Climate Change and Mental Health

A systemic approach to action in post-secondary education

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This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organisations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of UBC Sustainability Initiative staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the University of British Columbia.

Acknowledgement

This research was conducted on the unceded lands of the Coast Salish Nations, namely the sḵwx̱wú7mesh, xʷməθkʷəy̓əm, and sel̓íl̓witulh peoples. When researching and writing about the impacts of climate change on mental health, it is particularly important to start by acknowledging that this research was done in a place where there is a long history of trauma tied to the destruction and dispossession of land, and environmental change. Indigenous communities have long been (and continue to be) disrupted, displaced, and marginalized as their lands have been exploited and desecrated by colonization. Thus the climate crisis and its impacts on mental health must be understood as a continuance of the long felt anxiety, grief, and trauma caused by disruptions in relationships to land, and the climate crisis is perhaps felt more acutely for Indigenous communities whose identity, culture, and way of life are intimately connected to place. A simple acknowledgement does nothing to rectify these issues, but it would be amiss to write about climate change and mental health without acknowledging that there is a much more fundamental crisis ongoing in the place this report was written.

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Executive Summary

With temperatures increasing globally, sea levels rising, and intense storms and flooding becoming the norm rather than the exception, the climate crisis has demonstrated far reaching implications for people and the planet, implications that will only become more serious as the crisis continues. When considering the crisis, immediate concern is usually placed on physical health and safety. What often goes unnoticed is the mental and emotional toll the climate crisis is taking on individuals and communities. Direct and indirect stressors from climate change, as well as the overarching psychological and psychosocial challenges associated with acknowledging the magnitude of the crisis, lead to mental distress and disrupt mental health and wellbeing. Addressing the challenges that the climate crisis poses to mental health, and finding ways to live with and adapt to the overarching psychological and psychosocial weight of the crisis is needed to build healthy and resilient individuals and communities.

This report was commissioned by the UBC Sustainability Initiative to explore the climate crisis's impact on mental health and wellbeing in the context of post-secondary education with aims to better understand how post-secondary institutions may take action to address these issues. The report begins with a review of current research on the impacts that the climate crisis has on mental health, then explores the complexity of these impacts and how they may be understood within the context of post-secondary education.

The second half reports on research that was undertaken to understand how post-secondary institutions have begun to address these issues. While action has been somewhat limited in post-secondary educational settings, even among those institutions thought to be leaders on climate action and sustainability, findings show that individuals and groups within campus communities who are experiencing adverse mental health effects from the climate crisis are beginning to raise awareness and advocate for these issues. Many have also begun to organize support groups, workshops, and other initiatives to support coping within their communities.

Based on action currently underway, as well as the available research on climate change and mental health, the report argues the need for a systemic approach to addressing these issues. It details a list of questions and considerations that post-secondary institutions need to consider if they are to address the climate crisis holistically and ensure every individual within the campus community is supported toward mental health and wellbeing. Such an approach must include a consideration of the broad context of the institution and how it supports mental health and wellbeing through its institutional structure, organization, planning, and policies, as well as how it creates a supportive climate and culture for students, faculty, and staff. Creating a context that supports mental health and wellbeing in the face of the climate crisis requires a focus on mental health awareness to increase knowledge and understanding of these issues. It also requires developing community capacity to respond to early indications of

concern. Students, faculty and staff must feel competent in coping skills that strengthen their resilience and their ability to manage their own mental health and wellbeing. In cases where more support is needed, mental health services and programs must also be ready to provide support both in building self-management competencies and coping skills, as well as additional services in times of crisis.

Based on a systemic understanding of mental health and wellbeing in post-secondary institutions, a list of recommendations is included that will help institutions such as UBC begin to take action. A few of these recommendations are included below and are more fully discussed in the final section of the report.

Research and Planning

- More in-depth research is needed to better understand the nature and extent of the impacts the climate crisis is having on mental health within the campus community in order to better inform the ways programming and services can be adopted to help address these issues within specific campus communities; More research is needed to better understand the actions other post-secondary institutions are taking;
- Create a taskforce of researchers, students, staff, and faculty that have relevant expertise and experience to drive action on climate change and mental health;
- Organize a student forum that brings individuals and student groups together to discuss these issues and communicate needs.

Awareness and advocacy

- Provide information and resources to students, faculty, and staff in ways that are easily accessible;
- Take steps to insert the climate crisis into the campus community dialogue on mental health, and insert mental health and wellbeing into the campus community dialogue on sustainability and climate action (through relevant websites, social media, at events, etc.);
- Carefully consider messaging on climate change. What are the narratives created in the university regarding the climate crisis? How is the crisis framed in messaging? Does the overarching narrative promote agency, mental health, and wellbeing?
- Create a place to collect and share stories from the campus community that includes student, staff, and faculty voices, how they are impacted, and what ways they are coping.

Teaching and learning

- Create teaching and learning supports around climate change and mental health for those who are addressing climate change and the wider ecological crisis in their courses. This could take the form of a workshop by a trained facilitator that may be invited into the classroom or training for faculty and staff who would like to address these issues with their students themselves;

- Create an undergraduate seminar course on climate change and mental health with a focus on reflection, building self-management competencies, and coping;
- Develop a non-credit, asynchronous online Climate 101 course to make sure all students have access to correct information;
- Identify courses at UBC that deal with the climate and ecological crisis and invite instructors and teaching assistants associated with these course to a workshop on teaching, climate change, and mental health.
- Increase support and resources for community engaged learning opportunities that provide students the opportunity to take meaningful action on the climate crisis in connection to their studies.

Coping and Self-Management Strategies

- Build additional supports for both faculty and graduate students who are undertaking climate research;
- Provide training and resources for student groups who are organizing around climate and environmental crisis and are interested in learning how to better support and take care of one another in their work;
- Develop workshops for students, faculty, and staff on self-management competencies and coping; Bring in experts in community care from outside of the university to give workshops or presentations at UBC on climate grief and anxiety;
- Establish peer support or community care groups with formal support and resources from the university.

Mental Health Services

- Provide counsellors and other mental health service professionals training on climate change and mental health;
- Develop closer relationships and lines of open communication between Counselling Services and student groups on campus who are identified as likely to experience negative mental health effects related to the climate crisis;
- Develop relationships and lines of communication with student groups who are taking action on the climate crisis. Students presenting eco-anxiety may be referred to these groups or action oriented communities in order to help with coping;
- Develop a baseline to be used to assess the impacts of the climate crisis on an individual's mental health so that an effective plan may be developed for support;
- Research existing tools or develop new ones to help inform therapeutic and coping support provided to the campus community (See collected tools in Appendix B);
- Create an emergency plan to address mental health in the wake of a more direct climate crisis.

Climate Change and Mental Health

Introduction

Temperatures are rising globally, ice at the poles is melting at an alarming rate, sea levels are rising, and intense storms and flooding are beginning to become the norm rather than the exception. The impacts of the climate crisis have been far reaching with significant implications for people and the planet. These impacts will only become more acute and stressing as the crisis continues. After a catastrophic event like a natural disaster, response efforts generally focus on physical health and safety. What often goes unnoticed is the mental and emotional toll the climate crisis is taking on individuals and communities. An increase in the frequency and intensity of natural disasters leads to trauma, post-traumatic stress, and other acute mental health consequences, while more incremental changes to our environment such as increasing temperatures and rising sea levels threaten food security and economic livelihoods, cause migration, mass displacement, and disrupt lives, communities, and cultures, all of which have significant consequences for mental health and wellbeing. Beyond tangible impacts, the climate crisis also causes overarching psychological and psychosocial distress. People experience grief and sadness for what has already been lost and what will be lost in the future, a sense of hopelessness faced with the enormity of the problems, and fear and anxiety of what the future will hold in a rapidly warming world.

While we do not know exactly how many people are experiencing challenges to mental health due to the climate crisis, a 2019 survey by the Yale Program on Climate Change indicated that 66% of Americans polled reported that they are "worried" about climate change, and about 30% reported being “very worried,” a number that has seen a three-fold increase in the last five years (Leiserowitz et al., 2019). Perhaps it would be more alarming if people were not becoming increasingly worried? Fear, anxiety, and grief are a normative and healthy response to the challenges of our times and can lead to action. On the other hand, too much worry, anxiety, fear, and grief can be debilitating and could carry long term implications for society. As psychologists, psychiatrists, and other medical professionals around the world begin to see an uptick in the number of patients who are experiencing mental health consequences of the climate crisis, they have started to raise awareness, work to legitimize these mental health concerns in the established medical community, and to take them more seriously in research and practice (Cunsolo & Ellis, 2018; APA, 2017; Berry et al., 2018). However, research to understand the relationship between climate change and mental health and inform action is still quite limited (Berry et al., 2018; Cunsolo & Ellis, 2018; Berry et al., 2018). This is especially true in the post-secondary setting where research on the implications of the climate crisis on mental health is only just beginning (Pfautsch & Gray, 2017; Mānoa Institutional Research, 2018; Kelly, 2017; Ojala, 2016). This report hopes to add to this emerging understanding of climate change and mental health in the context of post-secondary

education to help further a conversation about how academic institutions might respond to the challenges the climate crisis poses to mental health and wellbeing.

The report begins with a discussion of current research on climate change and mental health to lay a foundation for understanding these issues in the context of post-secondary education, then moves to discuss findings from research that explored the actions that are currently underway to address these issues in post-secondary institutions. These findings and the research available point to the importance of approaching action, research, and planning from a systems approach to ensure post-secondary institutions are able to address the issues holistically and meet the needs of diverse populations within the campus community. Finally, the report concludes with recommendations on how post-secondary institutions may better support individuals dealing with the impacts of the climate crisis in order to both mitigate negative mental health consequences and ensure wellbeing.

Impacts of the Climate Crisis on Mental Health

Like other mental health challenges, the mental health impacts of the climate crisis may be understood according to a dual continuum model of mental health and mental illness highlighting two distinct but interacting continua: (1) the existence of *mental illness* which may include impairment such as trauma or psychiatric implications, and (2) *mental health and wellbeing* which includes the degree to which an individual is able to achieve optimal mental health in a given context (Doherty, 2018; CACUSS, 2013). In other words, while mental illness refers to the occurrence or absence of trauma, impairment, or disorder, mental health and wellbeing includes an individual's ability to manage stress and deal with challenges, maintain healthy relationships, realize their potential, and meaningfully contribute to their communities (Doherty, 2018; CACUSS, 2013).

Beyond these two continua, the impacts of the climate and ecological crisis on individual and community mental health and wellbeing can be understood in a number of ways (Clayton et al., 2017; Doherty, 2018). A conceptual distinction can be drawn according to the time of onset of mental health issues. For instance, the impacts of climate change on mental health may be immediate, after a catastrophic event, or may emerge months or years later (APA, 2017; Hayes et al., 2019). Negative mental health consequences may further be understood according to the way individuals and communities experience the climate crisis: directly, indirectly, or vicariously (overarching psychological and psychosocial effects) (Doherty, 2018). Understanding the differing experiences of the climate crisis and its impacts on mental health provides a foundation to better understand mental health consequences in specific contexts including post-secondary institutions, and will be discussed in more detail below.

Direct

Most of the research that has taken place on climate change and mental health pertains to the direct impacts of the climate crisis (Hayes and Poland, 2018; Cinaconi et al., 2020). Direct impacts of climate change include disasters such as wildfires, floods, drought, hurricanes, and heatwaves which happen more frequently and are made worse by climate change. When associated with a specific climate or ecological disaster or event, individual psychosocial impacts might include acute trauma such as PTSD, major depressive disorder (MDD), complicated grief, survivor guilt, recovery fatigue, or mid to long term effects such as anxiety, stress, depression, drug and alcohol abuse, and suicide (Hayes and Poland, 2018). It is important to note that disasters may also disrupt ongoing efforts that support positive mental health and wellbeing. For instance, mental health services may be disrupted by disaster including access to medications, support groups, and medical professionals. And opportunities for activities that promote wellbeing may not be available or be given priority during recovery, for instance leisure time, physical activity, or social and community events, which can compound the effects of the crisis on mental health.

However, it is important to note the psychosocial impacts are not always negative. A climate related disaster might also trigger healthy and positive psychosocial experiences such as altruism, resiliency, empathy, post-traumatic growth, and compassion in individuals, as well as create social cohesion and resiliency in communities (Hayes et al., 2018).

Indirect

Beyond natural disasters, the climate crisis impacts mental health in less direct ways. Indirect impacts refer to issues that ripple through societies and cultures or stressors that result in more incremental changes such as rising sea levels, changing temperatures, episodic drought, melting permafrost, deforestation and other changes to landscape. Through incremental changes, the climate crisis threatens food security and food sovereignty, disrupts water sources, weakens infrastructure, leads to migration and displacement, stresses livelihoods, and threatens social supports that positively support mental health and wellbeing (Clayton et al., 2017). As a result of these indirect impacts and the disruption they cause, individuals may experience compounded stress, anxiety, aggression, depression, drug and alcohol abuse, suicide, etc.

One illustrative example of the indirect impacts of the climate crisis on mental health and wellbeing is the effect warming temperatures may have on individuals and communities. For example, an individual whose livelihood is closely tied to agriculture may face changing and inconsistent weather patterns or new pests that have been introduced to an area due to a warming climate. The stress caused from failed crops or less productive harvests can have serious implications for mental health and wellbeing. Warming temperatures can also cause stress more directly. For instance, studies show that rising temperatures effect psycho-physiological functioning by changing bio-chemical levels of serotonin and dopamine, heat can cause disruptions to sleep and lead to exhaustion, and rising temperatures can even

influence levels of aggression, which can lead to increased interpersonal violence such as crime, domestic abuse, and homicide (Cianconi et al., 2020; Clayton et al., 2017; Manning & Clayton, 2018). Studies also show that increasing temperatures are a risk to individuals with existing mental health concerns and often result in increased use of emergency services for mental health and psychosocial problems not only in countries traditionally thought of as hot but also in countries like Canada (Vida et al., 2012; Manning & Clayton, 2018).

The indirect impacts of the climate crisis can also lead to challenges on the communal level. Indirect climate impacts can disrupt a sense of community and belonging as communities experience changes in their identity and the way they are organized. For example, Inuit communities face new challenges as travel is disrupted and hunting and fishing activities are hampered due to loss of sea ice and changing fish and animal populations. Traditional ways of living are being disrupted and the difficulty of continuing traditional practices threatens cultural identity. Other examples of community disruption due to Incremental or indirect stressors are disruptions to social cohesion and increased conflict and violence between communities. Conflict will become increasingly common as populations begin to migrate to different areas in search of resources or away from threats. Changes to community organization, identity, and social cohesion, as well as increases in conflict all lead to long-term impacts on mental health (Clayton et al., 2017).

Again, it is important to note that the effects of the indirect impacts of climate change may also be positive in that they may help create social cohesion, create shared meaning and purpose for communities, or cause individuals and communities to better understand the threats the climate crisis poses and find ways to take action. However, very little empirical research has been done in this area (Hayes and Poland, 2018).

Vicarious

Finally, impacts on mental health may not be tied to specific events or incremental stressors, but instead may be due to the awareness of the current and future threats climate change poses to the wellbeing of people and the Earth. In other words, even if individuals are somewhat distanced from direct and indirect climate impacts, they may experience overarching psychological and psychosocial distress or trauma. These issues have received little attention in the research, perhaps because they are more difficult to measure and do not seem as pressing in comparison to the acute crisis that many around the world are experiencing. However, the vicarious impacts of the climate crisis on mental health are increasingly being recognized as a growing mental health concern with significant implications for the future (Hayes and Poland, 2018; Hayes et al., 2018).

As individuals watch the climate crisis unfold, bear witness to the direct and indirect impacts on others, watch the destruction of the Earth and other species, and come to terms with threats to their own lives and the lives of future generations, they may experience feelings of loss, frustration, anger, anxiety, and

helplessness (Hayes et al., 2018). The risk for vicarious impacts on mental health is higher in certain populations. For example, those who are educated on the climate crisis and environmentally aware, individuals who understand their identity as connected to nature, professionals whose day to day work is related to the climate and ecological crisis (climate scientists, researchers, community organizers, students studying climate), those who are exposed to climate stressors (journalists, medical professionals, disaster response professionals), and young people who understand that the worst effects of the climate crisis are yet to come (Doherty, 2018; Helm et al., 2018)

However, it is again important to note that vicarious impacts of the climate crisis on mental health are not necessarily negative. In fact, many consider these issues to be a normative and healthy response to the climate and ecological crisis. Addressing these issues on the individual level and learning to cope with the uncertainty and enormity of the crisis can develop resiliency and can even be empowering in that they engage people in issues and lead them to take action. These positive impacts will be discussed in more detail below. First, it is important to briefly discuss the complexity of the impacts of climate crisis on mental health.

Understanding the Complexity of Climate Impacts on Mental Health

These categories used to explain experiences of the climate crisis – direct, indirect, and vicarious – are not mutually exclusive. Many are experiencing direct, indirect, and vicarious impacts at the same time, compounding the mental health consequences of the crisis. Individual experiences of climate impacts on mental health may also vary in their severity and interact in complex ways with existing stressors. For example, an individual may experience a single impact such as a flood that forces them to relocate but they may be resilient and easily adapt to a new environment. On the other hand, an individual who has little resources and supports to begin with may experience a complex web of stressors, for example, a hurricane at the same time as incremental stressors such as rising sea levels. These stressors may be added on top of existing mental health issues and vulnerability due to socioeconomic struggles. The complexity of stressors experienced can also change over time. For example, vicarious impacts of the climate crisis such as anxiety and fear may be triggered by weather warnings of an incoming storm or extreme weather event (Hayes et al., 2018). So while conceptualized neatly in the discussion above, experiences of the impacts of the climate crisis on mental health are complex and constantly in flux.

As noted in the examples above, the climate crisis impacts individuals and communities in different ways. Some individuals and communities are more vulnerable than others. According to a report by the American Psychological Association (2017), factors that affect how vulnerable people are to mental health impacts include: geographic location (i.e. those who live in risk prone areas), socioeconomic inequality, demographic inequalities (i.e. women and young people are at higher risk); and pre-existing illness or disability. Another important factor is cultural identity and the degree to which individuals and

communities are connected to place. For instance, Indigenous communities whose cultural identity and livelihoods may be closely tied to land.

Not only are some populations such as low income, marginalized, and minority communities often disproportionately affected by the climate crisis, they also have less access to care and services. This includes limited supports for not only mental health and wellbeing, but also opportunities for flourishing. Therefore, when considering the direct, indirect, and overarching psychological and psychosocial impacts of the climate crisis, work towards solutions must consider the difference in experience, and the action necessary to support wellbeing for specific populations.

Common Individual Mental Health Concerns

Before moving on to a discussion of how climate change and mental health may be addressed, it is helpful to more closely examine some of the more common issues on the individual level. The experience of these concerns are, again, complex, and depend largely on how climate change impacts an individual and their community as discussed above. After a natural disaster or disruption due to climate change, there may be acute consequences for individual mental health and wellbeing such as trauma and shock. However, incremental or indirect changes and disruptions due to climate crisis may create chronic issues. The American Psychological Association (2017) lists the following acute and chronic impacts on mental health and wellbeing due to the climate crisis:

- Trauma and shock
- Strains on social relationships
- Anxiety
- Substance abuse
- Loss (of personally important places, personal and occupational identity, or autonomy and control)
- Compounded stress
- Depression
- Suicide
- Aggression and violence
- Feelings of helplessness, fear, fatalism, solastalgia, and eco-anxiety

Of particular interest among these when considering the lesser known, but increasingly common vicarious impacts of the crisis are eco-anxiety and feelings of loss and grief. These are discussed in more detail below.

Grief and Loss

It is now quite common to recognize that the climate crisis brings significant loss and it can come in many forms. There is absolute loss such as the extinction of species and loss of life due to storms or heatwaves, which can be traumatic and devastating. There is also transitional loss as individual's lives, communities, and the environment change due to incremental or indirect consequences of climate change. One common example of transitional loss is "solastalgia," which describes the feelings of distress

that are produced when environmental change impacts an individual's connection to their environment. Solastalgia is a gradual wearing away of one's ability to derive solace from a place they once felt at home, which causes a disrupted sense of planetary wellbeing and wholeness (Albrecht et al., 2007).

A third type of loss associated with the climate crisis is anticipatory loss- knowing sea levels are rising, temperatures are warming, and life is changing for both people and the earth. Anticipatory loss may manifest as fear and sadness as individuals consider the losses they themselves will face, as well as the losses they know their children and future generations will suffer. This loss is of course not felt as acutely as absolute loss, but nonetheless, it can be difficult to deal with. Finally, there is ambiguous loss, which is a term used to describe the idea that loss is already happening, and we don't know how bad it will get. There is an infinite, unknown loss that awaits us (CPA, 2020).

While difficult to deal with, loss also provides opportunity. As we realize the magnitude of the crisis and what has already been lost (both absolute and transitional), and begin to contemplate what we have left to loose (anticipatory), loss may be motivating. It provides opportunity to recognize the value of what has been lost and why it has occurred, re-evaluate what is important, and react to the crisis in a way that is in line with these realigned values. Processing loss can also prepare us to deal with the unknown loss that awaits us. The unknown can be unsettling. It's difficult to live with uncertainty. However, if we learn how to manage fear of the unknown and deal with uncertainty in healthy ways, we can build resilient individuals and communities that are able to come to terms with loss while remaining engaged in work toward change. Ultimately allowing us to not only adapt, but better mitigate the challenges of an unknown future.

Part of becoming resilient and addressing these types of loss is working through grief. Grief is a reaction to loss and involves complex emotions from shock, disbelief, anger and blame, to hopelessness, sadness, and despair. Important to managing these feelings is a safe context to address them where thoughts and feelings can be expressed and acknowledged. Acknowledging grief caused by these various types of loss and being supported through it prevents it from taking over. In other words, grieving as individuals and as a community helps us move from disempowerment to empowerment, and "is an essential part of becoming fruitfully active about climate change" (CPA, 2020).

Eco-Anxiety

Eco-anxiety is gaining recognition as an increasingly common impact of the climate crisis on mental health (Hayes et al., 2018; APA, 2017). It may be understood as the anxiety and fear people face due to the looming threats associated with the climate crisis. The American Psychological Association describes it as "a chronic fear of environmental doom" (APA, 2017).

It is important, however, that eco-anxiety is not thought of as a disorder or medical condition. There is danger of eco-anxiety being mischaracterized as moral panic or overreaction. Graham Lawton (2019)

explains, “If eco-anxiety is treated as a pathology, ‘then the forces of denial will have won.” Instead he suggests, “what we are witnessing isn’t a tsunami of mental illness, but a long-overdue outbreak of sanity.” Eco-anxiety is a normal response to the challenges of the times and is certainly healthier than turning away and denying the crisis exists (CPA, 2020). Feelings of fear and anxiety over the future alert us to danger and can mobilize people to take action.

However, we must acknowledge and address eco-anxiety so that it does not lead to an unhealthy panic, or on the other end of the spectrum, a dangerous paralysis (CPA, 2020). This freeze response is what Glenn Albrecht names “Ecoparalysis” which involves the feeling that one cannot take action to mitigate the crisis in a meaningful way due to its complex and overwhelming nature (Hayes et al., 2018). All action seems insignificant in comparison to the magnitude and the complexity of the problems at hand, which creates feelings of hopelessness or fatalism.

Eco-anxiety might also involve feelings of anger and frustration. Thomas Doherty, a clinical psychologist, explains these feelings with the term, “climate hostage,” which is used to describe the frustration involved when an individual understands the urgency and magnitude of the climate crisis, but most cope with the inaction and denial of others (Weber, 2018).

Eco-anxiety has to be recognized and acknowledged as not to dominate one’s emotional state and inhibit wellbeing (CPA, 2020). Successfully managing eco-anxiety requires learning self-management techniques and utilizing self-coping mechanisms. It requires learning to live with loss as discussed above, and learning to manage feelings of uncertainty and the fear of the unknown. Successfully managing this uncertainty requires learning to offer empathetic and compassionate support to one another within our communities.

Beyond learning to manage feelings of loss, grief, and anxiety, it is often suggested that one of the best ways to address eco-anxiety is action, which is understood to be a productive and a healthy response. In fact, the Climate Psychology Alliance insists action is the “appropriate ‘treatment’ for eco-anxiety, not medication or interventions to eradicate the discomfort” (CPA, 2020). While not the focus of this report, it is important to include a cautionary word on action. Though action may make one feel empowered or help one cope with eco-anxiety, action is not inherently productive and may actually be ineffectual or even perpetuate or exacerbate the current crisis. Action must come from a depth of understanding. For example, individual behavior changes may promote agency and alleviate guilt, but may be a somewhat dangerous distraction from more systemic solutions that are necessary to work toward change on the scale required. Action must aim at the roots of the crisis such as the social and cultural ways of being and doing that have created the crisis in the first place. In other words, it is not just any action we are looking for, and it is dangerous to prescribe action that placates anxieties, fears, and loss, yet does little to address the roots of the crisis.

Addressing Climate Change and Mental Health

While understanding the relationship between climate change and mental health is complex, action on the issue is paramount. Addressing climate change and mental health may be thought of as both adaptation to the climate crisis, in that it helps build healthy, resilient individuals and communities in the midst of the crisis, and mitigation in that the process of addressing these issues in and of itself encourages engagement and action.

Acknowledging mental health issues in the climate crisis can raise awareness and reduce stigma. As people begin to acknowledge how mental health is influenced by a changing environment, they may be more inclined to undertake positive and productive action to support their own resiliency and adapt to the reality of our times (Hayes and Poland, 2018).

Addressing mental health and wellbeing leads to, and supports, engagement in advocacy and action (Hayes and Poland, 2018). If individuals are able to manage the feelings and thoughts that arise and come to terms with the crisis and the threats it poses, effectively avoiding "ecoparalysis," they may move from disempowering feelings to empowering ones which lead to action. However, as previously discussed, this action must come from a depth of understanding that ensures it is effective. Further, paying close attention to self-care and seeking mental health supports may also help support and sustain action already underway by preventing individual burnout. Taking part in work toward climate solutions and advocacy for these solutions may also lead to other positive individual mental health benefits that promote wellbeing such as a sense of agency, empowerment, growth, compassion, altruism, belonging and a sense of identity. On the community level, action further promotes social cohesion, connection, and collaboration. Thus, in turn, action towards mitigation builds individual and community resiliency necessary for adaptation (Hayes and Poland, 2018).

More research is necessary to identify effective long term techniques and strategies to address individual mental health challenges associated with the climate crisis. These strategies, however, at the community level will require a focus on preventative public health measures that help individuals and communities adapt to a changing environment and promote resiliency. On an individual level, therapeutic supports may be necessary, as well as work toward building self-management competencies and coping strategies to deal with loss, fear and uncertainty. These competencies and coping strategies can be augmented by wider supports that help individuals create healthy relationships and connections to community (Doherty, 2018).

Climate Change and Mental Health in Post-Secondary Education

Post-secondary institutions have students, faculty, and staff that all experience the impact of the climate crisis on their mental health and wellbeing differently. Some have been impacted directly having suffered trauma after living through a catastrophic event. Others may have suffered indirect effects, loss of livelihoods or other stressors. Even if direct and indirect impacts of the climate crisis are not common locally, international students may come from places where the crisis is felt more acutely. In a post-secondary setting in a place that is largely protected from the direct and indirect impacts of the climate crisis, at least at this point in time, the overwhelming concern may be those who are impacted vicariously. When considering vicarious impacts, post-secondary institutions must be attentive to populations who may be effected most. It is particularly important to address these issues among students who are taking coursework related to the climate and environmental crisis or who are working with these issues in student groups and organizations on campus. Another group likely to struggle with vicarious impacts on mental health are faculty and graduate students who are teaching and researching related subject matter (Conroy, 2019; Head & Harada, 2017). And again, when considering the issues more generally, it is important to take note of those who are already are disproportionally effected, for example minorities and marginalized groups.

One of the dangers of climate impacts on mental health within post-secondary settings is that the climate crisis may act as a compound stressor. According to an American College Health Association (2016) study, Canadian post-secondary students are at high risk for mental health issues. Within a 12-month period, 64.5% of students reported experiencing overwhelming anxiety, 59.6% reported feelings of hopelessness, and 44.4% indicated that they experienced moments where they were so depressed it was difficult to function. The fear, anxiety, and loss that come from the climate crisis will add to and exacerbate these existing issues. Addressing these issues and promoting mental health and wellbeing is essential to learning and academic success not only while students are in university but beyond their academic journeys (APA, 2017; CACUSS, 2013). If students learn to participate actively in managing their own wellbeing it sets a foundation for increased ability to do the same throughout the rest of their lives (CACUSS, 2013).

While generally, the focus is on students within the post-secondary institution, the mental health and wellbeing of faculty and staff are equally important in creating a healthy campus environment where everyone experiences wellbeing and flourishing. Faculty wellbeing directly impacts the effectiveness of the education delivered to students. For example, faculty must carry the emotional burden of educating students on a difficult subject matter. But how is one to teach the climate crisis effectively and care for students if they are struggling themselves? Further, student counsellors and other staff that support students may be unable to do this care work effectively if they themselves are experiencing disruptive

mental health concerns. Thus, it is important to consider mental health and wellness in post-secondary institutions holistically, which will be discussed in the sections below.

Addressing the Impacts of Climate Change on Mental Health in Post-Secondary Institutions

As previously mentioned, limited research has been done to understand the impacts of the climate crisis on mental health in post-secondary institutions, and even less has been done to understand how we might begin to address the issues in practice. This project's aim was to work in this direction by exploring the ways post-secondary institutions have already begun to address the impacts of the climate crisis on mental health. To get a sense of what other institutions are doing, extensive web searches were done using combinations of keywords such as "eco-anxiety," "eco-grief," "climate change," "mental health," "climate anxiety," and "climate grief," among others. These general searches were followed by more specific searches of the websites of post-secondary institutions considered to be leaders on sustainability and climate action. These included 16 of UBC's sustainability peers, institutions ranked in the top 25 by Times Higher Education for their work on climate action, and sustainability leaders designated by the Association for the Advancement of Sustainability in Higher Education STARS program. The institutions included in these specific searches are listed in Appendix A.

The search produced a number of different activities and actions taking place to address climate impacts on mental health. In Table 1 below, these actions are organized into four broad categories depending on the nature of the action: Awareness and Literacy, Coping and Self-management, Teaching and Learning, and Research and Planning. In total, sixty-three actions were identified through both the general web searches and the specific searches of the previously mentioned institutions. Approximately 39% of the total actions were geared toward Awareness and Literacy; 35% of the activities could be understood as focusing on Coping and Therapy; 20% related to Teaching and Learning; and roughly 6% of the total actions identified were related to Research and Planning. A more detailed list of actions tied to specific post-secondary institutions is available in Appendix A. In addition to the actions identified from both the general web searches and the searches of the specific institutions, Table 1 also includes notable examples of each type of action. It is, however, important to note that these results are heavily focused on what is taking place in English speaking universities due to English language searches. Also, because the methodology relied on web searches, the results are limited to information that is publically available online.

Table 1: Action on Climate Change and Mental Health in Post-Secondary Education

		Description	Examples
Awareness and Literacy (39%)	Articles and Media with Linked Resources	Many written articles, podcasts, and videos addressing eco-anxiety and grief have been created by both students and faculty. The majority of these are students writing about anxiety and grief for student newspapers, university blogs, etc. Most written articles also include links to further resources for action on climate change and/or coping.	• The University of Edinburgh's SEED blog on Social Sustainability and Responsibility includes both student and staff contributions. For Mental Health Awareness Week, the blog focused on eco-anxiety and grief including a number of student articles and perspectives. • The University of Colorado's online student newspaper "Changing Climate, Changing Lives" has a section dedicated to articles about eco-anxiety where students share their perspectives on the mental health impacts of the climate crisis.
	Presentations	One of the most common findings was a mix of both student and faculty led presentations on the climate crisis and mental health. Most include time for discussion and questions, but were not intended to provide coping help beyond providing resources or suggestions. These talks were more informational and less interactive than the workshops or discussion/support groups detailed below.	A few examples of titles include: • "Climate Depression & Environmental Angst: The Emotional Toll of Ecological Loss" Jennifer Atkinson, University of Washington Bothell (Video Recording) • "Eco-Anxiety and Climate Change: How can we keep looming climate worries from overwhelming us?" Chris Stark and Chris Weatherly, Washington University in St. Louis • "Climate Change, Mental Health, and Eco-anxiety: How the Global Pandemic Can Help Us Prepare" David Pollack, MD, co-founder of the US Climate Psychiatry Alliance and Professor Emeritus at Oregon Health and Sciences University
	Counselling Resources	Student Counselling websites are beginning to include articles on the issue and some include links to resources to help with coping. These, however, were informational rather than programming and thus categorized within the Awareness and Literacy section.	• Simon Fraser University's Student Counselling website includes information on "environmental wellness" and provides links to related resources.
	Other Resources	Other resources included a Library Toolkit on climate change and mental health with links to resources for students, faculty, and staff. Also, some institutions are drawing attention to the issue on their Sustainability Initiative websites including links to further resources.	• Lane Community College Library has created a Library Toolkit on Climate activism that includes information on climate grief/anxiety with a list of resources including links to places to get involved with climate action, support groups for coping, and resources for individual help (including professional services). (Toolkit)
Coping and Self-Management (35%)	Workshops and Discussion Groups	Workshops are intended to provide deeper understanding of the issues and support for coping. Almost half of the workshops were student organized. Workshops included everything from loosely organized student discussion groups; meditation sessions; art therapy sessions; yoga and movement workshops; reading and journaling clubs; to workshops on coping and wellbeing. Some workshops were facilitated using techniques	• At the University of Edinburgh, the student sustainability association put on "Meditation for Climate Anxiety", a series of mini meditation sessions during the institution's sustainability week. • At the University of Toronto, a Queer & Trans Students of Colour group led a discussion on Climate Change addressing the questions: "How does climate change specifically affect queer and racialized people?" "How do you deal with anxiety around climate change? "What are some ways we can have conversations about climate change without it being overwhelming and defeatist?" • At Dalhousie University, students have created an organization called Eco-Grief Meet, which is a support group designed to help students cope with the mental health impacts of the climate crisis.

		developed by professionals (e.g. Joanna Macy, The Work That Reconnects).	• As a part of the University of New Brunswick Sustainability week, UNB Sustainability partnered with Counselling Services to hold sessions on eco-anxiety. • At the University of Derby, staff and students struggling with anxiety over climate change are being offered art therapy to help them tackle feelings of anger, guilt and grief.
Teaching and Learning (20%)	Courses	Coursework is being developed on the climate crisis and mental health. These initiatives generally fall into a few general categories: (1) New courses or redesigned courses that make space for the affective nature of the climate crisis and help students with climate anxiety and grief; (2) courses focusing on the crisis more generally that are meant to inadvertently address the issue by providing students a more thorough understanding of climate and ecological issues; (3) courses that include the climate crisis and mental health and wellbeing as subject matter in existing curriculum (i.e. coursework in faculties of public health, medicine, psychology, and social work)	• A faculty member at the University of Washington Bothell has created a 200-level interdisciplinary studies seminar called "Environmental Grief and Climate Anxiety: Building Hope in the Age of Climate Consequences." The course explores the psychological and emotional impacts of the climate crisis through literature, poetry, film, and the arts. It was originally a pilot course geared toward environmental studies students who were struggling to cope, but has been popular with a wide range of students. (News Article) • The University of Connecticut has created a course called "The Human Epoch: Living in the Anthropocene." The course focuses on the history of the planet's eco-system while highlighting the adaptability and the resilience of the Earth with the goals of expanding student understanding of what is meant by "environment," while also helping them carefully unpack and analyze claims about the climate crisis. • Yale Climate Change and Health Initiative was founded to analyze the effects of climate change on global populations has created new courses including an 18-week online certificate: "Giving You Tools to Address the Health Impacts of Climate Change." Coursework includes mental health. (Initiative Overview and Course Curriculum)
	Workshops for Faculty and Staff	Workshops have been designed for faculty and staff who would like to learn to address their own mental health and wellbeing, as well as provide more support and care for their students in the classroom. Some workshops for faculty have also focused on how the impacts of climate change on mental health may be included in the curriculum as subject matter (i.e. those teaching in medicine, psychology, public health, etc.)	• The University of Hawai'i, one of the regional AASHE Centers for Sustainability Across the Curriculum, is currently hosting a 4-part workshop series: "Coping with Climate Anxiety in the Classroom and for Yourself: a Workshop for College & University Faculty." The workshops are designed to help faculty address their own emotions so that they can better support students to integrate and process the impacts of climate change. The workshops included an overview of the issues, research on climate change education, and experiential activities that can be used in the classroom (Workshop Info: April 2020, May 2020, June 2020, July 2020 and background materials). • The University of California, San Francisco began holding faculty workshops in 2016 to help professors from nursing, medicine, pharmacy, and dentistry begin including the mental and physical health impacts of climate change in their curriculum.
	Co-Curricular Activities	Co-curricular programming is being created outside of the formal curriculum. For example, non-credit coursework, and more in-depth co-curricular opportunities such as longer retreats.	• The University of Hawai'i is creating an online, non-credit, asynchronous course featuring subject matter experts across disciplines. The course is designed to introduce students to (1) what the science says about climate change impacts, (2) how Indigenous knowledge can help prepare for these impacts, (3) basic sustainability concepts and issues, and (4) ways to take action and solve problems. The course is designed to empower first year students (Overview) • Stamina for Sustainability is a 3-day retreat with follow up activities at the University of British Columbia. The new co-curricular program aims to help future sustainability leaders "embrace uncertainty, engage alternative ways of knowing and being, create space for critical reflection, and activate a deeper, collective accountability to the planet and each other." The hope is that participants will be able "to develop the capacities and stamina needed to support individual and collective well-being" in the face of the climate and ecological crisis (UBC Sustainability, 2020).

Campus Research and Planning (6%)	Research and Planning	Research on the issue of the impacts of the climate crisis on mental health in the context of post-secondary educational institutions is beginning to emerge and discussion is taking place through conferences and symposiums, as well as the creation of new task forces and committees to address the issues.	• At the University of Hawai'i, the Manoa Institutional Research Office and the Sustainability Office undertook research to understand student concerns on sustainability and climate change. The project involved surveying 8,000 students and gathering narratives of 500 students through focus groups to understand student perspectives on global and local environmental issues, climate change, and sustainability, and how these issues impact their experience in college, their degree choices, their career plans, and their visions of their own productive futures. The research is being used to inform teaching and learning initiatives and other program supports (Research Overview and Video Summary, PPT, Worry and Hope Study) • The University of California San Francisco's Department of Psychiatry has created a Climate Change and Mental Health Task Force. The group's goal is to foster awareness of the climate crisis and its psychosocial and ecological impacts within the department, across campus, and with community partners. It aims to incorporate this awareness in research, education, patient care, and public service (Overview and Video Recording).

The research revealed that action on mental health and the climate crisis is overall quite limited in the context of post-secondary institutions. Many of these institutions deemed leaders in sustainability and climate action have taken little, if any, action to address the issues on their campuses (see Appendix A). The most commonly occurring type of action has been in the form of advocacy and literacy. These advocacy and awareness initiatives described above were led mostly by students, but also faculty and individual staff members voicing concern and raising awareness.

The second largest category of action involved efforts to support self-help and coping. Most of the action in this category is being driven from the bottom up so to speak, and from those most in need, as students and faculty recognize the need to care for themselves and others. This is evidenced in the types of activities taking place. The scan found many workshops and discussion groups on coping and wellbeing, most of which were informal (discussion and support groups) and organized by students. Others were workshops and discussions organized by concerned faculty. Many of the activities in the Teaching and Learning category are also being driven by individual faculty who have recognized the need to address the affective nature of the climate crisis in their classrooms.

Further, the findings indicate that institutional planning to address the issues associated with climate change and mental health within post-secondary institutions is in its early stages. There is very little research and planning taking place on how to address the issues even in institutions known to be leaders in sustainability and climate action. However, it is important to note that the study was limited to events, research, and actions that have been posted publically online. There is undoubtedly discussion happening beyond what is readily available.

Finally, little evidence was found of Counselling Services on campuses taking action on the issues aside from a few institutions providing resources and information on their websites, which were more closely aligned with awareness and advocacy than providing programming or specific supports for coping.

However, through the process of researching and writing this report, it became evident that there are many medical professionals and counsellors who are taking up these issues and working with individuals struggling with eco-anxiety/grief in their private practices.

The table above focuses specifically on action taking place within post-secondary institutions and for campus communities, and did not include events and actions held by non-profit and other civil society organizations. However, it is important to note that institutions are beginning to work with civil society organizations and governments to address the impacts of climate change on mental health. For example, Stanford psychologists are working in collaboration with nor-for-profit organizations to provide research and support to the WILDFIRE initiative which was created to meet community mental health needs after the 2017 Sonoma County wildfires (Murillo, 2018). And researchers at the University of Auckland are working with government and community organizations to address the mental health needs of climate refugees who have resettled in New Zealand from Pacific island nations.

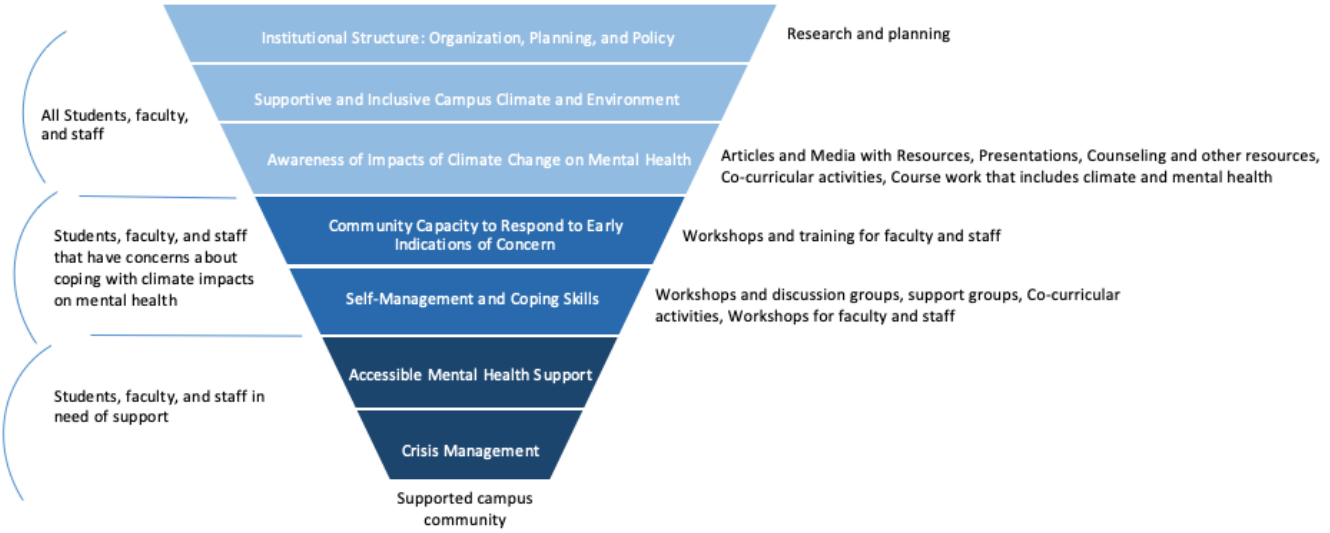
A Systemic Approach Toward Mental Health and Wellbeing

As post-secondary institutions expand their efforts to address the climate crisis and mental health, it is important they take a systemic approach for actions to be effective because contextual factors are key in supporting mental health and wellbeing, as well as learning (CACUSS, 2013). Student mental health is largely effected by the mental health and wellbeing of students' teachers, family, friends, and communities, as well as the institutions in which they study, the organizations that employ them, and their general cultural, environmental, and socioeconomic contexts affect mental health and wellbeing. Therefore, the focus can't simply be on the student and their ability to maintain their own mental health, a context needs to be created that is conducive to this. This means making sure that the whole campus is set up to support the mental health and wellbeing of its community members- faculty, staff, and students – which requires a consideration beyond the individual to the environment, the organizational structure, and the wider policies and practices that create the culture of the post-secondary institution (CACUSS, 2013).

A systemic approach centers the idea that community members' mental health and wellbeing are effected by the climate crisis differently. Creating an equitable campus means some will need special services if they are experiencing issues. There may be a need for targeted programming for students that might benefit from help with coping or therapy, and supports are needed more broadly to help everyone build capacities that allow individuals to flourish (CACUSS, 2013). A systemic approach also ensures that action taken is student centered – informed by student voices and rooted in their lived experiences. Finally, it involves everyone playing a role in, and taking collective responsibility for, creating a campus community that supports mental health and wellbeing.

The Canadian Association of College and University Student Services (CACUSS) and the Canadian Mental Health Association (CMHA) have developed a framework to address mental health within post-secondary institutions from a systemic perspective, identifying several levels of consideration necessary to ensure students are supported (CACUSS, 2013). Figure 1 below and the discussion that follows expands on the original framework provided by CACUSS to include the mental health of faculty and staff from a systemic perspective, as well as to provide a more specific consideration of how the impacts of climate change on mental health and wellbeing may be addressed systemically within post-secondary institutions (CACUSS, 2013). Further, the figure includes the types of activities found in the scan of current action on climate and mental health in post-secondary institutions as reported above. As previously discussed, many of the actions that have been taken fall within the middle of this diagram in the categories of raising awareness and work towards self-management and coping.

Figure 1: A Systemic Approach to Understanding Climate and Mental Health in Post-Secondary Settings:



CACUSS, 2013. This figure was created from the original framework developed by the Canadian Association of College and University Student Services (CACUSS) & Canadian Mental Health Association (CMHA) in the report: Post-Secondary Student Mental Health: Guide to a Systemic Approach.

To address the impacts of climate change on mental health in a systemic way, there are some specific questions that could be asked at each level beyond the more general mental health considerations outlined in the original CACUSS framework. These are discussed below.

Institutional Structure: organization, planning, and policy

When addressing mental health and the climate crisis, it is important to understand the context in which students, faculty, and staff study and work, and how this context impacts their mental health and wellbeing. Namely, the institution's goals, planning, policies, and practices need to create a culture that supports mental health and wellbeing related to the climate crisis. To create such an environment, it is helpful to consider some of the following questions.

- What is the narrative created by the institution regarding the climate crisis? Does it reflect the magnitude of the crisis? Does it do so in a way that supports mental health? What does it communicate to students, faculty, and staff? Take for instance the difference in the University of Pompeu Fabra Barcelona's "Planetary Wellbeing" initiative versus the University of Tennessee's climate initiative, "Apocalypse 2020." These narratives may have very different implications for mental health. While the appropriateness of specific narratives may vary by context and audience, it is important to consider these narratives at the institutional level, as well as at the programming level and how these effect individual and community mental health and wellbeing.
- Does intuitional priority as well as action reflect the urgency and magnitude of the climate crisis? Is action on the climate crisis evident in emissions strategies and other actions on campus, or do "sustainability" and "climate action" remain buzzwords rather than real response? A mismatch in messaging and action can create dissonance and negatively affect individual mental health.
- Is there a process in place to review and evaluate sustainability policies, information, and programming according to or through a mental health lens? What are the institutions mission statements around sustainability? Do these goals include considerations of mental health and wellbeing? Does this process take into consideration different populations of students, faculty, and staff? For instance, to accommodate the mental health and wellbeing needs of Indigenous students, efforts may be needed to decolonize understandings of sustainability to acknowledge the experience of Indigenous ways of thinking, knowing, and being.
- Does the institution's organization, planning, and policy process include student voices? Are the priorities of student groups organizing around the climate crisis considered in institutional plans and priorities on climate action?
- Are there rewards or motivation, or even room in policies and practice, that provide faculty and staff the opportunity to address their own mental health needs? Are the necessary resources available to do so?
- Are there opportunities for faculty, students, and staff to help define their role in promoting mental health and wellbeing on campus?
- Are there resources and supports in place to help individual faculties and student services such as counselling centers adapt to include a focus on climate change and mental health?

Supportive, inclusive campus climate and environment

Another important part of a systemic approach to addressing mental health in the post-secondary setting is creating a supportive climate and environment to encourage and sustain academic performance and learning, as well as mental health and wellbeing (CACUSS, 2013). Creating such an environment requires ensuring opportunities for meaningful student, faculty, and staff participation and engagement, a commitment to social justice for all, and a holistic approach to learning. A supportive and inclusive campus community helps students connect their learning to their lives and communities outside of the university setting, while also helping them to clarify their values and goals, in order to develop a sense of purpose and meaning (CACUSS, 2013). Such a climate helps create the foundation necessary to adapt to problems posed by the climate crisis and face them head on, ultimately nurturing a sense of agency and promoting resilience (Clayton et al., 2017).

- Is the sustainability community and communities working on climate action supportive and inclusive of all students, faculty, and staff? What can be done to make involvement more accessible and relevant to everyone?
- To what extent do faculty consider the impact of the climate crisis in their curriculum and pedagogy? What implications does this have for student wellbeing and mental health? Are there resources and supports for faculty to teach the climate crisis and make sure their curriculum and teaching is supportive of mental health and wellbeing?
- Are student groups that could provide help with coping welcoming to everyone? Are there systemic barriers to participation? How might barriers for participation in student groups be removed?
- Does coursework on the climate crisis include justice perspectives? Is there an acknowledgement that the impacts on individuals are not felt equally? Are students presented in the classroom with information the makes sense with their own experiences?
- Student groups on campus may know their own needs when it comes to mental health and the climate crisis. Are they able to share their concerns? Are student voices heard? Do they have access to the information and the resources needed to address issues themselves?
- Are there places for students to connect, discuss, and socialize? Are there places where faculty can also connect and discuss the challenges of the climate crisis?
- Are there programs in place that allow students to connect with the wider community? Are students provided opportunities to work on meaningful problem solving in relation to the climate and ecological crisis? For instance, through community engaged learning, project based coursework, part time employment, or co-curricular programming?
- Are feelings of anxiety and depression stigmatized in the classroom or in student groups and communities?
- How can a culture be created that acknowledges the scale and complexity of the climate crisis and the importance of connecting and caring for one another?

Mental health awareness

It is important to increase knowledge and understanding of the impacts the climate crisis has on mental health and wellbeing in order to promote health and build resilience. Providing information leads to an awareness that we need to look out for others as well as ourselves. It also helps to destigmatize mental health concerns related to the climate crisis increasing the likelihood that individuals will reach out for support if needed.

- Is there appropriate information available? Is it in the right places where it is easily accessible to faculty, staff, and students? Are there specific contexts or student groups that would benefit from information being shared in a different language or a more culturally relevant way?
- Are resources regarding strategies for taking care of mental health and coping with the climate crisis available to students, faculty, and staff and how might these be best shared?
- Are there connections that can be made or lines of communication that can be established to create a better sharing of information between groups on campus? For instance, those researching mental health and student groups working on climate action.
- Are students provided information that helps them think about the implications of mental health not only on their academic work, but also on their larger learning and career goals beyond post-secondary education?
- How is the relationship between mental health and the climate crisis communicated? For example, rather than presenting eco-anxiety as a disorder or medical condition, it may instead be characterized as a healthy, normal response to the challenges of the time. What are the implications of how messages are framed in specific contexts and for different audiences? What channels are used to communicate information? What are the implications of how messages are delivered?

Community capacity to respond to early indications of student concern

Communities need to be able to respond to the mental health needs of their members. In the post-secondary setting this involves students, staff, and faculty being able to recognize when others are experiencing mental health issues and respond accordingly (CACUSS, 2013).

- Are students able to recognize issues within their own communities? Do they have the information, resources, and supports necessary to address them?
- Are faculty and staff aware of the potential issues the climate crisis may have on mental health? Are they able to recognize these problems and identify students who may need help coping? Do they have the knowledge of what is available so that they can point students in the direction of resources and supports if necessary?
- Are faculty and staff comfortable with their role of recognizing and helping to address mental health and wellbeing? Do they feel confident? Are they clear about boundaries? How can they be more equipped in this role? Is there a need for additional informational resources or training?

- Joining like-minded communities and taking action on climate change is often suggested as a means for coping with the mental health issues associated with the climate crisis (APA, 2017; Doherty, 2018). Are faculty and staff aware of groups that students can be connected to? Are students aware of these groups that they can seek out to help with their own coping and self-care?
- Are student experiences of mental health considered in the design of coursework and curriculum, especially in courses that involve subject matter related to the ecological and climate crisis?

Self-management competencies and coping skills

Students, faculty and staff need to feel competent in coping skills that strengthen their resilience and their ability to manage their own mental health and wellbeing. This might include building interpersonal competencies, learning active coping and self-regulation skills, or intra-personal development. It might also include becoming civically engaged and taking social responsibility.

- Are there workshops and other activities available that teach individuals self-management competencies and coping skills? Are these programs and resources appropriate and accessible for all students? How are these programs delivered (online, in person, in small or large groups)? Are these approaches sufficient and effective?
- Are there opportunities in the classroom for structured and intentional reflection on the affective nature of the climate crisis? Are students encouraged to reflect on their own learning and development? Are they provided with opportunities to learn coping and self-management competencies?
- Are peer support programs in place? Are there ways to make them more welcoming for all students?
- Are there meaningful opportunities for students to engage in communities beyond the classroom that encourage personal development?

Accessible mental health services

Mental health service providers are an important part of a systemic approach to address the impacts of climate on mental health. Services and programs may be needed to help students, faculty, and staff manage their mental health and wellbeing when individuals need help developing coping strategies or when self-management and coping strategies fall short. They are able to provide services to support individuals through mental health challenges and are often able to provide more specialized care for specific populations (CACUSS, 2013).

Beyond working with individuals, the expertise of mental health service professionals can also help to inform planning and programming such as workshops and co-curricular activities that aim to support students, faculty, and staff. Further, they can be a valuable resource to individual faculties and programs that may come across specific concerns related to their unique academic programs and subject matter related to the climate and ecological crisis (CACUSS, 2013). In this way collaboration between faculties

and mental health service professionals can help create innovative programming to support teaching and learning.

- Are student mental health services aware of the impacts of the climate crisis on mental health? Is additional training necessary? Are resources available to ensure staff are prepared to recognize and address these issues that stem from the climate crisis?
- Are there connections and open lines of communication between mental health support services and specific student groups or high risk populations who may need these services?
- Taking action on climate change in a supportive community can help alleviate feelings of eco-anxiety. Do relationships exist between mental health service providers and climate action groups on campus? Are student counsellors and other mental health service providers aware of these groups and able to connect students with them effectively? Do the student action groups have the resources they need to onboard new students sent to them by counselling services in a welcoming way?
- Since taking action is an important part of coping with issues such as eco-anxiety, are counsellors aware of student academic programs, part-time work opportunities, or off campus groups that provide students the opportunity to work on climate solutions?
- Are there peer support groups that would benefit from input and guidance from mental health services?
- Are there opportunities for mental health services to collaborate with groups on campus to run workshops or train faculty and staff? Are there other creative partnerships that could be established that would allow mental health service professionals to help communities learn to care for each other and for themselves?

Crisis management

Mental health crisis management is usually thought of on an individual basis in the context of post-secondary institutions. For instance, acute distress and risk of suicide or actions of self-harm, that require a well-coordinated and planned response (CACUSS, 2013). In the context of the climate and ecological crisis, however, crisis consideration must move beyond the individual to consider the potential threats of mass crisis for instance after a wildfire, hurricane, or other catastrophic event. Response to crisis thus must be considered on a larger, more communal basis when it comes to climate change.

- Are there policies and protocols in place to deal with an acute crisis related to climate change? Are emergency preparedness plans comprehensive and effective? Have these plans been considered from a mental health perspective? (Responses to the COVID-19 pandemic have been a good practice run for many post-secondary institutions. A key question to consider is what could have been done differently to better support mental health for faculty, students, and staff?)

- If there were to be a catastrophic event that directly impacted the campus community, how would the university support the mental health needs of students and the surrounding communities both in the short and long term?
- Are there plans in place to help disseminate timely information to students, faculty, and staff during emergencies? In what ways can information be shared so that it positively supports mental health and wellbeing?
- What relationships between campus faculties, programs, and groups need to be strengthened to prepare and support a holistic response to crisis?

Addressing the Climate Crisis and Mental Health at UBC

UBC students, faculty, and staff are beginning to raise awareness about the need to address the issue of climate impacts on mental health. Students have written articles in student online newspapers and academic blogs to raise awareness. Workshops have also been organized to help with coping. There is also a growing awareness of the need to address these issues in policy and planning as evidenced in the inclusion of "community wellbeing and resilience" in the recent UBC Climate Emergency Community Dialogues and in the support of research such as this project. However, there is much more work to be done to ensure UBC is adequately addressing the mental health needs of students, faculty, and staff in relation to the climate crisis.

Recommendations

The best way to address the impacts of the climate crisis on mental health within post-secondary education is largely dependent on context. For example, in an institution that is experiencing the direct impacts of the climate crisis, the priorities for action may be quite different than institutions who are largely sheltered from direct impacts and are only experiencing indirect or vicarious impacts. This of course doesn't mean that students, faculty, and staff have not experienced direct impacts in the past and will not again in the future. As discussed in the first sections of this report experiences of the impacts of the climate crisis are complex and changing. For example, UBC is an international institution with a large international student population. Students' home countries may be places where direct impacts are more common and even while away for studies, they could have family and friends who are experiencing acute stressors of the climate crisis. Experience locally is also diverse. Some local students may have experienced wildfires and more indirect challenges to their family livelihoods due to incremental changes. Also, in a settler colonial state such as Canada, Indigenous students may have long experienced the destruction of their land and livelihoods, causing loss and grief now compounded by new climate threats.

Due to the lack of research, it is difficult to know for certain how students may be impacted by the climate crisis at UBC. However, in the high income context of Canada with relative social stability, and a geographical location largely protected from the worst impacts of climate crisis, the UBC community is fortunate enough to avoid the worst effects of the climate crisis, at least presently. Thus the biggest concern may be the vicarious impacts of the climate crisis. This may be especially true given UBC's student population. UBC has an internationally recognized focus on climate action and sustainability, which attracts students concerned and interested in studying climate change and sustainability, who may be more likely to experience vicarious impacts such as eco-anxiety as discussed earlier. However, this is only conjecture, more research is needed to understand the experience of mental health consequences from the climate crisis, including the characteristics of UBC's student population.

Until more research is done on the specific needs of the campus community, recommendations to begin the important work of addressing climate change and mental health must be made based on what is known to be important from a systemic perspective, existing research, and the action that is already being led by those who recognize the issues for themselves and others in their communities. Thus the recommendations below should be thought of as starting point with much more action needed as the climate crisis continues to unfold. The recommendations have been divided into five categories: research and planning, awareness and advocacy, teaching and learning, coping and self-management strategies, and mental health services.

Research and Planning

- Undertake research to better understand the nature and extent of the impacts the climate crisis is having on mental health within the campus community. Research will better inform the ways programming and services can be adopted to help address these issues. In such research it would be important to pay attention to the varying needs of specific populations (students and their level of study, faculty, staff, marginalized groups, specific disciplines of study and research, etc.)
- Continue to research the actions other post-secondary institutions are taking to address these issues beyond the information that is readily available online. This could include reaching out to key faculty and staff to conduct informational interviews or inviting them to a focus group discussion.
- Pull together a taskforce of researchers, students, staff, and faculty that have relevant expertise and experience to drive action on climate change and mental health at UBC.
- Consider organizing a student forum that brings individuals and student groups together to discuss these issues and communicate needs.

Awareness and advocacy

- Provide information and resources to students, faculty, and staff in ways that are easily accessible (e.g. sustainability webpage, counselling services webpage, through student action groups, faculty newsletters, etc.)

- Take steps to insert the climate crisis into the campus community dialogue on mental health. For example, make it a part of thrive week and provide informational resources through counselling services via the webpage, social media, or in print within the counselling services center.
- Insert mental health and wellbeing into the campus community dialogue on sustainability and climate action (through relevant websites, social media, at events, etc.).
- Carefully consider messaging on climate change. What are the narratives created in the university regarding the climate crisis? How is the crisis framed in messaging? Does the overarching narrative promote agency, mental health, and wellbeing? Create a short resource with guidelines or tips that the institution, USI, Climate Hub, and other organizations and student groups may reference to more carefully consider their messaging on the climate crisis.
- Create a place to collect and share stories from the campus community that includes student, staff, and faculty voices, how they are impacted, and what ways they are coping.

Teaching and learning

- Create more teaching and learning supports around climate change and mental health for those who are addressing climate change and the wider ecological crisis in their courses. This could take the form of a workshop by a trained facilitator that may be invited into the classroom (similar to current workshops offered by career services) or training for faculty and staff who would like to address these issues with their students themselves.
- Create an undergraduate seminar course on climate change and mental health with a focus on reflection, building self-management competencies, and coping. Offer this first to student populations who are most at risk (e.g. undergraduate students studying climate, environmental studies, etc.), and then eventually open it to all students.
- Develop and offer a non-credit, asynchronous online Climate 101 course to make sure all students have access to correct information. Accurate information can help prevent fear and anxiety and lead to empowerment.
- Identify courses at UBC that deal with the climate and ecological crisis and invite instructors and teaching assistants associated with these course to a workshop on teaching, climate change, and mental health. This would create an opportunity for instructors to share their knowledge and experience with one another, including the ways they currently address the affective nature of the climate crisis in the classroom. It could also offer a place to learn strategies for self-management and coping that they may use for themselves and their students. This could be a collaborative effort between USI, student climate groups, and Counselling Services.
- Increase support and resources for community engaged learning opportunities where students have the opportunity to take meaningful action on the climate crisis in connection to their studies.

Coping and Self-Management Strategies

- Build additional supports for both faculty and graduate students who are undertaking climate research. Those who take up research on climate are already at risk of suffering negative mental health consequences. Making sure there are adequate financial resources and other supports to conduct research related to climate change prevents compound stress and additional adverse mental health implications including anxiety, exhaustion, and burnout (Seritan & Seritan, 2020). A good model for a support program for graduate students is the Public Scholars Initiative. The initiative provides support for graduate students taking on publically engaged research projects by providing students additional research funding to relieve external stresses, a likeminded community to share research practices and discuss research challenges, and a platform to communicate research to each other and wider audiences. Something similar could be created to better support graduate students taking up the climate crisis in their research.
- Provide training and resources for student groups who are organizing around climate and environmental crisis and are interested in learning how to better support and take care of one another in their work.
- Develop workshops for students, faculty, and staff on self-management competencies and coping. These could be collaborative efforts between those working with sustainability and climate initiatives and Counselling Services. Not only will the workshops be more effective through this type of collaboration, they will help create a closer relationship and establish lines of communication between groups on campus and Counselling Services, which may be useful for managing concerns in the future.
- Bring in experts in community care from outside of the university to give workshops or presentations at UBC on climate grief and anxiety.
- Create spaces such as open-grief forums where campus community members can gather to share and support one another.
- Establish peer support or community care groups with formal support and resources from the university.
- Create discussion and support groups for those who are supporting others with mental health impacts of the climate crisis. For example, student leaders, faculty, and counsellors. Those doing care work need support and care themselves in order to continue this work effectively.

Mental Health Services

- Provide counsellors and other mental health service professionals training on climate change and mental health.

- Develop closer relationships and lines of open communication between Counselling Services and student groups on campus who are identified as likely to experience negative mental health effects related to the climate crisis.
- Develop awareness and lines of communication with student groups who are taking action on the climate crisis. Students presenting eco-anxiety may be referred to these groups and take action as a means of coping.
- Develop a baseline to be used to assess the impacts of the climate crisis on an individual's mental health so that an effective plan may be developed for treatment and support.
- Research existing tools or develop new ones to help inform therapeutic and coping support provided to the campus community (See collected tools in Appendix B).
- Create an emergency plan to address mental health in the wake of a more direct climate crisis. Is there a plan for students who are already on existing care to get the support they need if a disaster happens? How will mental health services work with others to address mental health needs for the campus community and beyond during and after a crisis?

Conclusions

These recommendations are only the beginning of what is necessary to address the mental health implications of the climate crisis in post-secondary education. They build on the types of actions that are already underway in post-secondary institutions in order to take a more systemic approach. To better inform and expand on these actions, more research is needed to understand the implications of the climate crisis on mental health including research on the vicarious impacts of the climate crisis, how these issues arise within post-secondary institutions, compound with existing mental health stressors, and are experienced by different populations within the campus community. To develop an effective, holistic approach to action, more research is also needed on the experiences of impacts on mental health within specific institutional contexts, so that recommendations may be better targeted at specific campus community needs.

However, there is no time to wait. While we are only beginning to research and understand these emerging issues, the impacts of the climate crisis are becoming increasingly common and more acute. Early action that considers the entire campus community from a systemic perspective will build resilience and help adapt to what is to come. And perhaps equally as important, beginning to address the climate crisis impacts on mental health and wellbeing will support action toward mitigation, creating compounded benefits for any action taken. If post-secondary institutions are committed to sustainable climate action, they must also be committed to supporting mental health and wellbeing within their campus communities. Mental health and wellbeing is foundational to effective research on climate change, widespread campus engagement on climate action, and the education of individuals capable of leading the herculean efforts that will be needed to mitigate and adapt to the challenges of the future.

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Appendices

Appendix A: University Action to Address Climate Change Impacts on Mental Health and Wellbeing

Appendix B: Resources for Individuals

Appendix C: Resources for Student Counsellors and Mental Health Services Professionals

Appendix A University Action to Address Climate Change Impacts on Mental Health and Wellbeing

Note: A blank box indicates that no actions were found using the search criteria.

	Awareness and Literacy				Coping and Self-Management	Teaching and Learning			Research and Planning
	Articles and Media with Resources	Presentations	Counselling Resources	Other Resources	Workshops / Discussion Groups	Courses	Workshops for Faculty and Staff	Co-Curricular Activities	
UBC PEER Institutions									
Arizona State University (Tempe)									
Harvard University	*	*							
Maquarie University									
Massachusetts Institute of Technology						*			
McMaster University									
Portland State University									
Simon Fraser University		*		*					
Laval University									
University of Auckland									
University of Edinburgh	*				*				
University of Hong Kong									
University of Manchester									
University of São Paulo									
University of Toronto					*		*		
University of Victoria									
Yale University	*				*	*			
ASSHE STARS Platinum Rated Institutions (2020)									
Arizona State University									
Colorado State University									
Cornell University				*	*				
Stanford University									

Thompson Rivers University									
University of California, Irvine									
University of Connecticut					*	*			
University of New Hampshire									
Times Higher Education Top 25 Ranked Universities on Climate Action (2020)									
University of British Columbia	*	*			*			*	
Vrije Universiteit Amsterdam									
University of Tasmania									
University of Victoria									
Peter the Great St Petersburg Polytechnic University									
University of Helsinki									
University at Buffalo					*				
Laval University									
Simon Fraser University		*							
Pontifical Bolivarian University (UPB) Medellín									
University of Costa Rica									
Pompeu Fabra University	*	*							
Indian Institute of Technology Kharagpur, India									
Riga Technical University									
University of L'Aquila									
Qatar University									
Technical University of Madrid									
University of Zaragoza									
Concordia University									
Paris Sciences et Lettres – PSL Research University Paris									
CES University, Columbia									
EAFIT University, Columbia									
Autonomous University of Barcelona									
National Taiwan University		*							
Iran University of Medical Sciences									

Appendix B Resources for Individuals

Websites

Self Sustain (https://selfsustain.com/blog/)

Climate and Mind (https://www.climateandmind.org)

The Good Grief Network (https://www.goodgriefnetwork.org/about/)

Eco-anxious Stories (https://www.ecoanxious.ca)

Eco-anxiety (https://www.ecoanxiety.com)

Presentations

"Climate Depression & Environmental Angst: The Emotional Toll of Ecological Loss" by Jennifer Atkinson, University of Washington, Bothell
https://video.muhlenberg.edu/media/Center+For+Ethics+Spring+2019A+"Climate+Depression+%26+Environmental+Angst A+The+Emotional+Toll+of+Ecological+Loss"/1_osvb4c9w

"Practical Strategies for Coping with the Emotional Toll of Conservation Work"
https://selfsustain.com/blog/webinar-practical-strategies-for-coping-with-the-emotional-toll-of-conservation-work/

"How Climate Change Effects Your Mentla Health" A Ted Talk by Britt Wray
https://www.ted.com/talks/britt_wray_how_climate_change_affects_your_mental_health?utm_campaign=tedspread&utm_medium=referral&utm_source=tedcomshare

Podcasts and other Media

Podcast: "Climate Change and Mental Health"
https://selfsustain.com/blog/sift-news-climate-change-and-mental-health-podcast/

Podcast: WHY!?! By the Good Grief Network
https://www.goodgriefnetwork.org/podcast-2/

Podcast: Facing It!
https://shows.acast.com/facing-it/episodes/episode-1-facing-down-climate-grief

Books

Albrecht, G. A. (2019). Earth emotions: New words for a new world. Cornell University Press.

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Ray, S. J. (2020). *A Field Guide to Climate Anxiety: How to Keep Your Cool on a Warming Planet*. Univ of California Press.

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Appendix C Resources for Student Counsellors and Mental Health Service Professionals

People

Thomas Doherty, Doctorate of Psychology, Psy.D., Licensed Psychologist (Portland, Oregon)
Self Sustain (https://selfsustain.com/about/)

Andrew Bryant, clinical social worker and psychotherapist (Seattle, Washington)
Climate and Mind (https://www.climateandmind.org)

Organizations

Climate Psychology Alliance
https://www.climatepsychologyalliance.org

Climate Psychiatry Alliance
https://www.climatepsychiatry.org

Tools

Climate Psychology Alliance North America, Map of Clinical Workshops and Events
https://climatepsychology.us/clinical-workshops

Joanna Macy's "Work that Reconnects" resources, events, and network.
https://workthatreconnects.org

Podcasts and other Media

Podcast: "Climate Change and Mental Health"
https://selfsustain.com/blog/sift-news-climate-change-and-mental-health-podcast/

Webinar: Practical Strategies for Coping with the Emotional Toll of Conservation Work
https://selfsustain.com/blog/webinar-practical-strategies-for-coping-with-the-emotional-toll-of-conservation-work/

Books

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