2019, p. 449).

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The compounding effects of disasters creates a “social problem in their own right,” as social stratification further increases after a hazard’s impact, with the long-term effects of wealth inequality affecting educational attainment, physical health, and emotional well-being (Howell & Elliott, 2019, p.449-450). These issues are inherently tied to race and to what Henry A. Giroux coins the “politics of disposability” (2006, p. 172). In this, Giroux argues that longstanding racial issues are inherently tied to class and income, with stereotypes such as the welfare state inadvertently being blamed on people of colour and, in the case of Canada, often Indigenous peoples (2006). As exemplified in disasters such as Katrina, it is evident that the media and government attempt to cover their tracks, insisting that “disaster was more about class than race, more about the shameful and growing presence of poverty, and the abject failure to provide aid to the most vulnerable” (Howell & Elliott, 2019, p. 174). Giroux contrasts this with the reality of racism in society and how it is inherently linked to class, stating “the bodies of the Katrina victims laid bare the racial and class fault lines that mark an increasingly damaged and withering democracy and revealed the emergence of a new kind of politics, one in which entire populations are now considered disposable, an unnecessary burden on state coffers, and consigned to fend for themselves” (2006, p. 174). Katrina truly highlighted the stark reality of the intersection of race and class, and how racism in society is still very prevalent and has evolved in the ways in which it is enacted. This is seen in Canada in regards to Indigenous peoples in many ways, and there is not a foreseeable difference in the ways in which aid, policy, and attitudes towards Indigenous peoples would take place, as a long standing history of mistrust, division, and injustice sets the scene for a pessimistic view of disaster response on

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Vancouver Island.

### **Gender Patterns and Migration in Response to Disaster**

In this state of mistrust from the government and a self-sustaining world within reserves, how Indigenous people would respond to disaster should be examined, especially in terms of who would make the calls in times of uncertainty. I spoke to my friend from the Island about the influence of gender, power, authority, and communality on decision-making regarding disaster response. He explained that his mother was more likely to be worried about warnings regarding natural disasters than his father, and that she would look to others in the community for how to respond, whether it was to evacuate or shelter in place. This experience falls in line with Enarson and Scanlon's research on gender patterns in flood evacuations, as they found that the disparity between men and women is highlighted in roles taken on during disaster preparation, such as packing and childcare for women or sandbagging for men; hazard awareness, with women being more accurately aware of and informed of the hazards compared to men; and in evacuation, wherein women and children are more likely to evacuate than men. When it came to evacuation, males were more likely to discourage leaving, as they had not only normalized flooding but considered planning and information seeking by their female counterparts to be overreactive (Enarson & Scanlon, 1999). In this, we also can identify a potential problem for flooding, tsunamis, and earthquakes on Vancouver Island, as the normalization of previous alerts experienced by long-term residents of the communities will make it less likely for citizens to evacuate, especially when compounded with this phenomenon in which men discourage migration. Enarson and Scanlon also found that the elders in the families discouraged evacuation (1999).

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One can assume that long-term residents would also encourage newcomers not to evacuate, therefore increasing the safety risk as people remain in harm's way, especially if this were to happen on a reserve, where elders' advice is taken very seriously and is highly respected (Enarson & Scanlon, 1999).

While opinions on evacuation and the perception of risk varies by gender, the roles within the evacuation context also affects how individuals respond and act within a disaster situation. As Haney et al. examined in their article on families and response during Katrina, social roles and responsibilities are often divided amongst people based on parenthood, gender, and employment (2007). In times of crisis, gender roles are reinforced and become more pronouncedly traditional, as schemas about how individuals are to behave in such a context are pursued and therefore follow a predictable female/male binary (Haney et al., 2007). For example, it is assumed that men stay behind and protect the home while women evacuate with the children; that women provide nearly all the childcare required; and that men are more likely to work longer or throughout the disaster while women's employment may suffer (Haney et al., 2007). In this, we can also observe how these assumptions of gender come from a privileged perspective wherein a family has the means to evacuate or maintain employment at the time of a disaster. Haney et. al also note the reality that "financial resources are likely to influence the likelihood of evacuation" and that "race and class stratified social networks may also differentiate how individuals experience stress after a disaster" (2007, p. 77-78). This accounts for the ways in which race and class compound in the disaster context, making people of colour, immigrants, and those of lower income more likely to experience distressing times during a disaster and struggle

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within the family cohort due to financial disadvantages, the application of gender roles, and the inability to evacuate. Overall, the conflict between masculine and feminine understandings and perspectives of disaster is made contentious due to the ways in which we are socialized and interpret our own gendered response, as “gendered strategies of self are not only used individually to construct superior selves, they are collective efforts that serve a collective end: defining and imposing boundaries between groups” (Pacholok, 2009, p. 494).

### **Intergenerational Trauma and Vulnerabilities**

Overall, the Cascadia Subduction Zone has the potential to cause vast destruction along the west coast of North America, affecting thousands of people and their livelihoods. Yet, in this paper I chose to specifically examine Indigenous peoples on Vancouver Island due to the geographical location of their reserves and the vulnerability associated with it, as well as the compounding effects of colonialism that has stemmed from persistent racism. The negative effects of colonization in Canada amongst Indigenous peoples is apparent to this very day and is evident across a wide scope of issues including loss of language, culture, land, identity, traditions, knowledge, and spirituality. The loss of these aspects is an extremely harmful situation that has been perpetuated for decades by inherently colonial structural processes within Canada, which further pathologize and marginalize Indigenous peoples. It is concerning that the biopolitics of disposability in Canada specifically targets Indigenous peoples, and that deeply rooted intergenerational trauma will affect the ways in which communities will respond to disaster, seek aid, and cope with the devastation in the aftermath. As it stands now, the suicide rate for the general Canadian population has

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decreased over the past two decades but has risen among many Indigenous communities (McQuaid et al., 2017). In a national representative study of Indigenous peoples from 2008-2010, “22% reported having had thoughts of suicide at some point in their life, and 13% had made an attempt. In comparison, 9% of non-Indigenous Canadians reported suicidal ideation in their lifetime” (McQuaid et al., 2017, p. 423). This shocking discrepancy can be explained by the tendency for Indigenous peoples to be exposed to adverse childhood experiences and lasting problems throughout their lives, such as trauma, mental health issues, and substance abuse. These factors, combined with colonial practices that caused imminent harm to the culture, spirituality, language, community, and individual health of Indigenous peoples have forever damaged and altered the well-being of said people. The Canadian government contributed further to these collective stressors and traumas by carrying out the practices of Indian Residential Schools (IRSs) from the years of 1863 to 1996, as forced assimilation sought to eradicate the Indigenous identity (McQuaid et al., 2017). While the IRSs have been closed for over 23 years, the negative effects can still be seen today in the resulting intergenerational trauma. Through symptoms such as the use of the child welfare system, suicide rates, domestic violence, substance abuse, and overall reduced quality of life, it is evident that these communities have been mistreated ever since initial contact with colonizers, and was further compounded with trauma throughout the implementation of the IRSs.

Intergenerational trauma can have negative physical, social, and cognitive implications that manifest in many different ways. Although the Indigenous community at large has remained resilient to these effects, intergenerational and historical trauma

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cannot be ignored. In Wilk et al.'s article on the scope of well-being of Indigenous people in Canada, they focus heavily on this historical trauma and suggest that "the effects of these disruptive historical events are collective, affecting not only individual Survivors, but also their families and communities" (2017, p. 2). The concept of historical trauma allows for a way to contextualize how the "traumatic events endured by communities negatively impact individual lives in ways that result in future problems for their descendants" (Wilk et al., 2017, p. 2). These effects are all-encompassing throughout the intersections of one's life, as it has been found that the children of IRSs survivors have poorer health status than those that attended the schools themselves (Wilk et al., 2017, p. 17). Adverse health effects due to the intergenerational trauma resulting from IRSs that were observed in the study included "medical and psychosomatic conditions, mental health issues and post-traumatic stress disorder, cultural effects such as changes to spiritual practices, diminishment of languages and traditional knowledge, social effects such as violence, suicide, and effects on gender roles, childrearing, and family relationships" (Wilk et al., 2017, p. 19).

These factors contributing to the vulnerabilities of Indigenous populations highlight the ways in which intergenerational trauma will likely make it difficult for them to respond to disaster. Indigenous communities on Vancouver Island hold this legacy of mistreatment and injustice at the hands of a colonial government and have passed down this trauma and inherent mistrust in the government throughout generations. This will make it particularly difficult to implement preparation plans, to respond properly after the disaster, and to observe and intervene within communities afterwards; and rightly so. Indigenous communities on the Island and across Canada have adapted and

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created new ways of life while incorporating traditional practices and engaging in resilient and activist fashions. While the self-sustaining culture and traditional means by which Indigenous communities choose to exist may bring about ties to one another, the land, and the manner in which they govern themselves, it is necessary to consider the vulnerabilities which are present within this framework.

### **Avoiding a Corrosive Community**

An aspect related to the political economy that should be taken into consideration to ensure that recovery occurs effectively and orderly is to account for the possibility of the development of a corrosive community. A corrosive community is created following the negative effects of some disasters and entails the damage that is done to individuals and communities over a long period of time, including environmental, psychological, social, and economic disparities (Picou et al., 2004). While this term is often attributed to technological disasters, it lends itself to be extremely relevant to the potential disaster and negative consequences of the Cascadia Subduction Zone. Corporations and individuals who are profiteering in the wake of a disaster may in turn contribute to the creation of a corrosive community, as the long-term interests of residents of differing economic standings are not of priority. The effects of such immoral actions could “permeate community social structure, producing social responses that are both emergent and constraining” (Picou et al., 2004). These systemic events that are implemented and allowed for by the government contribute to an overall social definition of the situation and in turn, citizens who are most socially vulnerable suffer the most adverse effects. With this in mind, Picou et al. suggest that an alternative to these negative foreseeable outcomes is to engage in the



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development of a therapeutic community instead, as social, economic, and financial support that is received in a timely manner lends itself to a “consensus-type” recovery (2004, p. 1495). This analysis is especially relevant to the case of Indigenous people living on Vancouver Island, as we have seen in the past that continued exploitation of the land they live on has occurred for centuries and perpetuates cycles of inequality, colonialism, racism, and distrust.

The development of a therapeutic community in a post-disaster context would entail aid being sent in a fashion that is complementary to the ways in which Indigenous peoples conduct themselves and their lives, as consideration of how they would like to receive aid should be prioritized. In order to avoid the creation of further distrust and division, Indigenous people should be involved in decision-making regarding the modality of aid and the ways in which rebuilding the community should take place. To truly rebuild a community that would be able to once again have ontological security, the involvement and investment in the communities on a governmental and communal level should be considered. At this time, it would be imperative for the government to act in accordance with treaties and laws regarding unceded land, as further exploitative practices that could occur in the wake of disaster would add to growing tensions between these groups. Rather than capitalizing on the chance to gain profit off of the Island's resources in a post-disaster context, the Canadian government would be faced with an opportunity to finally act in accordance with Indigenous peoples' interests and uphold the values they claim to have.

## **Conclusion**

Vancouver Island is home for many Indigenous people of Canada from varying

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regions and communities who are faced with multiple challenges regarding their natural environment. While Indigenous culture is highly integrated with the earth around them and the traditions they uphold, risks can be present within the same land they cherish. The Cascadia Subduction Zone that lies within the Pacific Ocean is itself a threat to coastal British Columbia, as an earthquake and tsunami are predicted to take place at any time. Preparedness for disaster can truly make or break one's response to an emergency situation, and Islanders along the fault line have integrated preparatory practices within their culture. Yet, vulnerabilities are always present among populations at risk of natural disasters, and the adverse conditions many Indigenous people within Canada have faced are of no exception. Issues regarding mental health, poverty, resources, and stability are byproducts of long-standing colonial practices that have predisposed Indigenous populations to these adversities, despite their resilience and willingness to support one another through decades of settler-colonialism. Social capital within reserves and various communities on Vancouver Island will be necessities in the wake of a disaster, and both bonding and bridging practices will aid islanders in their efforts to recover from a disaster. In addition to an awareness of the power of social capital to help during and after an emergency situation, an analysis of gender patterns and roles within this response can shed light on the manners by which action is taken. The tight-knit culture of communities on Vancouver Island amongst Indigenous peoples is a strength through which healing can take place in response to collective and individual trauma, and the hopes of building a life beyond the colonial regime through which they have been influenced by for generations will become a potential reality. Timely responses of aid and the transparency in policies regarding

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rebuilding in the wake of the disaster provides a channel by which further healing can take place between the government and Indigenous peoples, as this presents an opportunity for collaboration and the development of a therapeutic community. At this time, one can only plan for preparation and keep these aspects in mind as they hold the government accountable for their hand in the creation of these social issues. Islanders must continue on in resiliency and strength as they have for centuries, bracing for the impact of the “really big one.”

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