



Canadian Campus  
Wellbeing Survey

Bien-être sur les  
campus canadiens

## Eco-Anxiety Module

*June 2023*



University of British Columbia

Vancouver, British Columbia

June 2023

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## Acknowledgements

We would like to acknowledge and thank the members of the CCWS Technical Advisory Committee for their feedback that is instrumental to the ongoing CCWS efforts. We would also like to express our appreciation to the COMPASS (<https://uwaterloo.ca/compass-system/>) team for sharing their abbreviated measure.

### **Funding:**

Development and testing of the student version of the CCWS was supported by a grant from the Rossy Foundation (grant awarded to G. Faulkner at the University of British Columbia).

### **Suggested citation:**

Wunderlich, K., Faulkner, G., Eco-Anxiety Module. CCWS Technical Report Series 2023; 4. Vancouver, BC: The University of British Columbia. Available at: [www.ccws-becc.ca](http://www.ccws-becc.ca)

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## Table of Contents

<b>Acknowledgements.....</b>	<b>3</b>
<b>Introduction .....</b>	<b>5</b>
<b>Methods.....</b>	<b>5</b>
<i>Identifying Potential Measures .....</i>	<i>5</i>
<i>Feedback from Technical Advisory Committee .....</i>	<i>6</i>
<b>Conclusion.....</b>	<b>7</b>
<b>References.....</b>	<b>8</b>
<b>Appendix A – Climate-related items added to the CCWS by post-secondary institutions. ....</b>	<b>9</b>
<b>Appendix B – Clayton and Karazsia (2020) climate change anxiety scale .....</b>	<b>10</b>
<b>Appendix C – Ágoston and colleagues’ (2022) eco-anxiety questionnaire (EAQ-22) .....</b>	<b>12</b>
<b>Appendix D - Clayton and Karazsia (2020) climate change anxiety scale, abbreviated version.....</b>	<b>14</b>

## Introduction

The impact of climate change on mental health has garnered increased attention in recent years (Cianconi, Betrò, & Janiri, 2020; Clayton, Manning, Krygsman, & Speiser, 2017). Climate change affects people of all ages and may be particularly worrying for younger people (Ágoston et al., 2022), making it a relevant topic for the post-secondary sector to monitor. This has been reflected in additional questions selected by post-secondary institutions (PSIs) participating in the winter 2022 and 2023 deployments of the CCWS (see Appendix A).

The Canadian Campus Wellbeing Survey (CCWS) core modules do not currently include items that relate to climate change. Given the saliency of this topic, it seems timely to create an optional module with standardized questions that institutions can choose to include. This will allow for longitudinal data to be available in the CCWS research dataset, and for consistency between participating post-secondary institutions (PSIs). Offering an optional module creates flexibility for PSIs to opt in to include the module while maintaining the integrity of the core CCWS module. The purpose of this report is to outline the process that the CCWS Team took to identify the content for an additional optional module.

## Methods

### Identifying Potential Measures

The focus of the CCWS is on post-secondary mental and physical health and wellbeing. Accordingly, measures that focused on mental health and climate change were explored. This led to literature on eco-anxiety, "a chronic fear of environmental doom" (Clayton et. al, 2017, p. 68). In this report, we follow Ágoston and colleagues' (2022) preference to refer to eco-anxiety "as opposed to climate change anxiety... as the former is a broader concept that includes emotional reactions to environmental pollution, degradation of the natural environment and climate change as well" (p. 3).

The CCWS Team identified eco-anxiety as the topic of focus for the optional module. Clayton and Karaszia (2020) created and validated a measure for climate change anxiety, which would allow for the CCWS to assess eco-anxiety. Please see Appendix B for the items in this measure. The Climate Change Anxiety Scale (CCAS) includes 22-items and measures emotional response to climate change. Clayton and Karaszia (2020) examined the factorial structure of their newly developed scale in US samples via exploratory (n = 203 participants) and confirmatory (n = 199 participants) factor analyses. There are four sub-scales: cognitive and emotional impairment, functional impairment, personal experience of climate change, and behavioral engagement. The first sub-scale (items 1–8) assesses cognitive and emotional difficulties in response to climate change, reflected in rumination, difficulty sleeping or concentrating, crying, or nightmares about climate change. The second (items 9–13) assesses functional impairments and aims to assess whether thinking about climate change has damaged the individual's ability to socialize, work, or concentrate at work or school. It includes items like "My concerns about climate change interfere with my ability to get work or school assignments done." The third (items 14–16) reflects (direct and indirect) personal experience of climate change. It includes items such as "I have been directly affected by climate change" or "I know someone who has been directly affected by climate change." Finally, the fourth sub-scale (items 17–22) denotes behavioral engagement and the tendency to deploy adaptive behavioral responses to climate change. It includes items such as "I try to reduce my behaviors that contribute to climate change" or "I feel guilty if I waste energy."

Internal reliability was high for each subscale (i.e., factor), with Cronbach's alphas higher than 0.80. The authors also reported concurrent and discriminant validity of the scale (Clayton & Karazsia, 2020). They examined the patterns of correlations between each of the four CCAS sub-scales and a general measure of environmental identity as well as a combined measure of depression and anxiety. Each sub-scale except for behavioral engagement was positively associated with the mixed measure of depression and anxiety. Except for functional impairments, each sub-scale was positively associated with environmental identity.

A final measure considered was by Ágoston and colleagues (2022; see Appendix C). This measure was found after initial conversations with TAC. It is included here for post-secondary institutions considering options for their institution-specific questions that may complement the eco-anxiety module. In short, the Eco-anxiety Questionnaire (EAQ-22; Ágoston et al., 2022) was created to address critiques that previous measures had been designed using a more limited range of items. The authors conducted interviews on eco-anxiety and thematically analyzed them to create a comprehensive question pool. The items in this pool were tested and two factors emerged: habitual ecological worry and negative consequences of eco-anxiety. The former is represented by items that "display a strong emotional charge (e.g., being scared, alarmed, terrified or worried about the consequences of climate change and the ecological crisis)" (Ágoston et al., 2022, p. 10), while the latter refers to "tangible physical, emotional, or behavioral consequences (e.g., poor sleep, tension in muscles, constant alertness, crying)" (Ágoston et al., 2022, p. 10). The measure was developed using a Hungarian sample and includes 22 items. Additional work to assess the validity and reliability of the measure is needed. The EAQ-22 is focused on assessing negative emotional states related to climate change. In contrast, the CCAS includes sub-scales regarding personal experience of climate change and behavioral engagement in addressing climate change. Depending on interest, this does make the CCAS potentially more attractive as a survey tool given its broader scope.

One of the primary considerations when developing the CCWS was to keep the burden on respondents low by minimizing response time (Weatherson, Kwan, Ramanathan, & Faulkner, 2019). Following this sentiment, an abbreviated version of the Climate Change Anxiety Scale was sought out. A shortened version is currently used by the COMPASS system (<https://uwaterloo.ca/compass-system/>; please see Appendix D), focusing on some umbrella topics and what may most impact students. It is briefer than the full version, fitting with the goal of the CCWS to be a survey that is quick to complete. However, one limitation is that there is currently no validation data on the abbreviated measure.

### Feedback from Technical Advisory Committee

The CCWS has a Technical Advisory Committee (TAC) whose aim is to advise the CCWS Team in supporting the successful administration of the survey. In March 2023 the TAC was consulted regarding offering the climate change anxiety scale (Clayton & Karazsia, 2020) or the abbreviated version as an optional module that participating PSIs could elect to include along with the core CCWS modules.

The TAC considered the CCWS' goal to prioritize the breadth, not depth, of included items. This led to a concern that the measure by Clayton and Karazsia (2020) was too long. The TAC supported offering the abbreviated measure as an optional module that would be relevant to both the student and employee surveys. These items will offer participating institutions a starting point, with the opportunity to do further work if they would like to explore the topic in more detail.

## Conclusion

The abbreviated version of the Climate Change Anxiety Scale that was modified by COMPASS will be available as an optional module for institutions participating in the CCWS starting fall 2023. The optional eco-anxiety module is brief, and participating PSIs can continue to customize their additional questions to further explore this topic if they choose to do so. At the time of this report, participating PSIs are allowed to include up to one additional module to limit additional time to complete the CCWS. At the time of the approval of this module, there are two optional modules available: the longer food security measure, and eco-anxiety. Inclusion of this optional module will allow post-secondary institutions to standardize questions with other institutions who also choose to adopt the measure, allowing for comparison between institutions, across time, and for data to be available in the CCWS research dataset.

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## Appendix A – Climate-related items added to the CCWS by post-secondary institutions.

Post-secondary institutions (PSIs) can choose to add up to five items that are specific to their them. De-identified additional questions regarding climate change that were included by individual PSIs in the winter 2021 and 2022 deployments are included below.

How concerned are you about climate change?

- Not at all concerned
- Slightly concerned
- Somewhat concerned
- Moderately concerned
- Extremely concerned

Do you think climate change is linked to human behaviour?

- Yes
- No
- Unsure

Do you think [PSI] can help reduce climate change?

- Yes
- No
- Unsure

Check ways in which you think [PSI] can be effective in addressing climate change (check all that apply).

- Offer courses on climate change
- Do an environmental audit of campus
- Include renewable resources in future campus development
- Educate campus community on ways to mitigate climate change
- Prioritize environmentally friendly commuting options (charge for parking, install electric vehicle charging stations and bike shed)
- Other (comment box)

Other comments or suggestions about [PSI]'s role in reducing climate change:

- *Open-ended*

Please indicate the degree to which 'eco-anxiety' (e.g., feelings of despair, anger, anxiety in response to climate change) represents how you have been feeling during the last 30 days:

- None of the time
- A little of the time
- Some of the time
- Most of the time
- All of the time

## Appendix B – Clayton and Karazsia (2020) climate change anxiety scale

**Source:** Clayton, S., & Karazsia, B. T. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, 69, 101434.

<https://doi.org/10.1016/j.jenvp.2020.101434>

Please rate how often the following statements are true of you.

<b>Cognitive-emotional impairment</b>	1 – Never	2 – Rarely	3 – Sometimes	4 – Often	5 – 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?”					

<b>Functional impairment</b>	1 – Never	2 – Rarely	3 – Sometimes	4 – Often	5 – Almost always
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.					

<b>Personal experience of climate change</b>	1 – Never	2 – Rarely	3 – Sometimes	4 – Often	5 – Almost always
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.					

<b>Behavioral engagement</b>	1 – Never	2 – Rarely	3 – Sometimes	4 – Often	5 – Almost always
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.					

## Appendix C – Ágoston and colleagues’ (2022) eco-anxiety questionnaire (EAQ-22)

Source: Ágoston, C., Urbán, R., Nagy, B., Csaba, B., Kőváry, Z., Kovács, K., ... Demetrovics, Z. (2022). The psychological consequences of the ecological crisis: Three new questionnaires to assess eco-anxiety, eco-guilt, and ecological grief. *Climate Risk Management*, 37, 100441.

<https://doi.org/https://doi.org/10.1016/j.crm.2022.100441>

People have many different thoughts, feelings, and reactions regarding climate change and the ecological crisis. Please indicate how strongly you agree or disagree with the following statements.

	Strongly disagree (1)	Somewhat disagree (2)	Somewhat agree (3)	Strongly agree (4)
1. It really upsets me to see how animals are suffering because of environmental pollution.				
2. I worry about the next generation because they will be drastically affected by climate change.				
3. I am so anxious about climate change that I cry.				
4. It makes me angry that many people fail to do even the most basic things to protect the environment.				
5. I have unusual tension in my muscles since I've become more aware of climate change.				
6. I feel sorry for those whose health is already negatively affected by climate change.				
7. I am terrified by how many things have changed in just a few years because of climate change.				
8. My loved ones become irritated because I talk about my climate change concerns too often.				
9. I am worried about the increasing number of natural disasters caused by climate change.				
10. Thoughts of climate change often distract me from my current tasks.				
11. It makes me sick to think about how much certain countries are polluting				

the environment, and there is nothing I can do about it.				
12. It scares me that the weather is becoming more and more unpredictable because of climate change.				
13. I am so anxious about climate change that it affects my performance at school/work.				
14. It is frustrating that we elect decision makers who do not seriously consider the work of climate scientists/experts.				
15. I feel uneasy when I think about the consequences of climate change.				
16. People look at me in a strange way, because I am so passionate about environmental action.				
17. I find it terrifying that the seasons have changed a lot in a short time.				
18. I worry that every decision I make will result in something harmful to the environment.				
19. It makes me angry that our environmentally damaging behaviors increase the suffering of people who live in areas that are more impacted by climate change.				
20. I have a very negative perspective on the future of the planet because of climate change.				
21. I am constantly on alert because there could be a climate change related disaster at any time.				
22. I sleep poorly because I keep thinking about climate change.				

**Factors of the EAQ-22:**

Habitual ecological worry: 1, 2, 4, 6, 7, 9, 11, 12, 14, 15, 17, 19, 20.

Negative consequences of eco-anxiety: 3, 5, 8, 10, 13, 16, 18, 21, 22.

## Appendix D - Clayton and Karazsia (2020) climate change anxiety scale, abbreviated version

Source: [COMPASS survey](#), the world's largest and most comprehensive longitudinal school-based primary prevention project (secondary school students).

1. Please rate how often the following statements are true for you.

	Never	Rarely	Sometimes	Often	Almost always
a. Thinking about climate change makes it difficult for me to sleep					
b. My concerns about climate change interfere with my ability to get work or school assignments done					
c. I try to reduce my behaviors that contribute to climate change					
d. I believe I can do something to help address the problem of climate change					