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Cracking the Climate Communication Code: Unraveling the
Roles of Eco-Anxiety and Resilience in Climate Change Messages

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Abstract (English)

Effective climate communication is essential for fostering public support for climate action. However, the extent to which emotional tone influences pro-environmental behavior remains contested. This study examines how fear-driven versus neutral climate videos affect eco-anxiety and self-reported pro-environmental behavior, while also considering psychological resilience as a moderating factor. Based on an online survey with 379 participants, the study also incorporates the concept of the resilience paradox—the assumption that while resilience helps regulate emotional distress, it may simultaneously reduce the perceived urgency to act in the face of threats. Findings indicate that exposure to the fear-driven climate change messages significantly increased both eco-anxiety and pro-environmental behavior. Eco-anxiety mediated the relationship between message framing and behavior. Resilience moderated the effect of message framing on eco-anxiety, but not on behavior, thus only partially supporting the resilience paradox. Overall, the results suggest that emotionally framed climate messages—especially fear appeals, when used strategically—hold the potential to encourage pro-environmental behavior.

Keywords: climate change communication, emotional framing, fear appeals, eco-anxiety, pro-environmental behavior, psychological resilience, moderated mediation.

Abstract (German)

Damit Klimaschutzmaßnahmen gesellschaftliche Akzeptanz und Unterstützung finden, ist eine wirksame Kommunikation über die Dringlichkeit der Klimakrise unerlässlich. Unklar ist jedoch, inwieweit sich die emotionale Tonalität solcher Botschaften auf umweltfreundliches Verhalten auswirkt. Die vorliegende Studie untersucht, wie sich angstbetonte im Vergleich zu neutralen Klimavideos auf Klimaangst und umweltfreundliches Verhalten auswirken und welche Rolle psychologische Resilienz als moderierende Variable spielt. Grundlage ist eine Online-Befragung mit 379 Teilnehmenden, in der auch das sogenannte Resilienzparadoxon berücksichtigt wurde – die Annahme, dass Resilienz zwar zur Emotionsregulation beiträgt, gleichzeitig jedoch das subjektive Erleben von Handlungsdringlichkeit in Bedrohungssituationen abschwächen kann. Die Ergebnisse zeigen, dass das angstbetonte Video sowohl die Klimaangst als auch das selbstberichtete umweltfreundliche Verhalten signifikant erhöhte. Klimaangst vermittelte den Zusammenhang zwischen Botschaft und Verhalten; Resilienz moderierte den Einfluss auf die Klimaangst, jedoch nicht auf das Verhalten – womit das Resilienzparadoxon nur teilweise bestätigt wurde. Insgesamt legen die Befunde nahe, dass emotional gestaltete Klimabotschaften – insbesondere in Form strategisch eingesetzter Angstappelle – das Potenzial haben, klimafreundliches Verhalten zu fördern.

Schlüsselwörter: Klimakommunikation, emotionale Rahmung, Angstappelle, Klimaangst, umweltfreundliches Verhalten, psychologische Resilienz, moderierte Mediation

Cracking the Climate Communication Code: Unraveling the Roles of Eco-Anxiety and Resilience in Climate Change Messages

1. Introduction

Few global issues pose as significant a threat in this century as climate change, which profoundly affects ecosystems, economies, and societies (Van Lange & Rand, 2022). Beyond natural disasters like hurricanes, droughts, and wildfires, climate change also impacts human mental health, food security, and economic stability (IPCC, 2022). Vulnerable populations, such as residents of low-lying island nations or drought-prone agricultural communities, often experience these effects directly (IPCC, 2022). However, many individuals in other parts of the world primarily encounter the consequences of climate change through media coverage and social media platforms (Shao & Yu, 2023).

Despite the increasing visibility of climate change in the media, this indirect exposure often fails to generate the sense of urgency needed to inspire meaningful pro-environmental behavior among individuals not directly affected (van der Linden, Maibach, & Leiserowitz, 2015). One contributing factor to this detachment is the perception of climate change as a remote or abstract phenomenon. Bridging the gap between awareness and action has therefore become a central concern for researchers across disciplines, who aim to identify communication strategies that effectively promote pro-environmental behavior (Moser, 2010; van der Linden et al., 2017). A key debate in climate change communication centers on how to frame messages in ways that successfully motivate individuals to adopt sustainable behaviors (Ettinger et al., 2021).

In environmental psychology, research findings present a complex picture of the effectiveness of different communication strategies. While some approaches emphasize hope by highlighting the positive outcomes of pro-environmental actions, others use fear to underscore the severe consequences of inaction (Ettinger et al., 2021). However, studies have yet to conclusively demonstrate which strategy is more effective in motivating public engagement (Ettinger et al., 2021). In light of these inconclusive findings, researchers have increasingly focused on understanding individual differences in how people perceive and respond to climate communication. Recent studies have explored a range of psychological factors—such as environmental values, perceived self-efficacy, and emotional reactions—that may moderate the impact of climate messages (Swim & Bloodhart, 2015; van Valkengoed &

Steg, 2019). Among these, emotional responses like eco-anxiety have received growing attention as both a reflection of the psychological burden of the climate crisis and a potential motivator for behavior change (Clayton & Karazsia, 2020). In this context, Shao and Yu (2023) demonstrated that individuals exposed to climate crisis information through media were more likely to experience eco-anxiety, which—under certain conditions—translated into pro-environmental behavior. However, the relationship between eco-anxiety and behavior proved to be complex and dependent on individual coping mechanisms. Notably, resilience emerged as a key moderating factor. While it supported individuals in managing eco-anxiety and maintaining mental well-being, Shao and Yu (2023) identified a so-called "resilience paradox": greater resilience sometimes reduced the motivational urgency to engage in pro-environmental behavior. This finding aligns with prior research evidence suggesting that emotional adaptation to eco-anxiety, although beneficial for psychological functioning, may unintentionally undercut collective environmental efforts by lowering the perceived need to act (Tugade & Fredrickson, 2004; Mah et al., 2020).

Against this background, the present study seeks to advance our understanding of how emotional climate messaging influences behavior. To address these gaps, this thesis explores how the emotional tone of climate messages—such as fear-driven or neutral narratives—affects pro-environmental behavior. Building on the work of Shao and Yu (2023) and Ettinger et al. (2021), this study also examines the role of eco-anxiety as a mediator and resilience as a moderator in these relationships. By investigating these dynamics, this research aims to clarify how emotional responses to climate communication can either motivate or hinder pro-environmental behavior, ultimately providing insights into designing more effective communication strategies.

1.1. Fear-Driven Messages in Climate Change Communication

Fear messages are designed to evoke emotional responses by highlighting the potential dangers and harm that individuals may face if they fail to act on the provided recommendations (Tannenbaum et al., 2015). Over the past few decades, such strategies have been studied, particularly within public health campaigns, where fear has proven effective in shifting attitudes and promoting behavioral changes (Maynard et al., 2014; Witte & Allen (2000)).

In the context of climate change communication, similar patterns emerge, yet the findings on the use of fear appeals and their impact on pro-environmental behavior are mixed. Evidence suggests that such messages can motivate actions like conserving energy (Meijnders et al., 2001) or engaging in climate advocacy, including signing petitions (van Zomeren et al., 2010). While high-threat climate messages may not necessarily evoke stronger fear reactions than low-threat ones, they do appear to increase intentions to seek out and share climate-related information (Skurka et al., 2023). Despite these promising effects, researchers have cautioned that fear-based messages should be used carefully. Evidence suggests that such appeals can trigger psychological defense mechanisms, prompting individuals to downplay or deny the severity of climate threats as a means of regulating negative emotions (Ruiter et al., 2014). Moreover, although fear-based messaging may capture attention, its ability to foster sustained personal engagement appears limited (O'Neill & Nicholson-Cole, 2009; Moser, 2016).

These findings have led scholars to argue for the complete avoidance of emotional appeals in climate change communication, cautioning that any use of emotional content may compromise message credibility and reduce its perceived efficacy, as such messages risk being dismissed as overly emotional and lacking rational reasoning (Bloodhart et al., 2019). However, recent research presents a more nuanced perspective: the effectiveness of emotional content—particularly fear-based appeals—appears to depend on how such messages are framed and how different audiences receive them. While poorly designed fear appeals may provoke defensive reactions or be perceived as manipulative, strategically crafted fear messages can successfully capture attention and promote behavioral engagement (Tannenbaum et al., 2015).

Therefore, the first hypothesis guiding this study is as follows:

H1: Exposure to fear-driven climate change messages is associated with higher levels of pro-environmental behavior compared to messages lacking emotional content.

1.2. The Role of Eco-Anxiety in Climate Change Communication

While fear-driven climate change messages have been shown to influence pro-environmental behavior, research findings remain inconsistent. Variations in outcomes highlight the importance of both message framing and individual psychological characteristics in determining the effectiveness of such communication (Ogunbode et al., 2019). One

explanation for this variability may lie in the emotional impact of these messages, which often emphasize the perceived threats of inaction (Shao & Yu, 2023). Such effects are typically achieved by exposing individuals to reports on the consequences of climate change, thereby reducing the psychological distance to the issue (Spence et al., 2012). As a result, the message increases perceived personal relevance (Ogunbode et al., 2022), which in turn influences emotional responses and subsequent behavior (Li et al., 2022).

Among the emotional reactions associated with climate change, eco-anxiety has received considerable scholarly attention (Kühner et al., 2024). Eco-anxiety is defined as the distress experienced when individuals feel anxious about environmental loss or damage (Ojala et al., 2021). While there is considerable evidence supporting the connection between eco-anxiety and pro-environmental behavior (Ogunbode et al., 2022; Stanley et al., 2021; Hickman et al., 2021), the exact nature of this relationship remains a topic of debate (Shao & Yu, 2023). On one hand, some researchers argue that eco-anxiety serves as a positive predictor of pro-environmental behavior (Ogunbode et al., 2022), with findings suggesting that daily experiences of eco-anxiety are associated with increased environmental engagement (Kühner et al., 2024). On the other hand, several studies have shown either no significant relationship (Clayton & Karazsia, 2020) or even a negative association (Geiger et al., 2022), indicating that high levels of eco-anxiety may lead to emotional paralysis and potentially reduce long-term pro-environmental behavior.

Building on current research, previous studies have overlooked how variations in the emotional tone of climate change messages impact eco-anxiety. This study aims to bridge this gap by analyzing both the content and the emotional framing of climate change messages. Fear-driven messages that emphasize the negative consequences of climate change are expected to heighten eco-anxiety. Recent findings suggest that when climate change is presented using fear appeals, it increases fear, which in turn raises levels of eco-anxiety (von Gal et al., 2024).

This leads to the following hypothesis:

H2: Exposure to fear-driven climate change messages is associated with higher levels of eco-anxiety than exposure to messages without emotional content.

This study does not approach eco-anxiety as a mental health risk (Parry et al., 2022) but rather builds on the concept of adaptive eco-anxiety, which is considered a functional

emotional response that can promote environmental engagement (Verplanken et al., 2020). In this context, experiencing eco-anxiety following exposure to climate change messages is expected to encourage rather than hinder pro-environmental behavior. Prior research supports this idea, with findings indicating that eco-anxiety—when triggered constructively—can act as a motivator for climate action (Shao & Yu, 2023; Stanley et al., 2021; Ogunbode et al., 2022). These studies emphasize the importance of considering how the emotional framing of climate messages influences both eco-anxiety and behavioral outcomes. Building on this, the present study investigates whether eco-anxiety acts as a mediating variable in the relationship between different types of climate change messages and pro-environmental behavior.

Taken together, these findings suggest the following hypothesis:

H3: Eco-anxiety mediates the relationship between climate change messages and pro-environmental behavior.

1.3. The Resilience Paradox in Climate Change Communication

As the emotional and psychological effects of climate change become more prominent (Hayes et al., 2018), resilience has gained attention as an important factor in how individuals manage these challenges. Defined as the ability to respond to adversity with adaptability and growth, resilience is typically considered a valuable psychological strength (Hobfoll et al., 2015). However, in the context of climate change communication, recent studies have identified a more complex role for resilience (Ogunbode et al., 2019). People with higher resilience often perceive climate-related threats as less serious, which may reduce their levels of eco-anxiety—but also their motivation to take pro-environmental action. This unintended effect is known as the “resilience paradox” (Shaw et al., 2014): meaning that while resilience helps to regulate negative emotions, it may also lower the emotional drive needed to engage in climate-positive behaviors. As such, resilience may act as a moderator in the relationship between climate message framing, emotional responses like eco-anxiety, and subsequent behavior (Shao & Yu, 2023).

Based on these considerations, the following hypothesis is proposed:

H4: Resilience moderates the associations between climate change messages and eco-anxiety, as well as between eco-anxiety and pro-environmental behavior.

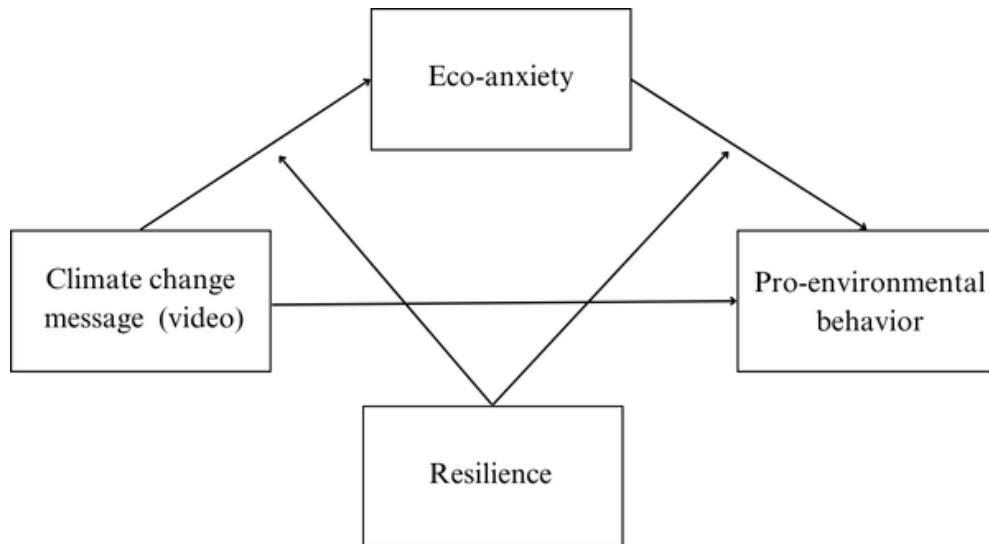
1.4. Framing Climate Change Messages - The Role of Videos in Modern Communication

In recent years, the consumption of online video content has increased substantially (Newman et al., 2019). This trend spans across various platforms—including social media (e.g., TikTok, Instagram, Twitter), news outlets, and streaming services—reflecting a broader shift in how people access and process information (Ettinger et al., 2021). Videos have become an especially effective medium for communicating complex topics like climate change, as they combine visuals, sound, and text to engage viewers emotionally and cognitively. Compared to written formats, videos tend to be more engaging and easier to comprehend, making them a valuable tool for public education and awareness (Dai & Wang, 2023). Research further indicates that video formats are more effective than text in increasing understanding and engagement with scientific content, including climate change messages (Goldberg et al., 2019).

Building on these insights, the present study adapts climate videos from Ettinger et al. (2021) for an Austrian audience. Subtitles are translated into German, and the content is localized to reflect Austria-specific climate impacts, such as alpine warming and more frequent extreme weather events. To minimize potential bias introduced by narration (e.g., tone, accent, or gender), the videos will feature no spoken voice (Ettinger et al., 2020). These adaptations aim to enhance emotional relevance and explore how localized video strategies can foster public engagement with climate change.

1.5. The Model of the Present Study

This study builds on the model developed by Shao and Yu (2023), with one key modification. While their original work examined general exposure to climate change media and participants' attitudes toward the topic, the present study narrows the focus to the emotional tone of climate change messages. Greater exposure to media content was found to be linked to increased eco-anxiety and more active engagement in pro-environmental behavior (Shao & Yu, 2023). Expanding on their model, the current study investigates how emotionally framed climate messages influence eco-anxiety and related behavioral outcomes. The proposed relationships among variables—climate change message (video), eco-anxiety, resilience, and pro-environmental behavior—are illustrated in Figure 1.

Figure 1*Research model*

Note. Adapted from *Media coverage of climate change, eco-anxiety and pro-environmental behavior: Experimental evidence and the resilience paradox*, by L. Shao & G. Yu, 2023, *Journal of Environmental Psychology*, 87, 102130. <https://doi.org/10.1016/j.jenvp.2023.102130>. © 2023 by Elsevier.

2. Methods

2.1. Video production

To explore how different emotional framings of climate messages influence viewer responses, participants were shown short (1 minute 45 seconds) climate change videos created specifically for this research. The videos differed in emotional tone—either fear-driven or neutral. Given the interpretive variability of broad emotional concepts, this study draws on the risk-as-feelings framework (Loewenstein et al., 2001), which defines fear as a spontaneous emotional reaction to perceived threats, rather than a result of deliberate cognitive evaluation. In this framework, fear functions as an affective response that shapes how individuals process risk-related information and make decisions. Ruiter et al. (2011) similarly describe fear as an unpleasant emotion arising from the recognition of threat, supporting this understanding.

The fear-driven video presents a predominantly pessimistic outlook on the future consequences of climate change. It incorporates alarmist language and emotionally charged visuals. While potential solutions are acknowledged, they are accompanied by doubt about their feasibility or scale. The message emphasizes loss framing, focusing on the costs of inaction.

Figure 2

Screenshot from the fear-driven video



Note. Use of alarming language and a pessimistic outlook on the future if no action is taken

In contrast, the neutral video adopts a more objective tone, presenting information about climate change impacts without emotional content. The language is restrained, with minimal use of adjectives, and the visuals are less provocative. Although the video highlights the need for climate action, it avoids framing the message in optimistic or pessimistic terms.

Figure 3

Screenshot from the neutral video



Note. Climate change impacts with little to no emotional framing

Both videos were produced using content sourced from [Storyblocks](#), a platform offering a wide library of high-quality, royalty-free stock footage. This ensured consistency and professional visual standards across both conditions.

2.2. Survey Design

The study began by obtaining demographic information from participants, such as age, gender, and level of education. To assess participants' general attitudes toward climate change messages, they were asked, prior to viewing the video, how they typically feel about information on this topic. Participants were then randomly assigned to either the fear-driven or neutral video condition. After watching the videos, they rated the video's tone.

Eco-Anxiety was measured using the Climate Change Anxiety Scale (Clayton & Karazsia, 2020), a 13-item instrument designed to assess cognitive and functional impairments related to eco-anxiety. An example item is: *‘Meine Sorgen über den Klimawandel machen es schwer für mich, Spaß mit Freunden und Familie zu haben.’* Responses were recorded on a 5-point Likert scale ranging from 1 (never) to 5 (almost always). The scale was translated into German for this study. In the current sample, the scale demonstrated a Cronbach’s alpha of .72, indicating moderate internal consistency.

Resilience was assessed using the University of Washington Resilience Scale – 8-Item Short Form (UWRS-8), which evaluates an individual's ability to recover from stress. Participants responded to items such as: *‘Wenn etwas passiert, das mich gestresst fühlen lässt, beruhige ich mich normalerweise schnell.’* using a 5-point Likert scale from 1 (not at all) to 5 (very much). The UWRS-8 has demonstrated high reliability in previous studies, in this study, the scale exhibited a Cronbach’s alpha of .86, indicating strong internal consistency.

Pro-Environmental Behavior was measured using the Pro-Environmental Behavior Questionnaire (Liu & Wu, 2013), a 12-item scale assessing environmentally friendly behaviors. A sample item is: *‘Beim Einkauf achte ich auf klimafreundliche Lebensmittel.’* Responses were recorded on a 5-point Likert scale from 1 (not at all) to 5 (always). The scale demonstrated acceptable reliability in this study, with a Cronbach’s alpha of .75.

2.3. Participants

A priori power analysis was conducted using G*Power 3.1.9.4 (Faul et al., 2009) to determine the minimum required sample size for detecting effects in a moderated mediation model. Assuming a small effect size ($f^2 = 0.02$), an alpha level of .05, and a desired statistical power of .80, the analysis indicated that a sample of at least 485 participants was necessary.

Data collection was carried out using the Unipark platform, selected for its capability to support video-based online surveys. Recruitment was conducted through convenience sampling by distributing the survey link via social media platforms such as Facebook, WhatsApp, and student messaging groups.

A total of 543 individuals participated in the study. Participants were excluded if they did not complete the study ($n = 73$), completed the questionnaire in less than two minutes ($n = 2$), or if their perception of the video's emotional tone did not align with its intended framing (fear or neutral) ($n = 87$). This resulted in a final sample of 379 participants. Of the final sample, 236 participants identified as female (62.3%) and 143 as male (37.7%). Participants ranged in age from 18 to 65 years ($M = 26.35$, $SD = 11.86$).

3. Statistical Analysis

All statistical analyses were performed using SPSS version 25. Hypotheses 1 and 2 were evaluated through linear regression analyses. To test Hypotheses 3 and 4, the PROCESS macro for SPSS by Hayes (2013) was employed. Specifically, Model 8 was utilized to examine the mediating effect of eco-anxiety (Hypothesis 3), and Model 58 was applied to assess the moderated mediation involving resilience (Hypothesis 4).

Prior to conducting the analyses, all assumptions of linear regression were thoroughly examined. Linearity was assessed, confirming a linear relationship between the independent and dependent variables. The normality of residuals was evaluated, indicating an approximate normal distribution. Homoscedasticity was verified, revealing no discernible patterns that would suggest heteroscedasticity. Multicollinearity was assessed by calculating Variance Inflation Factor (VIF) values for all predictors, all of which were below the commonly accepted threshold, indicating no significant multicollinearity. The independent variable (video condition) was dichotomous, while the dependent variables (eco-anxiety and pro-environmental behavior) were continuous.

3.1. Correlational Insights: A Descriptive Statistical Overview

To examine the relationships among gender, age, and the main study variables, Pearson's correlation coefficients were calculated (see Table 1). The results indicated that gender was positively correlated with video condition ($r = .17, p = .047$), eco-anxiety ($r = .12, p = .037$), pro-environmental behavior ($r = .19, p = .024$), and resilience ($r = .03, p = .045$). Age was negatively associated with the climate change message condition ($r = -.10, p = .038$), eco-anxiety ($r = -.08, p = .003$), and resilience ($r = -.13, p = .045$), but positively correlated with pro-environmental behavior ($r = .15, p < .001$). The climate change video condition was positively correlated with eco-anxiety ($r = .32, p < .001$), pro-environmental behavior ($r = .37, p < .001$), and resilience ($r = .16, p < .001$). Eco-anxiety was positively associated with pro-environmental behavior ($r = .29, p = .005$) and negatively correlated with resilience ($r = -.10, p = .009$). Finally, resilience was negatively correlated with pro-environmental behavior ($r = -.17, p < .001$).

Table 1

Descriptive Statistics and intercorrelation between variables (n = 379).

	1	2	3	4	5
1. Gender	–				
2. Age	-.05	–			
3. Climate Change Video	.17*	-.10*	–		
4. Eco-anxiety	.12*	-.08**	.32***	–	
5. Pro- environmental behavior	.19*	.15***	.37***	.29**	–
6. Resilience	.03*	-.13*	.16***	-.10**	-.17***

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

4. Results

4.1. Regression Analysis for Hypothesis 1

Building on the results of the correlation analysis, age and gender were included as control variables in the regression models. To test Hypotheses 1 and 2, (multiple) linear regression

analyses were conducted. The results for Hypothesis 1 (Model 1, Table 2) revealed a positive and statistically significant association between video condition and pro-environmental behavior ($\beta = 0.28$, $p < .001$, 95% CI [.19, .37]). The overall model was significant, explaining approximately 7% of the variance in pro-environmental behavior (Adj. $R^2 = 0.07$; $F(1, 376) = 14.75$, $p < .001$).

When the control variables age and gender were included in Model 2 (Table 2), the model remained highly significant and the explained variance increased substantially (Adj. $R^2 = 0.29$; $F(3, 374) = 53.43$, $p < .001$). The effect of video condition on pro-environmental behavior remained significant ($\beta = 0.24$, $p < .001$, 95% CI [.18, .30]), whereas age and gender did not emerge as significant predictors.

Taken together, these results support Hypothesis 1, suggesting that exposure to fear-driven climate change messages is associated with significantly higher self-reported pro-environmental behavior compared to neutral messaging.

Table 2

Regression coefficients for the influence of age, gender and climate change message on pro-environmental behavior ($n = 379$).

Coefficients	Model					
	1			2		
	β	95 % CI	t	β	95 % CI	t
Climate Change Video	.28	[.19; .37]	5.50***	.24	[.18; .30]	4.80***
Age	-	-	-	.19	[-.01; .28]	1.27
Gender	-	-	-	.22	[-.08; .35]	1.47
Constant	1.42	[1.27; 1.57]	13.70***	1.27	[.92; 1.62]	7.06***
	$R^2 = .07$			$R^2 = .3$		
	Adj. $R^2 = .07$			Adj. $R^2 = .29$		
	$F(1, 376) = 14.75***$			$F(3, 374) = 53.43***$		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.2. Regression Analysis for Hypothesis 2

To assess the impact of the emotional tone of climate change messages on eco-anxiety, a linear regression analysis was conducted. The results showed a moderate and statistically significant positive association between video condition and eco-anxiety levels ($\beta = 0.31, p < .001, 95\% \text{ CI } [0.20, 0.43]$). This model accounted for approximately 8% of the variance in eco-anxiety ($\text{Adj. } R^2 = 0.08; F(1, 376) = 26.73, p < .001$), indicating that participants exposed to the fear-driven video reported higher levels of eco-anxiety than those who viewed the neutral video. In a second model that included age and gender as control variables, explanatory power increased considerably ($\text{Adj. } R^2 = 0.26; F(3, 374) = 45.83, p = .008$). The effect of the video condition remained statistically significant, although slightly reduced ($\beta = 0.26, p < .003, 95\% \text{ CI } [0.18, 0.39]$). In addition, both control variables showed significant associations: age ($\beta = 0.14, p = .025, 95\% \text{ CI } [0.02, 0.26]$) and gender ($\beta = 0.21, p = .005, 95\% \text{ CI } [0.11, 0.35]$). These results support Hypothesis 2 by suggesting that fear-driven climate change messages are associated with higher levels of eco-anxiety, even after accounting for age and gender.

Table 3

Regression coefficients for the influence of age, gender and climate change message on eco-anxiety ($n = 378$).

Coefficients	Model					
	1			2		
	β	95 % CI	t	β	95 % CI	t
Climate Change Video	.31	[.20; .43]	5.08***	.26	[.18; .39]	3.68**
Age	-	-	-	.14	[.02; .26]	2.29*
Gender	-	-	-	.21	[.11; .35]	2.96**
Constant	1.51	[1.33; 1.69]	16.78**	1.29	[1.09; 1.49]	12.90***
	$R^2 = .08$			$R^2 = .27$		
	Adj. $R^2 = .08$			Adj. $R^2 = .26$		
	$F(1, 376) = 26.73***$			$F(3, 374) = 45.83**$		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.3. *Eco-Anxiety as a Mediator*

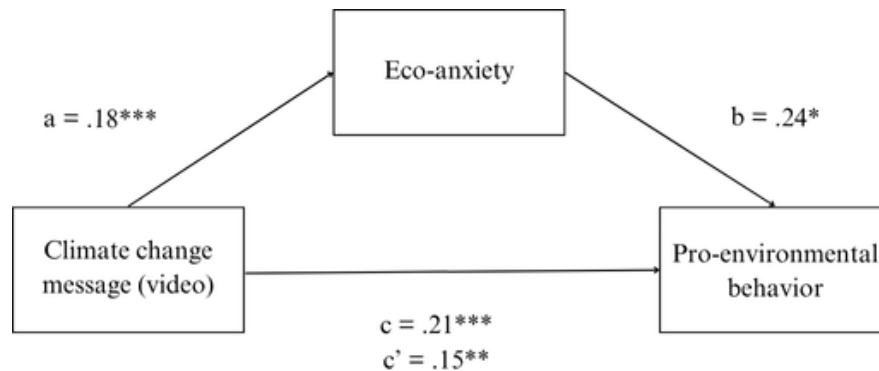
In order to test Hypothesis 3, the mediating role of eco-anxiety in the relationship between video condition and pro-environmental behavior was examined using the PROCESS macro for SPSS Model 4 (Hayes, 2013), as well as applying 5,000 bootstrap iterations (Hemmerich, 2023).

Consistent with prior analyses, and as shown in Tables 4.1 to 4.3 in the appendix, the direct effect of the fear-driven climate change video on pro-environmental behavior was positive and statistically significant ($\beta = 0.24$, $SE = 0.07$, $p = .007$, 95% CI [0.10, 0.38]). Similarly, the climate change video condition had a significant effect on the mediator, eco-anxiety ($\beta = 0.23$, $SE = 0.06$, $p < .001$, 95% CI [0.12, 0.34]). In turn, eco-anxiety significantly predicted pro-environmental behavior ($\beta = 0.36$, $SE = 0.07$, $p < .001$, 95% CI [0.22, 0.45]). The indirect effect of climate change video condition on pro-environmental behavior via eco-anxiety was also significant (indirect effect = 0.09, Boot SE = 0.02, 95% CI [0.03, 0.15]), indicating partial mediation.

When age and gender were added as control variables, the mediation effect remained robust (see Tables 5.1 to 5.3 in the appendix). The climate change video condition continued to predict eco-anxiety ($\beta = 0.18$, $SE = 0.07$, $p < .001$, 95% CI [0.13, 0.31]) and pro-environmental behavior ($\beta = 0.15$, $SE = 0.07$, $p = .004$, 95% CI [0.10, 0.35]). Eco-anxiety again predicted pro-environmental behavior ($\beta = 0.24$, $SE = 0.06$, $p < .001$, 95% CI [0.16, 0.39]), and the indirect effect remained significant (indirect effect = 0.04, Boot SE = 0.02, 95% CI [0.01, 0.11]). While age was not a significant predictor, gender had a significant positive effect on both eco-anxiety ($\beta = 0.12$, $SE = 0.06$, $p = .045$, 95% CI [0.01, 0.20]) and pro-environmental behavior ($\beta = 0.15$, $SE = 0.07$, $p = .031$, 95% CI [0.01, 0.29]). These results provide evidence for partial mediation, supporting Hypothesis 3.

Figure 4

Graphical Representation of the Mediation Effect (Hypothesis 3) with Control Variables



Note. Mediation through eco-anxiety via the a and b paths. $N = 379$. Control variables included: age and gender. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.4. Testing for Moderated Mediation Effect of Resilience

According to Hypothesis 4, resilience was expected to moderate the relationship between climate change messages and eco-anxiety, as well as between eco-anxiety and pro-environmental behavior. To examine this moderated mediation effect, Model 58 of the PROCESS macro (Hayes, 2013) was used. A bootstrap analysis with 5,000 iterations was conducted.

As shown in Tables 6.1 to 6.3 in the appendix, resilience significantly moderated the relationship between climate change message condition and eco-anxiety ($\beta = -.16$, $p = .007$, 95% CI $[-.28, -.04]$). This indicates that individuals with lower levels of resilience experienced a stronger increase in eco-anxiety after watching the fear-driven video compared to those with higher resilience. In contrast, resilience did not significantly moderate the relationship between eco-anxiety and pro-environmental behavior ($\beta = -.05$, $p = .24$, 95% CI $[-.17, .07]$).

When the control variables gender and age were included in the model (see Tables 7.1 to 7.3 in the appendix), the interaction between climate change message and resilience remained significant ($\beta = -.12$, $p = .008$, 95% CI $[-.20, -.04]$), whereas the interaction between eco-anxiety and resilience remained non-significant ($\beta = -.04$, $p = .26$, 95% CI $[-.12, .03]$).

Due to the non-significance of the second interaction term, Hypothesis 4 is only partially supported.

5. Discussion

The aim of this study was to investigate how different framings of climate change messages—specifically fear-driven versus neutral—affect eco-anxiety and pro-environmental behavior, with attention to the moderating role of resilience. Findings revealed that participants exposed to fear-driven climate change messages, reported significantly higher levels of eco-anxiety. Heightened eco-anxiety, in turn, was associated with increased engagement in pro-environmental behaviors. These results support the notion that, when carefully crafted, fear appeals can activate rather than paralyze individuals, motivating them toward environmentally responsible actions (Moser, 2007; O'Neill & Nicholson-Cole, 2009; Tannenbaum et al., 2015).

By employing emotionally toned video stimuli instead of relying solely on the quantity of climate change news consumed, this research addresses methodological limitations identified in earlier work (Shao & Yu, 2023). This approach aligns with the affective communication framework proposed by Ettinger et al. (2021), emphasizing the significance of visual and emotional engagement in climate change messaging.

5.1. Effects of Message Framing on Pro-Environmental Behavior

The findings of this study indicate that fear-inducing climate change messages can effectively enhance pro-environmental behavioral intentions. Participants exposed to fear-based video content reported higher intentions to engage in environmentally responsible actions compared to those who received neutral messages. This effect is likely due to the heightened emotional arousal and sense of urgency elicited by fear appeals, which make the consequences of climate change feel more immediate and personally relevant (Schwarz & Loewenstein, 2017). Recent research by Tang et al. (2024) further supports these findings, demonstrating that interactive fear appeals—such as simulated social media posts with user engagement—can reduce psychological resistance and enhance message relevance, thereby increasing intentions for pro-environmental behavior.

5.2. Eco-Anxiety as a Motivating and Inhibiting Mechanism

Exposure to fear-inducing climate change messages has been observed to elevate levels of eco-anxiety, which can mediate an increase in pro-environmental behavior. This pattern suggests that eco-anxiety functions as an emotional mechanism, translating perceived climate threats into concrete behavioral intentions (Clayton et al., 2020). According to Ogunbode et al. (2022), individuals' cultural background influences how strongly climate anxiety predicts pro-environmental behavior, with a more pronounced link in individualistic cultures than in collectivistic ones. In societies where climate change is perceived with greater psychological distance—such as many Western nations—eco-anxiety may thus play an especially crucial motivational role.

However, other studies highlight potential downsides of eco-anxiety. Excessive levels can reduce behavioral engagement, likely due to feelings of helplessness or emotional overload (Innocenti et al., 2023; Kühner et al., 2024). For instance, Chen et al. (2024) reported that high levels of climate anxiety among adolescents were associated with reduced pro-environmental behavior.

Effectively leveraging eco-anxiety in climate communication involves pairing fear-inducing messages with clear, actionable solutions. By providing realistic and achievable pathways to action, communicators can transform emotional concern into meaningful behavioral engagement (Nabi & Myrick, 2019). Eco-anxiety, when accompanied by solution-oriented strategies that foster a sense of agency and control, can serve as a powerful motivator for pro-environmental behavior (Leite et al., 2023; von Gal et al., 2024).

5.3. The Role of Resilience in Climate Communication

Attempts to replicate the findings of Shao and Yu (2023) regarding the "resilience paradox" were unsuccessful in this study. Although a significant interaction between video type (fear-driven vs. neutral) and individual resilience levels was observed concerning eco-anxiety, resilience did not moderate the relationship between eco-anxiety and pro-environmental behavior. This outcome suggests that while resilience may influence emotional responses to climate messages, it does not necessarily translate into behavioral outcomes.

The observed pattern diverges from the "resilience paradox" proposed by Shao and Yu (2023), who argue that resilience helps individuals regulate distressing emotions like eco-anxiety, but may simultaneously lower their motivation to act on climate issues. Supporting this idea, Zeier and Wessa (2023) found that certain emotion regulation strategies—closely associated with psychological resilience—can diminish the willingness to engage in environmentally friendly behaviors.

Collectively, these studies suggest that an overemphasis on individual resilience may unintentionally weaken climate engagement. While resilience aids in protecting mental health, it might also diminish the sense of urgency required to inspire action (Brown, 2014). Future research should explore how to balance personal coping mechanisms with collective responsibility—perhaps by emphasizing community or environmental resilience to encourage both well-being and sustainable behavior (Cox & Perry, 2011).

5.4. Limitations and Future Research

Despite the informative findings, several limitations should be noted. Most notably, the study relied on a convenience sample that did not reach the a priori calculated sample size required for sufficient statistical power. This limits the robustness of the analyses and reduces the generalizability of the findings. While convenience sampling is frequently used in psychological research due to its practicality, it is also associated with sampling bias and limited external validity (Faber & Fonseca, 2014; Lin, 2023). As a result, the present findings may not be representative of the broader Austrian population or transferable to other cultural contexts. Larger and more heterogeneous samples are recommended in future studies to ensure greater external validity and more reliable conclusions.

Second, the study did not include a control group or additional emotional tones beyond neutral and fear-driven messages. While this binary comparison allowed for a focused investigation, it limited the ability to explore a broader emotional spectrum in climate messaging. In particular, hope-based messaging—which often combines acknowledgment of climate risks with empowering narratives about achievable solutions and personal or collective efficacy—was not examined in this study (Chadwick, 2019). Prior research suggests that the emotional tone of a message can shape both its reception and its impact on behavior (Gao & Wan, 2022). Moreover, emerging evidence suggests that emotional framings are not uniformly effective; their persuasive power depends on factors such as intensity,

perceived threat level, and the inclusion of action-oriented elements (Huang & Guo, 2024). Future studies should therefore investigate a wider array of emotional appeals, including both positive framings (e.g., hope) and nuanced variations within emotions.

Third, pro-environmental behavior was measured exclusively via self-report. Although common in psychological research, self-report may not fully capture actual behavior. To strengthen ecological validity, future studies should incorporate additional behavioral paradigms—such as donation-based measures (e.g., Lange, 2022), spontaneous recycling (Linder et al., 2021), or ecological product choices (Donmez-Turan & Kiliclar, 2021). Moreover, the use of cross-sectional designs restricts insights into the long-term effects of emotional framing on behavior. Longitudinal research would allow for the examination of whether observed effects on self-reported intentions or emotions translate into sustained behavioral engagement over time (Howell, 2014).

6. Conclusion

This study underscores the relevance of emotional tone in climate change communication. Fear-driven messages, when delivered via video, were shown to increase eco-anxiety, which in turn predicted greater pro-environmental behavior. Contrary to some assumptions, fear does not necessarily paralyze audiences—it may instead mobilize action, particularly when paired with emotionally engaging content. While resilience moderated emotional responses, it did not alter behavioral outcomes.

For climate change communicators—whether policymakers, educators, or activists—these findings highlight the importance of intentional emotional framing. Messages should be crafted with clear behavioral objectives, attention to audience differences, and understanding of emotional dynamics. Future research should continue to explore how emotional and psychological variables interact to shape environmental behavior, and how communication strategies can be optimized to foster collective climate action.

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Appendix 1: Inferential statistical analysis

Hypothesis 3: Mediation effect eco-anxiety without control variables

Model 1

Tab 4.1

Model 1: Total Effect

Model	B	SE	β	t	p
Constant	1.51	.10	-	15.10	<.001
Climate Change Message	.40	.06	.33	6.67	<.001

Note. $R^2 = .07$, $F(1, 376) = 44.49$, $p < .001$

Tab 4.2

Model 1: Direct and Indirect effect

Coefficients	Dependent Variable					
	Model 1 (Eco-Anxiety)			Model 2 (Pro-environmental behavior)		
	β	95 % CI	t	β	95 % CI	t
Climate Change Message	.23	[.12; .34]	4.28***	.24	[.10; .38]	3.02**
Eco-Anxiety	-	-	-	.36	[.22; .45]	5.14***
Constant	1.29	[1.23; 1.69]	16.78**	1.29	[1.08; 1.50]	12.90***
	$R^2 = .04$			$R^2 = .12$		
	Adj $R^2 = .04$			Adj. $R^2 = .12$		
	$F(1, 376) = 15.67$ ***			$F(3, 374) = 25.57$ ***		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

Tab 4.3

Model 1: Indirect effect of climate change message on pro-environmental behavior via the mediator

IV	M	DV	Indirect Effect	SE	95% CI
Video	Eco-anxiety	Pro-environmental behavior	.09	.03	[.03 ; .15]

Hypothesis 3: Mediation effect with gender and age as control variables

Model 2

Tab 5.1

Model 2: Total Effect

Model	B	SE	β	t	p
Constant	1.35	.17	-	7.94	<.001
Climate Change Message	.26	.07	.21	3.71	<.001
Age	.05	.04	.05	1.34	.18
Gender	.18	.07	.11	2.47	.01

Note. $R^2 = .11$, adj. $R^2 = .10$, $F(3, 374) = 15.54$, $p < .001$.

Tab 5.2

Model 2: Direct and Indirect effect

Coefficients	Dependent Variable					
	Model 1 (Eco-Anxiety)			Model 2 (Pro-environmental behavior)		
	β	95 % CI	t	β	95 % CI	t
Climate Change Message	.18	[.13; .31]	4.4***	.15	[.10; .35]	3.0**
Age	.05	[-.01; .10]	1.67	.04	[-.01; .10]	1.33
Gender	.12	[.01; .20]	2.0*	.15	[.1; .29]	2.14*
Eco-Anxiety	-	-	-	.24	[.16; .39]	5.67***
Constant	1.46	[1.29; 1.63]	16.22**	1.26	[.93; 1.59]	7.41***
	R² = .17			R² = 0.28		
	Korr. R² = .16			Korr. R² = .21		
	F(3, 374) = 12.33***			F(4, 373) = 38.09***		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

Tab 5.3

Model 2: Indirect effect of climate change message on pro-environmental behavior via the mediator

Independent Variable	Mediator	Dependent Variable	Indirect Effect	95% CI
Video	Eco-anxiety	Pro-environmental behavior	.04	[0.01; 0.11]

Hypotheses 4: Moderator effect of resilience without control variables

Model 3

Tab 6.1

Model 3: Moderator analysis

Coefficients	Dependent Variable					
	Model 1 (Eco-Anxiety)			Model 2 (Pro-environmental behavior)		
	β	95 % CI	t	β	95 % CI	t
Climate Change Video	.32	[.19; .45]	4.70**	.18	[.04; .32]	2.52*
Eco-Anxiety	-	-	-	.22	[.10; .34]	3.57***
Resilience	-.25	[-.38; -.12]	-3.79	-.14	[-.27; -.01]	-2.13
Video x Resilience	-.16	[-.28; -.04]	-2.67**	-	-	-
Eco-Anxiety x Resilience	-	-	-	-.05	[-.17; .07]	-.82
Constant	0.00	[-.12; .12]	0	1.29	[1.10; 1.48]	13.06
	$R^2 = .07$			$R^2 = .13$		
	Adj $R^2 = .06$			Adj. $R^2 = .12$		
	$F(3, 374) = 9.39***$			$F(4, 373) = 11.12***$		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$.

Tab 6.2

Model 3: Conditional indirect effect of climate change message on pro-environmental behavior via the mediator and moderator.

Resilience	Indirect Effect	SE	95% CI
-1.58	.04	.04	[-.03; .12]
.00	.1	.03	[.04; .17]
1.58	.15	.05	[.06; .26]

Tab 6.3

Model 3: Interaction terms of the moderated mediation analysis.

	Delta R ²	F	df1	df2	Sig.
Video x Resilience	0.021	6.42	1	374	0.007
Eco-Anxiety x Resilience	.004	1.01	1	374	0.244

Hypothesis 4: Moderator effect of resilience without control variables

Model 4

Tab 7.1

Model 4: Moderator analysis

Coefficients	Dependent Variable					
	Model 1 (Eco-Anxiety)			Model 2 (Pro-environmental behavior)		
	β	95 % CI	t	β	95 % CI	t
Climate Change Video	.24	[.12; .36]	3.93**	.10	[.01; .24]	1.69*
Eco-Anxiety	-	-	-	.17	[.12; .29]	3.95***
Resilience	-.20	[-.32; -.08]	-3.00**	-.07	[-.20; .10]	-2.12
Video x Resilience	-.12	[-.20; -.04]	2.67**	-	-	-
Eco-Anxiety x Resilience	-	-	-	-.04	[-.12; .03]	-0.82
Age	.05	[-.02; .12]	1.30	.04	[-.02; .09]	1.30
Gender	.10	[-.01; .21]	1.75	.07	[-.03; .17]	1.45
Constant	1.10	[.88; 1.32]	10.5***	1.29	[1.10; 1.48]	13.06**
	$R^2 = .22$			$R^2 = .35$		
	Adj $R^2 = .21$			Adj. $R^2 = .33$		
	$F(5, 372) = 19.78***$			$F(6, 371) = 24.33***$		

Note. Gender was coded as 0 = male, 1 = female. Video condition was coded as 0 = neutral, 1 = fear. * $p < .05$, ** $p < .01$, *** $p < .001$..

Tab 7.2

Model 4: Conditional indirect effect of climate change message on pro-environmental behavior via the mediator and moderator.

Resilience	Indirect Effect	SE	95% CI (LLCI – ULCI)
-1.58	0.03	0.02	[-.03; .12]
.00	0.07	0.03	[.04; .17]
1.58	0.09	0.02	[.06; .26]

Tab 7.3*Model 4: Interaction terms of the moderated mediation analysis.*

	Delta R ²	F	df1	df2	Sig.
Video x Resilience	0.020	7.42	1	372	0.008
Eco-Anxiety x Resilience	.019	1.25	1	372	0.264

Appendix 2: Video Transcripts

2.1. Fear-Driven Video

Link to the video: <https://maker.storyblocks.com/share/vHsINRHgfKDvfv0O>

Die Menschheit befindet sich in großen Schwierigkeiten.

97% der Klimaforscher*innen sind sich einig, dass ein katastrophaler Klimawandel stattfindet, und dass menschliches Verhalten diesen vorantreibt.

Die Verbrennung fossiler Brennstoffe setzt Treibhausgase frei, welche die Erde wie eine Decke erwärmen.

Diese Erwärmung macht den Unterschied.

Diese hat eine erhebliche Auswirkung auf Österreich und die Welt, wie das Schmelzen von Eisschichten und Gletschern.

Die steigenden Temperaturen führen zu erhöhter Brandgefahr in vielen Ländern Europas.

Denn bei höheren Temperaturen steigt die Verdunstung und die Trockenperioden dauern länger.

Außerdem kommt es zu Hochwasser und Überschwemmung, die auch viele Städte in Österreich bedrohen.

Aufgrund der extremen Wetterereignisse und Hitzewellen kommt es zu erhöhten gesundheitlichen Beschwerden.

Sowie zur Ausbreitung infektiöser Krankheiten.

Bedeutende nationale Sicherheitsrisiken sind die Folge.

Auch die Tierwelt ist betroffen: Bei einer Temperaturzunahme von 2 Grad Celsius verlieren 8% der Wirbeltierarten mehr als die Hälfte ihrer Population.

Wir haben viel zu verlieren:

Finanzielle Schäden schlimmer als die Wirtschaftskrise.

Schwere Luftverschmutzung besonders in Städten.

Deutliche Rückgänge bei der landwirtschaftlichen Ernte und somit Nahrungsmittelunsicherheit.

Die Aussichten sind nicht gut:

Obwohl die Preise für erneuerbare Energien sinken, ist der Übergang unseres Energiesystems ein massives Projekt. Dabei erfordert der Klimawandel globale Zusammenarbeit.

Und wir haben nur zu wenig Zeit, denn wenn wir keine drastischen Maßnahmen ergreifen, ist die Menschheit dem Untergang geweiht.

2.2. Neutral Video

Link to the Video: https://maker.storyblocks.com/share/o7I_8oMdb98f1UbB

Die Menschheit steht vor einer Herausforderung. Denn 97% der Klimaforscher*innen sind sich einig, dass der Klimawandel stattfindet und dass menschliches Verhalten diesen vorantreibt.

Die Verbrennung fossiler Brennstoffe setzt Treibhausgase frei, welche die Erde wie eine Decke erwärmen.

Diese Erwärmung macht den Unterschied.

Diese hat eine Auswirkung auf Österreich und die Welt, wie das Schmelzen von Eisschichten und Gletschern.

Die steigenden Temperaturen führen zu erhöhter Brandgefahr in vielen Ländern Europas.

Denn bei höheren Temperaturen steigt die Verdunstung und die Trockenperioden dauern länger.

Außerdem kommt es zu Hochwasser und Überschwemmung, die auch viele Städte in Österreich bedrohen.

Aufgrund der extremen Wetterereignisse und Hitzewellen kommt es zu erhöhten gesundheitlichen Beschwerden.

Sowie zur Ausbreitung infektiöser Krankheiten.

Bedeutende nationale Sicherheitsrisiken sind die Folge.

Auch die Tierwelt ist betroffen: Bei einer Temperaturzunahme von 2 Grad Celsius verlieren 8% der Wirbeltierarten mehr als die Hälfte ihrer Population.

Forschungsergebnisse zeigen auf,

dass die Kosten des Klimawandels höher sind als die Kosten zur Bekämpfung.

Es kommt zu Luftverschmutzung, insbesondere in Städten.

Es treten Rückgänge in der landwirtschaftlichen Ernte auf.

Es gibt bereits Maßnahmen zur Bekämpfung der Auswirkungen: Wie den Wechsel zu erneuerbaren Energien. Dabei erfordert der Klimawandel globale Zusammenarbeit.

Es benötigt jetzt nachhaltige Entscheidungen, welche zukünftige Auswirkungen haben werden. Denn wenn keine Maßnahmen ergriffen werden, spüren die kommenden Generationen die Auswirkungen.

Appendix 3: Screenshots of the Climate Change Messages

On the left-hand side is the fear-driven video, and on the right-hand side is the neutral video.

These are examples of different use of picture with the same text:



This is an example of the use of the same picture with different tonalities:



Appendix 4: Survey

Declaration of Consent:

Herzlichen Dank für Ihr Interesse an dieser Studie!

Diese Umfrage wird im Rahmen einer Masterarbeit im Bereich der Umweltpsychologie an der Universität Wien durchgeführt.

Wie läuft die Studie ab?

Zu Beginn der Studie wird Ihnen ein kurzes Video zum Thema Klimawandel vorgeführt und danach einzelne Fragen, bei denen ich Sie anschließend um Ihre Einschätzung bitten werde. Es ist Ihnen jederzeit freigestellt, an dieser Untersuchung teilzunehmen. Sie haben die Möglichkeit, die Befragung zu jedem Zeitpunkt zu beenden. Ich versichere Ihnen, dass alle Ihre Angaben mit höchster Vertraulichkeit behandelt und anonym erfasst werden, sodass keine persönlichen Rückschlüsse gezogen werden können.

Die Fertigstellung dieses Fragebogens dürfte in etwa 10 Minuten Ihrer Zeit in Anspruch nehmen.

Ihre Unterstützung wird sehr geschätzt – vielen Dank!

Teilnahme und Datenschutz

Die Teilnahme an dieser Studie ist von vornherein anonym und erfolgt freiwillig. Sie können jederzeit, ohne Angabe von Gründen, Ihre Bereitschaft zur Teilnahme ablehnen oder auch im Verlauf der Studie zurückziehen. Das Ablehnen der Teilnahme oder ein vorzeitiges Ausscheiden aus dieser Studie hat keine nachteiligen Folgen für Sie. Mit der Teilnahme an dieser Studie sind keinerlei Risiken oder negative Konsequenzen zu erwarten. Nach Abschluss der Datenerhebung ist prinzipiell keine Zuordnung zwischen den Daten im Datensatz und Ihrer Person möglich – der Datensatz ist anonym. Entsprechend ist nach Abschluss dieser Datenerhebung auch keine gezielte Löschung Ihres persönlichen Datensatzes möglich, da wir diesen nicht zuordnen können.

Die anonymen Daten werden elektronisch gespeichert und ausschließlich für Forschungszwecke genutzt.

Fragen und Kontakt?

Für Fragen im Zusammenhang mit der Studie steht Ihnen die Studienleitung gerne zur Verfügung. Ich bin darum bemüht, Ihnen möglichst rasch zu antworten.

Ich habe die obenstehende Information gelesen, verstanden und erkläre mich mit den Teilnahmebedingungen einverstanden. (Ja / Nein)

Sociodemographic Information:

1. Wie alt sind Sie?
(Bitte geben Sie Ihr Alter in Jahren an.)
2. Welchem Geschlecht fühlen Sie sich zugehörig?
 - Männlich
 - Weiblich
 - Divers
 - Keine Angabe
3. Wie ist Ihre Staatsangehörigkeit?
 - Österreich
 - Deutschland
 - Schweiz
 - Anderes EU-Land
 - Anderes Nicht-EU-Land
4. Was ist Ihr höchster Bildungsabschluss?
 - Kein Bildungsabschluss
 - Pflichtschulabschluss
 - Abgeschlossene Lehre / Berufsausbildung
 - Matura / Abitur / Hochschulreife
 - Hochschul- oder Universitätsabschluss

Baseline measure:

Stellen Sie sich bitte eine Situation vor, in der Sie Informationen zum Klimawandel begegnen. Wie fühlen Sie sich im Allgemeinen über die Art der Informationen, die Sie typischerweise zu diesem Thema lesen oder hören?

- Ich empfinde die Informationen als ...
1 = sehr negativ – 5 = sehr positiv

- Ich fühle mich durch die Informationen ...
1 = sehr entmutigt – 5 = sehr ermutigt
- Die Informationen machen mich ...
1 = sehr pessimistisch – 5 = sehr optimistisch

Information on the video:

Im nächsten Schritt sehen Sie ein etwa einminütiges Video, das sich mit dem Thema Klimawandel beschäftigt. Bitte sehen Sie sich das Video aufmerksam an.

Eco-Anxiety:

Bitte geben Sie an, wie häufig die folgenden Aussagen auf Sie zutreffen, wenn Sie über den Klimawandel nachdenken.

Bitte bewerten Sie jede Aussage auf einer Skala von 1 bis 5:

1 = nie 2 = selten 3 = manchmal 4 = oft 5 = immer

- Wenn ich über den Klimawandel nachdenke, fällt es mir schwer, mich zu konzentrieren.
- Wenn ich über den Klimawandel nachdenke, fällt es mir schwer zu schlafen.
- Ich habe Alpträume über den Klimawandel.
- Ich ertappe mich dabei, dass ich wegen des Klimawandels weine.
- Ich denke: „Warum kann ich den Klimawandel nicht besser in den Griff bekommen?“
- Ich bin allein und frage mich, warum ich so über den Klimawandel denke.
- Ich schreibe meine Gedanken über den Klimawandel auf und analysiere sie.
- Ich denke: „Warum reagiere ich so auf den Klimawandel?“
- Meine Sorgen über den Klimawandel machen es mir schwer, mit Familie oder Freund*innen Spaß zu haben.

- Ich habe Schwierigkeiten, meine Sorgen über Nachhaltigkeit mit den Bedürfnissen meiner Familie in Einklang zu bringen.
- Meine Besorgnis über den Klimawandel beeinträchtigt meine Fähigkeit, Arbeits- oder Studienaufgaben zu bewältigen.
- Meine Besorgnis über den Klimawandel hindert mich daran, mein Potenzial voll auszuschöpfen.
- Freund*innen sagen mir, dass ich zu viel über den Klimawandel nachdenke.

Resilience:

Wie gut treffen die folgenden Aussagen auf Sie zu, wenn Sie sich in belastenden oder stressigen Situationen befinden?

Bitte bewerten Sie jede Aussage auf einer Skala von 1 bis 5:

1 = überhaupt nicht 2 = ein bisschen 3 = etwas 4 = ziemlich 5 = sehr

- Ich bewahre auch in schwierigen Situationen eine positive Einstellung.
- Wenn etwas passiert, das mich stresst, beruhige ich mich normalerweise schnell.
- Wenn ich einen Rückschlag erlebe, mache ich trotzdem weiter.
- Auch wenn ich mich manchmal schlecht fühle, erhole ich mich in der Regel schnell wieder.
- In stressigen Zeiten bleibe ich normalerweise ruhig und gelassen.
- Ich tue, was mir wichtig ist, auch wenn ich gestresst bin.
- Wenn etwas Belastendes passiert, mache ich einfach weiter.
- Wenn in meinem Leben etwas schief läuft, kann ich mich selbst wieder aufrichten und neu beginnen.

Pro-Environmental behavior:

Wie häufig führen Sie die folgenden Handlungen durch?

Bitte bewerten Sie jede Aussage auf einer Skala von 1 bis 5:

1 = fast nie 2 = selten 3 = manchmal 4 = oft 5 = fast immer

- Ich gehe zu Fuß oder fahre mit dem Fahrrad, anstatt Auto zu fahren oder mitzufahren.
- Ich verzichte darauf, neue Kleidung zu kaufen, die ich nicht wirklich brauche.
- Ich entscheide mich bewusst gegen das Fliegen.
- Ich versuche, meine Familie und Freund*innen zu einem klimafreundlichen Verhalten zu bewegen.
- Ich spare Energie im Haushalt.
- Ich benutze öffentliche Verkehrsmittel anstelle des Autos.
- Ich vermeide Lebensmittelverschwendung.
- Ich achte auf eine klimafreundliche Ernährung.

Attention to Climate Change Information:

Wie viel Aufmerksamkeit schenken Sie im Allgemeinen Informationen über den Klimawandel – z. B. in den Medien, sozialen Netzwerken oder Gesprächen?

Bitte bewerten Sie Ihre Antwort auf einer Skala von 1 bis 5:

1 = gar keine Aufmerksamkeit 2 = wenig 3 = mäßig 4 = viel 5 = sehr viel
Aufmerksamkeit

Perceived Tone of the Climate Change Video:

Erinnern Sie sich bitte an das Video zum Klimawandel, das Sie gesehen haben. Wie haben Sie die Inhalte, die im Video gezeigt wurden, wahrgenommen?

- Die Tonalität des Videos war ...
1 = sehr negativ – 5 = sehr positiv
- Ich fühlte mich durch das Video ...
1 = sehr entmutigt – 5 = sehr ermutigt
- Das Video wirkte auf mich ...
1 = sehr pessimistisch – 5 = sehr optimistisch

Debriefing:

Vielen Dank für Ihre Teilnahme!

Ihre Teilnahme liefert wertvolle Erkenntnisse für die Wissenschaft!

An dieser Stelle will ich noch einmal betonen, dass die Idee hinter den Videos darin bestand, die Situation des Klimawandels besonders negativ darzustellen und den Fokus auf die Auswirkungen des Klimawandels zu richten, ohne auf bereits vorhandene Maßnahmen einzugehen. Dies geschah vor dem Hintergrund, dass im Rahmen der Studie untersucht werden soll, ob Personen eher eine Tendenz zeigen, sich umweltfreundlich zu verhalten, wenn sie mit negativen oder neutralen Informationen über den Klimawandel konfrontiert werden.

Falls Sie Ihre Situation als belastend empfinden, können Sie sich telefonisch an folgende Organisationen wenden, die Beratung im Bereich Klimaangst anbieten:

- Telefonseelsorge: 0800 1110111 oder 116 123 (auch per Chat möglich)
- Nummer gegen Kummer für Kinder, Jugendliche und Eltern: 116 111 (auch per Chat möglich)

Oder Sie können Informationen zum Thema mentale Gesundheit und Klimawandel im Internet aufsuchen:

- [Psychologists for Future Beratung](#)
- [10 Säulen der Selbstfürsorge \(PDF\)](#)