

**Climate Anxiety Management Toolkit Proposal for the the UC Office of Sustainability**

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Climate change is a global phenomenon that affects every living member of our planet. As an interdependent species, human interaction with our living world is deeply inculcated within us and is integral in the development of our collective psyche. How we interact and respond to the ever increasing climate crisis is indicative of a deeply shared connection with our biosphere. Human awareness of our role in the escalation of our planet's ecological collapse has begun to shape our own internal psychological wellbeing; feelings of ecological grief and climate focused anxiety that stems from this strained interdependence with our planet, as well as it's inevitable wellbeing, has directly influenced our own sense of wellbeing and mental health. When faced with such overwhelming ecological destruction, we react with feelings of uncertainty, unpredictability and uncontrollability, all of which fall under the criteria for symptoms of classic anxiety (Panu, 2020). This shift towards an ecologically related sense of anxiety has become increasingly more prevalent, affecting a large majority of individuals from all walks of life, including members of the University of Calgary. While ecologically based anxiety is rapidly on the rise, there is still a great deal of academic and clinical work to be done before "climate anxiety" can be considered as a clinically diagnosable phenomenon. There are, however, strong correlations between what we already understand regarding the definitions of anxiety and grief that allows us to respond quickly to the overwhelming needs of those who suffer in the shadows. There is strong evidence to suggest that most forms of eco/climate anxiety are non-pathological; while some evidence does suggest feelings similar to those related to forms of existential anxiety, it tends to manifest as a practical anxiety which encourages individuals to exhibit a problem solving attitude when faced with these emotions (Panu, 2020). There is a significant need for resources to tackle climate anxiety and ecological grief as the rising number of individuals turn to sources of leadership for answers. Those who are tasked with the emotional

and mental wellbeing of any large group must be well prepared to fight back and educate those in need.

### **Our Community Partner**

The fight against climate change has resulted in the creation of a dedicated office at the University of Calgary tasked to address all of the concerns that climate change brings to our collective doorstep: The Office of Sustainability.

The University of Calgary created its Office of Sustainability in 2007. Since that time, the office has hosted a number of events to promote sustainability, helped to create research opportunities, and worked with university stakeholders to develop policies and practices that promote sustainability on campus. Moreover, the Office of Sustainability strives to empower students to become sustainability leaders in all areas of their lives and communities.

The Office of Sustainability has a dedicated team focused on creating a more sustainable campus, and is supported with over 120 years of combined professional experience.

The Office of Sustainability currently faces two wellness issues that they have identified as a problem within its member population. The first is Climate anxiety, defined as the continuous anxiety that we feel from the ever changing environment due to climate change. The second is ecological grief (eco-grief), which is the grief we feel for the ecological destruction or collapse of the earth's biome. The simple act of bearing witness to the death of a tree can create feelings of eco-grief and climate anxiety. These issues are incredibly complex, especially in Alberta, where topics related to the environment and sustainability are often polarized, politicized, and diminished because many people believe that climate action will negatively impact the economy. The Office of Sustainability has noticed an increase in students who are experiencing climate anxiety and eco-grief, as the instances of natural disasters and the

prevalence of zoonotic diseases increase. Acute events can cause symptoms similar to that of traumatic stress. In addition, exposure to extreme or prolonged weather events can lead to multiple severe consequences, including post-traumatic stress, and can even be passed on to later generations (Cianconi, 2020).

As the leaders for sustainability on campus, many students experiencing any climate anxiety or eco-grief have been turning to the Office of Sustainability for resources in combating these mental health struggles. In the past, the Office of Sustainability has referred students to the Wellness Center at the University of Calgary, but they would like to have resources that students can access via the Office of Sustainability's website.

Our wellness solution proposal is a self administered, resource rich toolkit, that, if successfully implemented, will not only help students who are struggling with climate anxiety and eco-grief, but will also alleviate the pressure on both the Office of Sustainability and the Wellness Center. Our hope is that our proposed solution, with its ease of use and accessibility through the Office of Sustainability's website, may even reach individuals beyond the University of Calgary, making it a broadly accessible and adaptable resource.

### **Proposed Data Collection**

We are proposing the Office of Sustainability use the Climate Anxiety Scale (CAS), as pictured in figure 1, both before and after the proposed wellness intervention (see Appendix). We are recommending the Office of Sustainability provide the CAS in the introduction of the toolkit, and ask participants to take the survey twice: before starting the wellness intervention and after 30 days. We believe this suggested time frame will give participants the ability to consistently implement the wellness solution into their life, while not giving too much time that they forget to use the scale after implementing the toolkit.

We are additionally proposing the Office of Sustainability provide an additional survey for participants to use after they have implemented the toolkit. This survey is suggested to be used simultaneously with the participant's second use of the CAS. We propose the survey consist of a brief overview of the toolkit the participant used, and ask the participant to give feedback on how much the toolkit helped them, along with any improvements they might suggest for the toolkit. The goal of this is to have an ever changing, evolving toolkit that is kept up to date as a continuously helpful resource.

### **Rationale for Selected Instrument**

Although minor issues exist in the reliability of the CAS by Clayton and Karazsia (2020), it directly addresses the main points of climate anxiety that we are proposing the Office of Sustainability measure. The scale focuses on different aspects of climate anxiety such as behaviour, cognitive, and emotional impairment. The intent of the study conducted by Clayton and Karazsia (2020) was to develop a measure of climate change anxiety that would allow for consistency in measurement and understanding. These researchers attempted to validate previously created scales surrounding a variety of ways in which climate anxiety is expressed and essentially determined that experiencing climate change is associated with more than one type of response. Additionally, the CAS recorded responses to areas of climate anxiety such as cognitive-emotional impairment, functional impairment, experience of climate change in general, and behavioural engagement (2020). Due to the diverse approach used within this scale, we believe it will accurately measure the specific aspects implemented within our toolkit.

The validity of the CAS is strong, as it has been adapted from other scales, and validated by multiple sources, including the Ruminative Response Scale (Treynor et al., 2003) and the Functional Impairment Rating Scale (Weiss et al., 2011). The CAS explicitly addresses climate

anxiety. While it does not specifically discuss eco-grief, it has questions that indirectly address feelings that align with eco-grief, such as “I find myself crying because of climate change” (Clayton & Karazsia, 2020). Moreover, the scale measures what it is intended for, as every point centers around climate. Clayton and Karazsia (2020) found the measures of the CAS to show concurrent validity.

When discussing the reliability of this scale, we found that the questions were well written and understandable for a variety of ages; especially for an open toolkit targeting students in university. This is backed up by the sample population used in the validation of this scale done by Clayton and Karazia (2020):

The sample was 75% Caucasian, with just under 10% African heritage and smaller percentages Asian, Latinx, or other ethnicity. The majority (about 50%) were between 25 and 34, but ranged from the category 18–24, to three people who were 75 or older. The majority had completed a 4-year degree but ranged from one respondent who had not completed high school to 13 who had a graduate or professional degree. (p. 4)

There were two things that we thought of as potential drawbacks in terms of reliability, both of which could be disregarded depending on how the Office of Sustainability might choose to implement the scale in the toolkit. The first is the order of questions. Some of the questions might cause more emotional reactions than others, therefore a randomized order of the questions might affect the reliability of the scale. Since we expect the toolkit to produce a smaller sample size (less than 200), we recommend the Office of Sustainability keep the questions in a consistent order. The most noticeable weakness for the CAS in terms of reliability is the lack of a specified timeline for the participants to consider in their responses. We propose the Office of Sustainability include a timeline if they choose to implement this scale.

The CAS is straightforward, easily accessible and can be administered without any formal training. The scale also includes information regarding the breakdowns of each section in order to aid the administering parties in determining climate anxiety from the answers of the participants; specifically questions 1-13. We believe the simple administration provided by this scale will make it easy for participants to use and understand the scale on their own, making the CAS especially useful for the remotely accessible toolkit we are proposing.

The ethics of this scale is explicit in stating that it is not a clinical diagnosis measure and does not include any sensitive questions that may cause an individual further distress. The simplicity of this scale allows it to be used anonymously, without collecting identifiable information from participants, which is what we propose to do.

### **Proposed Design**

We are proposing the Office of Sustainability create a Climate Anxiety Management Toolkit (CAMT) that can be made available through their website. The ease of access of an online toolkit, meant to be accessible remotely, will be ideal given the special circumstances with which we all face today; we feel a remote application specifically targeting environmental mental health issues would be the best first line of defence for the Office of Sustainability. We have also directly considered those university members who are cut off from many of the university's resources. Many members have relocated to other cities, provinces and even countries due to the COVID-19 worldwide pandemic, and we feel that providing all members equal access to University of Calgary resources, such as this self-administered toolkit, is essential.

We are also proposing the toolkit be laid out in a clear enough way that it can be self-directed, so people can independently choose what resources work best given their particular

preferences. In addition, we propose that additional, pertinent resources accessible externally, such as the Wellness Center, be included for anyone looking for further help with anxiety or feelings of distress.

The resources featured in the toolkit can be categorized into three, clinically proven coping mechanism classifications. We determined that grounding the intervention with three proven, clinically adopted and utilized methods (Weiten et al., 2014) would enable every diverse participant of the toolkit to find a useful avenue to explore. We also feel that by aligning our coping strategies with those of psychological theory and practice we can provide a working framework of authenticity that can always be returned to when retooling this section of the toolkit for additional uses or opting for alternative coping strategies.

The first category of resources we are proposing are appraisal focused. This section would have resources on ways to learn more about climate change as well as climate anxiety and eco-grief. Examples of resources found within this category are books and podcasts with a specific focus on environmental issues, such as The Emergence Magazine Podcast (The Emergence Magazine, n.d.). The purpose of the appraisal focused category is to help individuals become educated about environmental issues through self-directed means.

Another category we are proposing works with a problem focused approach. This section would have resources to help people become actively involved through different groups that are focused on sustainability and climate action. For example, it would include active clubs such as the UofC Garden Club (UofC Garden Club, n.d.). The goal with this approach is to help people locate a local community in which they can discuss their feelings more openly and also aid in discovering new and insightful ways to foster positive change in their lives.



The final category we propose is emotion focused. This section would include a variety of ways that people can address their anxiety and grief interpersonally. For example, Savouring Nature Guided Meditation videos (Wallace & Lindsay, 2021) would be included in this section, as well as various ways to meditate and connect with nature on a personal level. Discovering how the individual fits into their respective biosphere can only happen through contemplative and introspective analysis. This may even help create a new awareness of reciprocity that can further influence one's relationship with their environment.

Ultimately, we feel that this three pronged approach marries well with the CAS as both methods share the same form and functionality. We believe this shared aspect between our measure and our design further validates and reinforces the toolkits effectiveness.

Our proposed design aims to measure participant climate anxiety levels using an intervention based approach. There will be a total of three (3) surveys: a pre- and post-CAS measure and a final survey assessing the usefulness of the CAMT resources. The nature of our CAMT distribution will utilize a convenient sample; individuals seeking help from the provided resources can choose to participate in the assessments via Qualtrics Survey links provided within the toolkit. For further instructions, refer to figure 2 in the Appendix.

### **Conclusions and Limitations**

The goal of this wellness solution proposal is to provide individuals specifically seeking help from the Office of Sustainability with effective resources to help combat feelings of eco-grief and climate anxiety. A self-administered, resource rich toolkit was constructed in order to provide answers and resources on the topic of climate related stress. It will also aid in alleviating stress on participants, the Office Sustainability, and the Student Wellness Center on campus.

We expect that the toolkit we have proposed is the best solution to help the Office of Sustainability and falls in line with their request for a wide range of resources and options for individuals who are suffering. We feel this format is the most valuable overall due to our diligent work to create an all-encompassing instrument. For instance, we proposed that this toolkit be accessible online via the Office of Sustainability's website, thereby considering the ease of remote access. We additionally considered the self-directability of the toolkit to allow individuals to effortlessly navigate through the toolkit itself as well as find resources based on individual needs. Moreover, we propose varying coping mechanisms within the toolkit to address the strategies unique to any person's preferences. We expect that these solutions will reduce the future foot-traffic experienced by the Office of Sustainability and enable safe access to resources during the current pandemic. Likewise, we expect that individuals will be able to help themselves in the reduction of climate anxiety and eco-grief due to the intervention-based nature of the CAMT. In the proposal, individuals take a pre- and post-intervention survey and can compare their scores. This would allow them to physically see the results from the resources they used and potentially allow them the possibility of utilizing new strategies they may otherwise have had a hard time discovering on their own. Furthermore, we believe that the CAMT is potentially “a one size fits all” approach and has the potential to help many other organizations, groups, businesses, schools, or other institutions seeking help with similar issues.

As with all studies, the current proposal has limitations. The toolkit relies heavily on self-direction which may be less helpful for those who require additional guidance or understanding. For instance, a young child, a person with a disability, or someone who is not technologically equipped may require more assistance which eliminates the purpose of the self-directed aspect of the toolkit. Although remote access was a large consideration for ease of accessibility, we

neglected to consider people who do not have access to the internet. This detriment excludes a population of people from accessing the resources. Another foreseeable limitation within this proposal is the reliance on memory and accountability for individuals to complete the post-intervention portion of the study. For purposes of anonymity, participants receive all survey links in advance. This can create data collection issues as the participant must remember to retrieve the link from the CAMT to complete the post-intervention surveys. This is a limitation as there is no incentive for individuals to complete all three surveys. Even if individuals reap the benefits from the intervention, they may potentially forget to complete the post-intervention survey. We suggest a follow-up email be implemented to ensure better data collection. General limitations were also noted in terms of the proposal's methodology. For instance, this proposal seeks to collect data from a convenience sample (ie. those who visit the Office of Sustainability website); thus, the results cannot be generalized. Finally, individuals may not take the time to answer questions to their best ability which could lead to inconclusive results when it comes to the data collection process.

Climate anxiety and eco-grief are becoming increasingly prevalent on a global scale. The CAMT is a proposed solution we believe can help mitigate the distressing eco-related thoughts and feelings members of the University of Calgary might be feeling in a safe and remotely accessible manner. While this proposal pertains to a small section of the population, it is important to remember that this is a rising global phenomenon. The notion that small steps by individuals can cause drastic differences on an environmental scale is well known. With this proposal, we hope to help the Office of Sustainability take similar steps in creating lasting and impactful change surrounding the mental health of the University of Calgary members.

## References

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## Appendix

Figure 1. *Climate Anxiety Scale.***Table 1**

Questionnaire items.

Please rate how often the following statements are true of you.				
1	2	3	4	5
Never	Rarely	Sometimes	Often	Almost always
1.	Thinking about climate change makes it difficult for me to concentrate.			
2.	Thinking about climate change makes it difficult for me to sleep.			
3.	I have nightmares about climate change			
4.	I find myself crying because of climate change			
5.	I think, “why can't I handle climate change better?”			
6.	I go away by myself and think about why I feel this way about climate change			
7.	I write down my thoughts about climate change and analyze them			
8.	I think, “why do I react to climate change this way?”			
9.	My concerns about climate change make it hard for me to have fun with my family or friends.			
10.	I have problems balancing my concerns about sustainability with the needs of my family.			
11.	My concerns about climate change interfere with my ability to get work or school assignments done.			
12.	My concerns about climate change undermine my ability to work to my potential.			
13.	My friends say I think about climate change too much.			
14.	I have been directly affected by climate change			
15.	I know someone who has been directly affected by climate change			
16.	I have noticed a change in a place that is important to me due to climate change			
17.	I wish I behaved more sustainably			
18.	I recycle			
19.	I turn off lights			
20.	I try to reduce my behaviors that contribute to climate change			
21.	I feel guilty if I waste energy			
22.	I believe I can do something to help address the problem of climate change			

Note: Items 1–13 constitute the climate change anxiety scale. Items 1–8 represent cognitive-emotional impairment; 9–13 measure functional impairment; 14–16 measure experience of climate change; 17–22 measure behavioral engagement.



Figure 2. *Design Diagram for Climate Anxiety Management Toolkit.*

## Design Diagram for Climate Anxiety Management Toolkit Prepared for the UC Office of Sustainability

