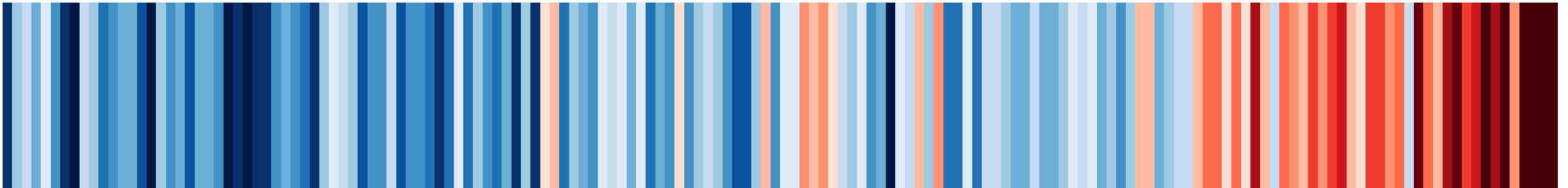


Psychology of Climate Change Communication

Week 5: Climate change emotions

Dr. Viktoria Cologna and Dr. Jan Pfänder



Today's lecture

- To what degree are different climate change emotions experienced around the world?
- Which emotions should we try to evoke as climate change communicators?
- Which emotions are best suited to reach different audiences?
- Which emotions are most effective at driving pro-environmental behavior and policy support?



13.10.2026

Photo by Yomex Owo on Unsplash







13.10.2026

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Mentimeter

How do you feel about climate change?

Climate Emotions Wheel



Climate Emotions Wheel © 2024



ClimateMentalHealth.Net

Stories > People

Climate Hope is everywhere that you are



Chris Greenberg

27 April 2023 • 6 min read



Moments of hope and resilience from the climate frontlines

30 December 2023

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Future Planet team
Features correspondent



Anna Morottaja in Lapland is just one of those getting used to life on the frontlines of climate change (Credit: Riikka Morottaja)

Effects of climate change worsening in every part of the US, report says

The worsening effects of rising temperatures comes as U.S. emissions decrease.

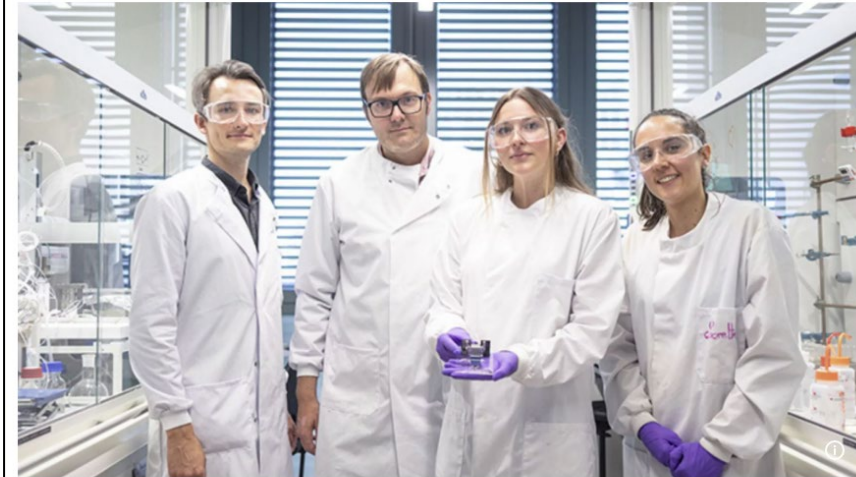
By [Stephanie Ebbs](#), [Julia Jacobo](#), [Kelly Livingston](#), [Daniel Manzo](#), and [Daniel Peck](#)
November 14, 2023, 10:02 PM



A brush fire dubbed the Highland fire, burns along Highway 371 on Oct. 31, 2023 in Aguanga, Calif.
Irfan Khan/Los Angeles Times via Getty Images

eawag
aquatic research ooo

'Exciting' solar breakthrough means energy can be kept in sustainable batteries that don't overheat



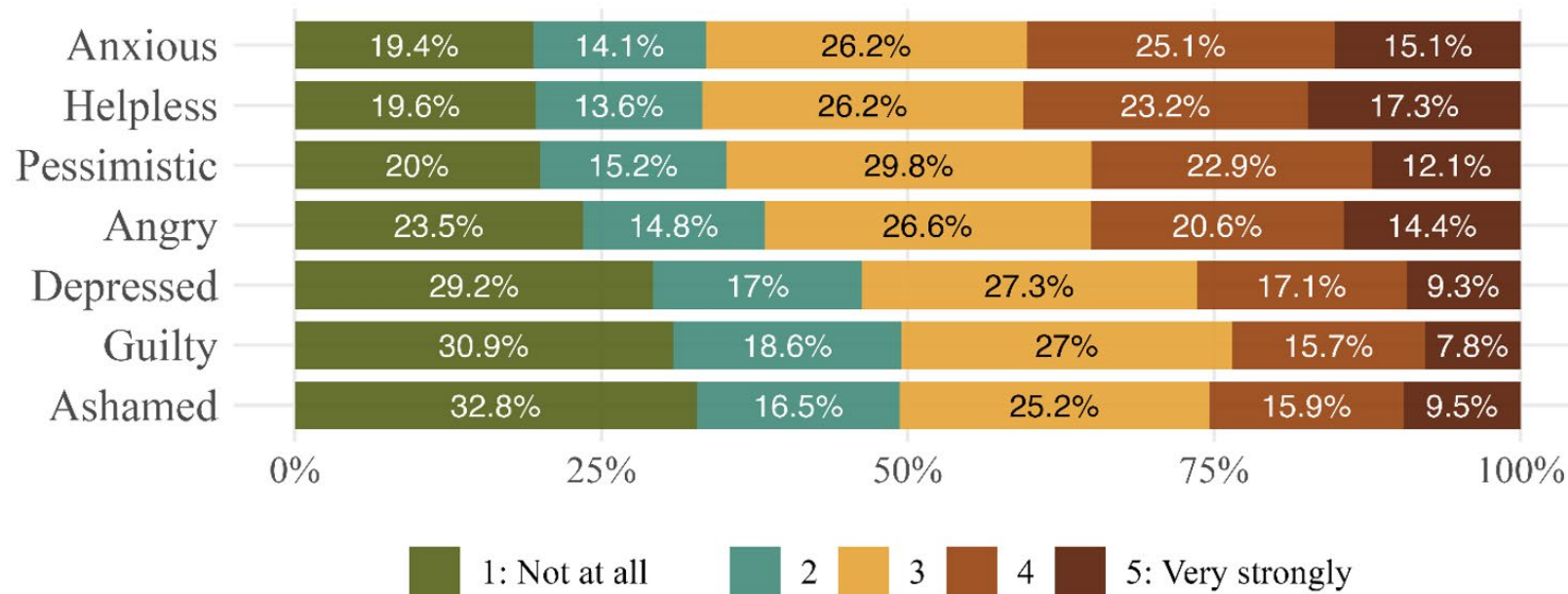
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By Euronews Green

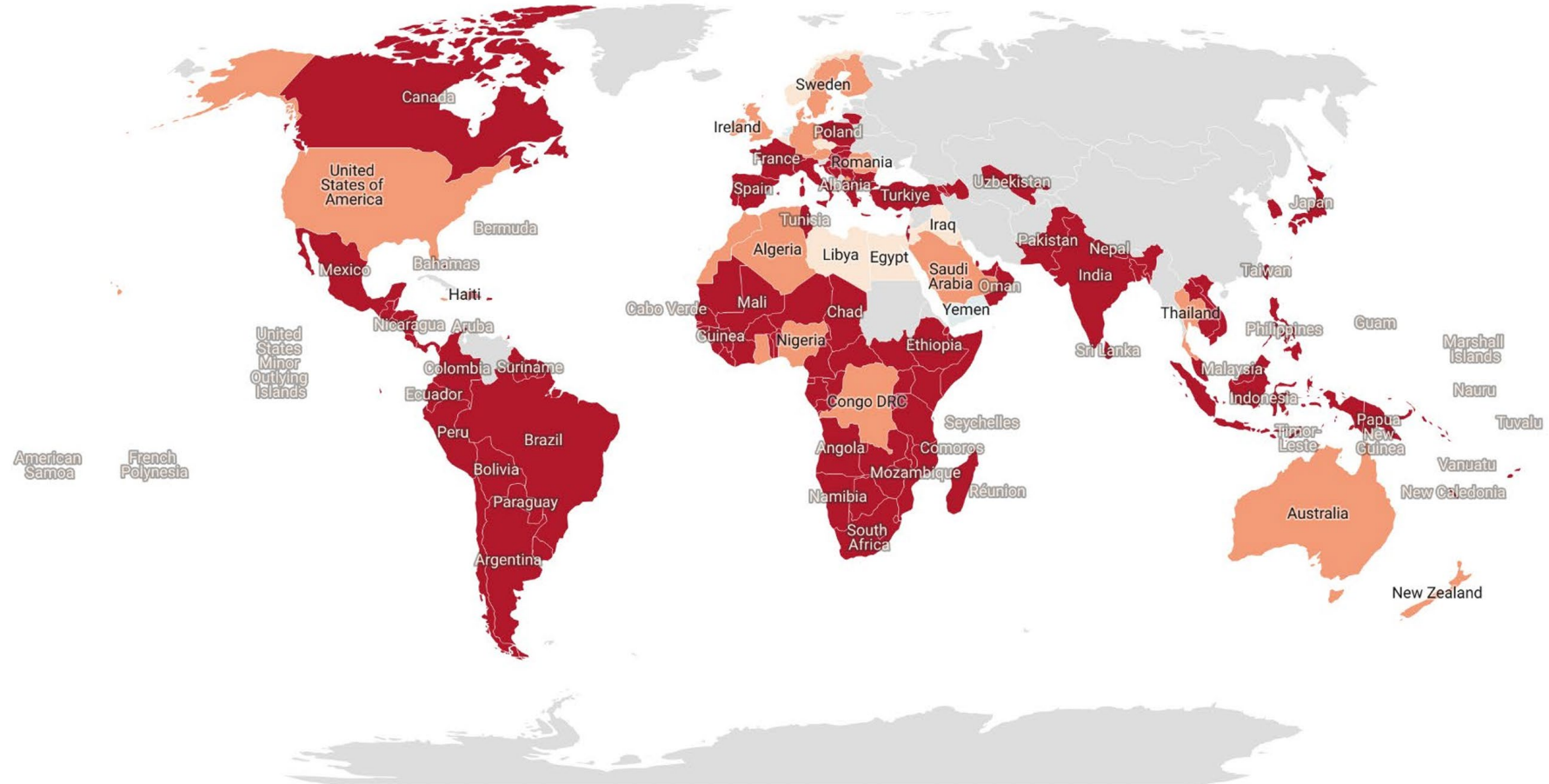
Published on 20/09/2024 - 16:12 GMT+2 • Updated 22/09/2024 - 20:57 GMT+2

How do other people feel about climate change?

Climate change emotions across 68 countries in 2023 (TISP Data)



Ghasemi et al., under review



Climate change worry in 2021 among young people (16-25)

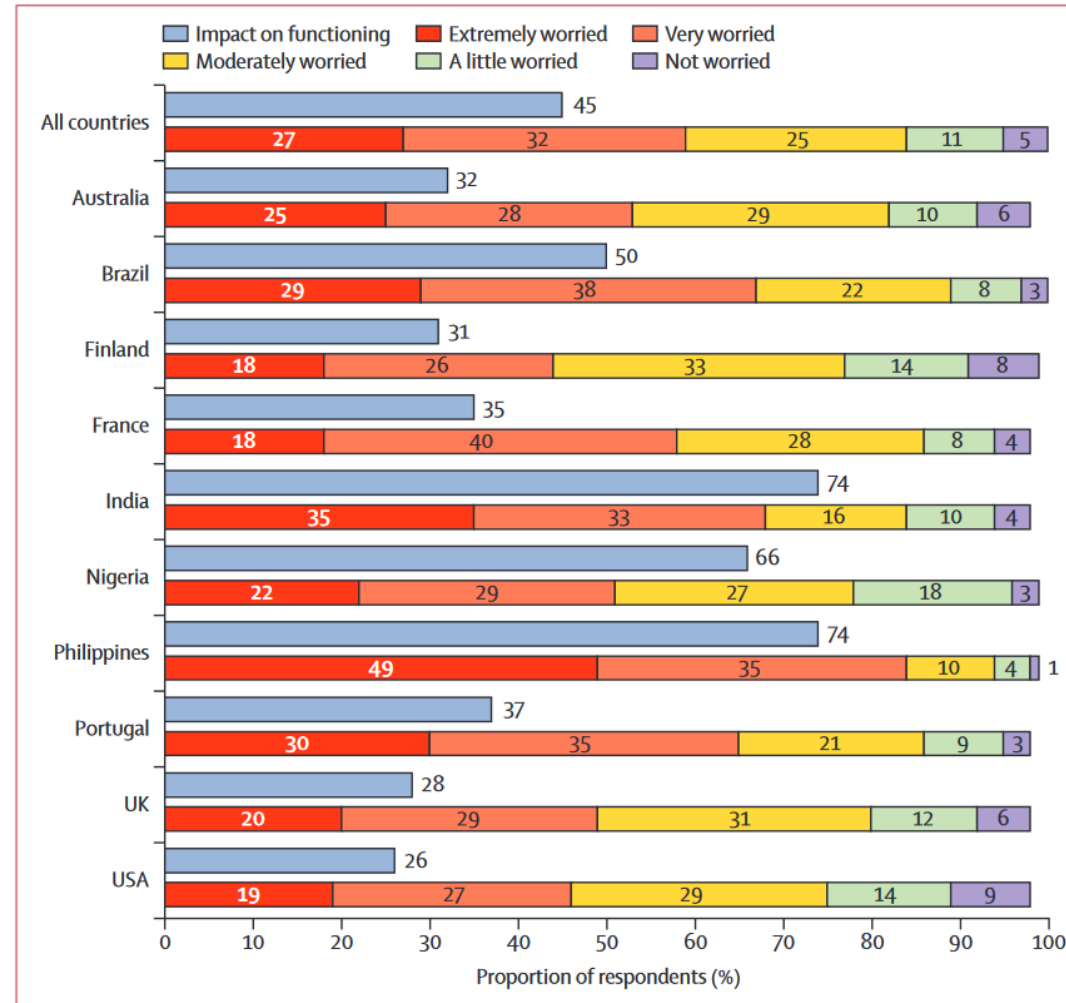


Figure 1: Worry about climate change and impact on functioning

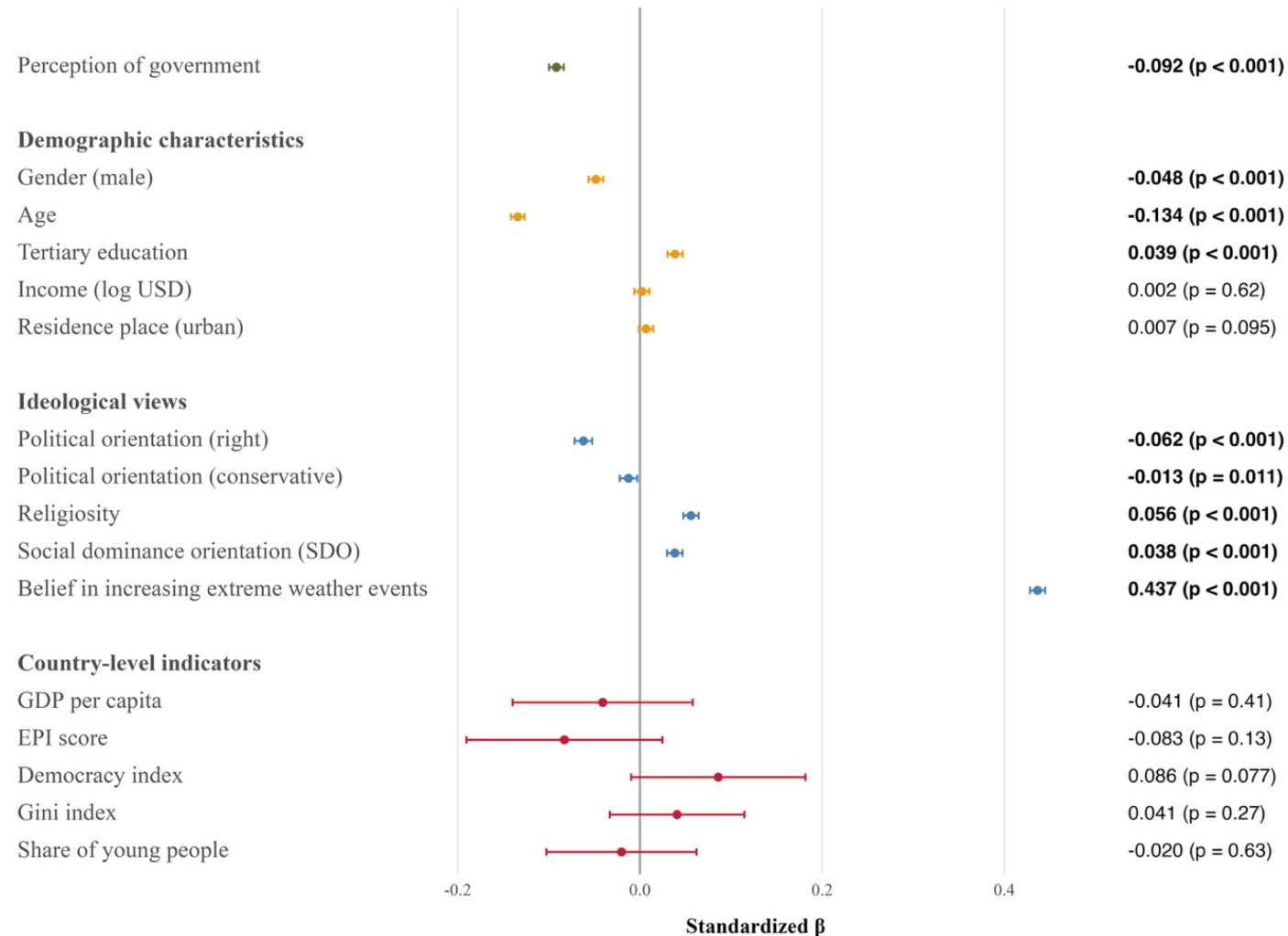
The graph shows the proportion of the sample reporting a negative impact on functioning from their feelings about climate change and various levels of worry about climate change. Data are shown for the whole sample (n=10 000) and by country (n=1000 per country)

Hickman et al., 2021

Climate change emotions around the world

- Most people tend to be at least somewhat worried about climate change
- But measurements differ, leading to different estimates

Correlates of negative emotions across 68 countries



Defining affect, appraisal, and emotions

How would you define the term “emotion”?

Mentimeter

Affect

- A positive/pleasant or negative/unpleasant feeling towards an event (e.g., climate change) or an object (e.g., a technology).
- A 'faint whisper of emotion' or gut feeling that can inform judgments and decisions by providing a quick evaluation heuristic.
- Enduring beliefs and predispositions.
- Compared to full-blown emotions, the experience of affect is less intense.

Brosch, 2021, Scherer, 2005

Appraisal

- The rapid evaluation of the relevance of an event or an object for one's concerns and well-being, which drives and differentiates the elicitation of emotions. (Brosch, 2021)

Emotions

- Emotions are elicited by stimulus events:
 - Something happens to the organism that stimulates or triggers a response after having been evaluated for its significance (e.g., thunderstorms, the behaviors of other people or your own).
- The eliciting event and its consequences must be relevant to major concerns of the organism (appraisal)
- Emotions prepare adaptive action tendencies and motivations.

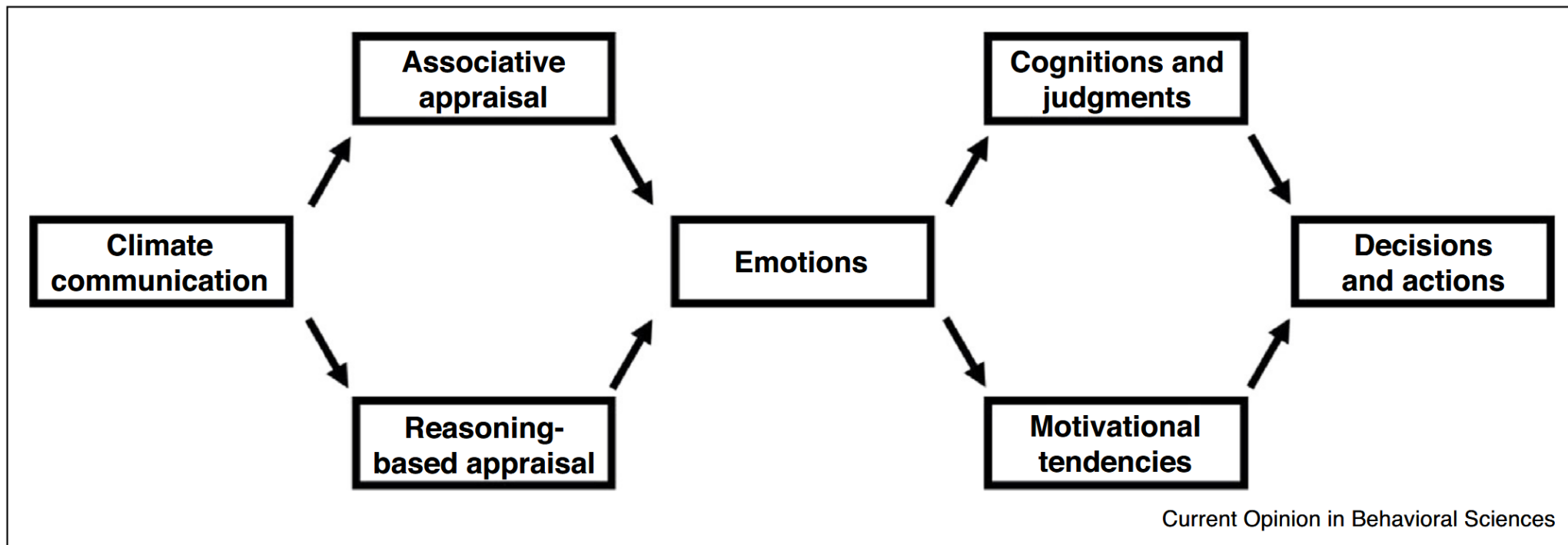
Scherer, 2005

Emotions can be defined as:

- Adaptive reactions that are elicited when an event or an object is *appraised as relevant* to one's concerns, resulting in changes in:
 - motivational action tendencies (e.g., fear: fight, flight, or freeze)
 - physiological reactions (e.g., tension)
 - expressions (e.g., facial and vocal expression)
 - subjective feeling (emotional experience)
- Emotions trigger motivational tendencies that facilitate coping with the situation, and influence cognitive processing, evaluation, and judgment, impacting subsequent decision-making and behavior.

Brosch, 2021

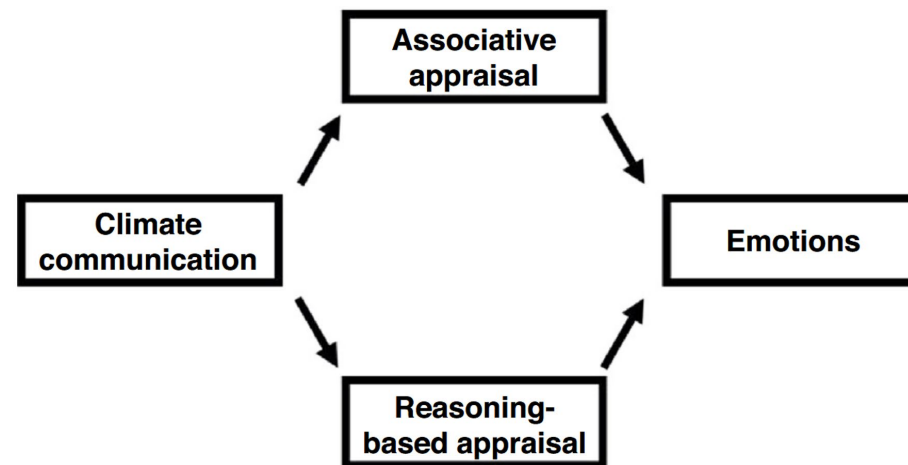
Appraisal and emotions



Brosch, 2021

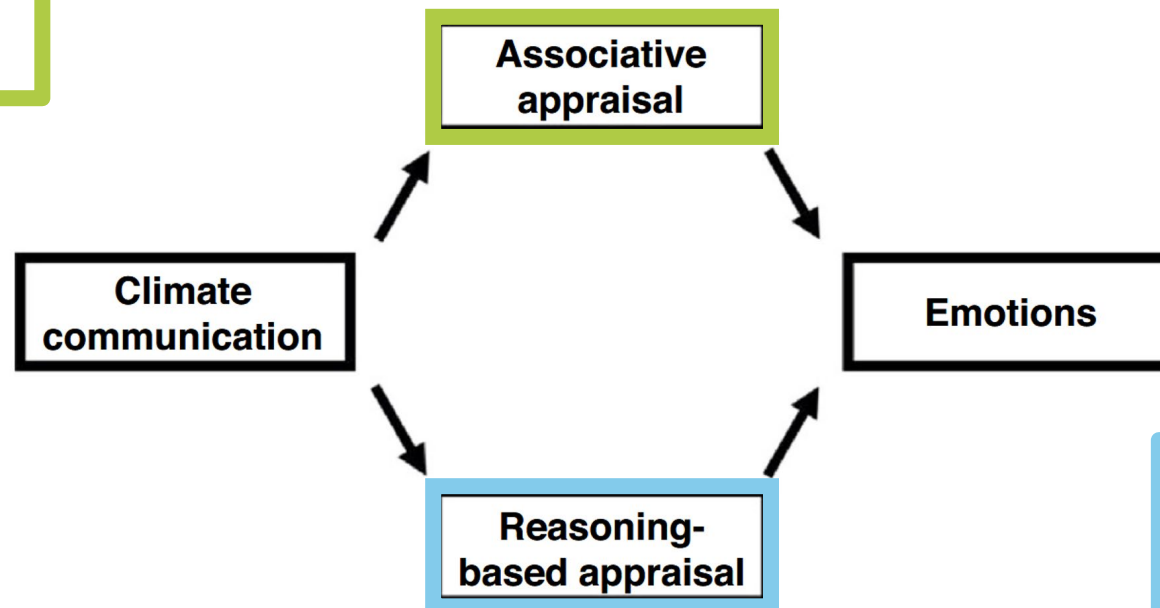
From communication to emotions

- The same message can evoke different emotions in different individuals.
- What matters is whether an individual **appraises** the message as relevant to their concerns.



From communication to emotions

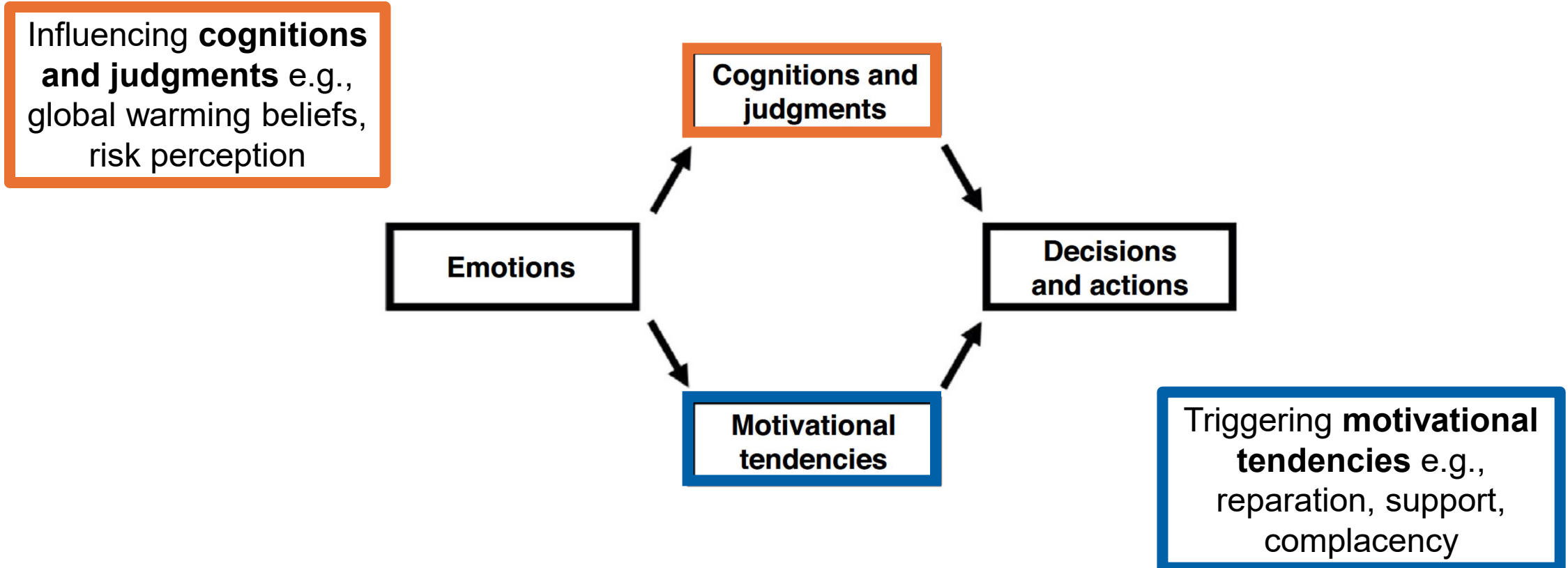
Associative appraisal is largely based on previous experiences and can occur *quickly* and *automatically*.



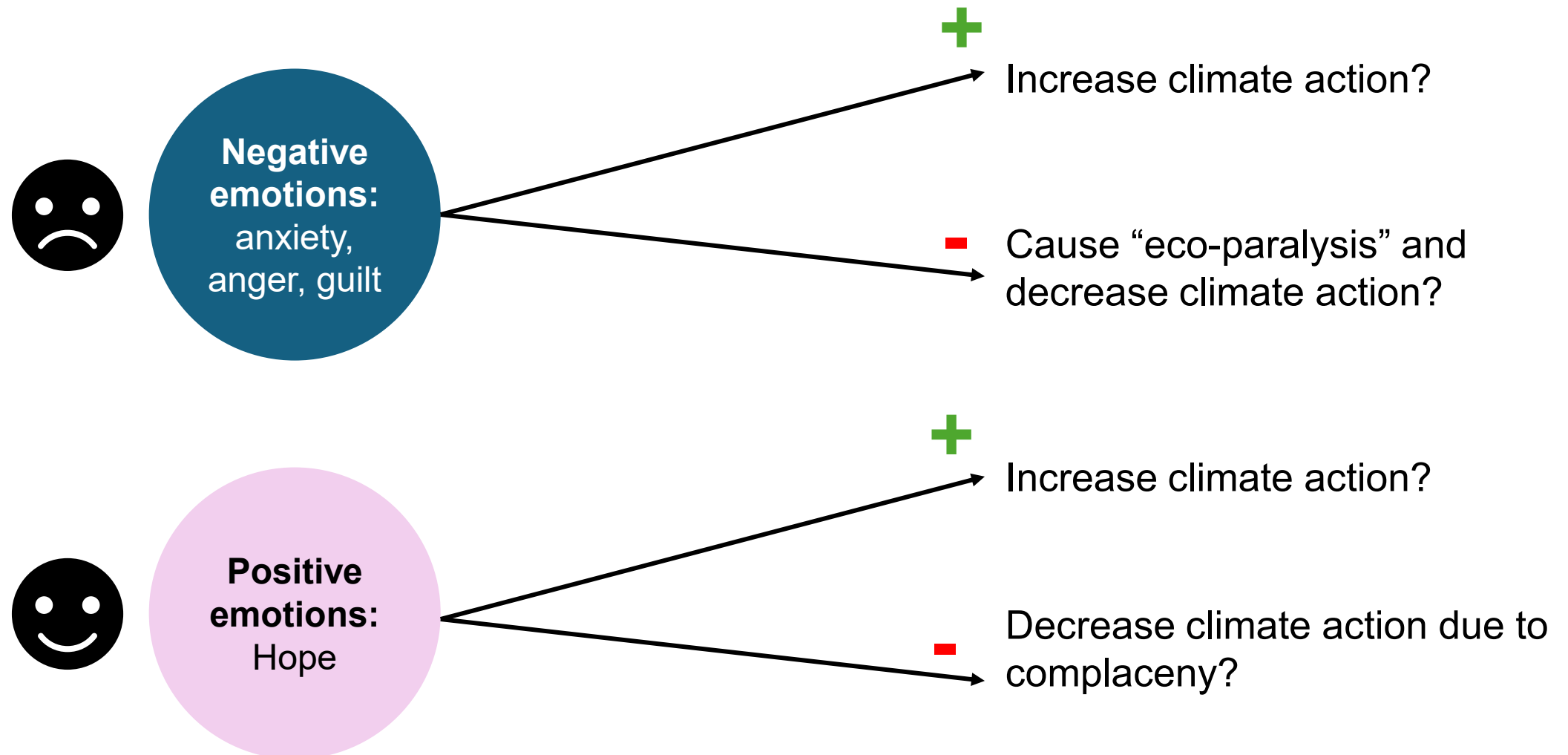
Reasoning-based appraisal is a slower and more effortful process that can integrate new information for a more thorough and flexible analysis.

From emotions to action

- Once emotions are elicited, they can influence people's actions through two pathways:



From emotions to behavior



Negative emotions and climate action

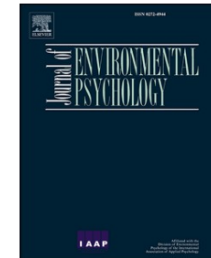
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Emotional reactions to climate change predict climate-friendly outcomes in 63 cross-country samples

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Tobia Spampatti

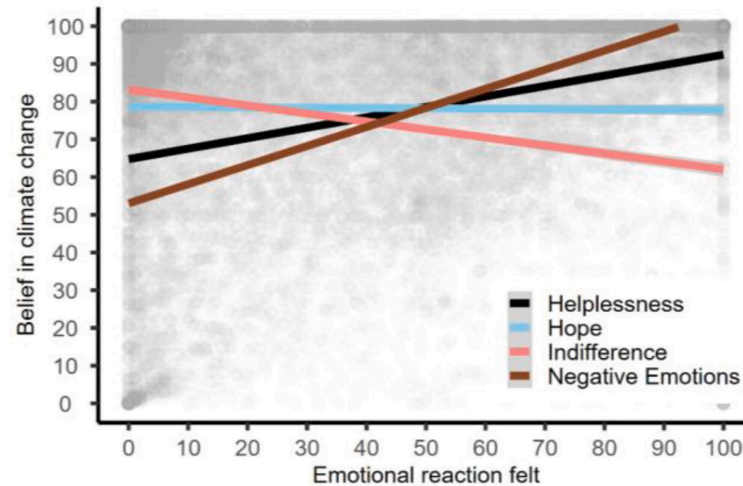
Study setup

- Participants were exposed to a scientifically accurate description of the impacts of climate change. This description was designed to elicit negative emotions, particularly fear.

“If your anxiety about climate change is dominated by fears of starving polar bears, glaciers melting, and sea levels rising, you are barely scratching the surface of what terrors are possible [...]”
Extreme rainfall/hurricane events become 70% more likely. Droughts will be twice as frequent and twice as long. Twice as many people will not have reliable access to water. [...] If greenhouse gas emissions continue to rise, we could exceed 1.5°C as early as 2026. [...] Climate change is now affecting every continent, every region, every ocean on earth, and every facet of the weather.”

Emotions, belief, and policy support

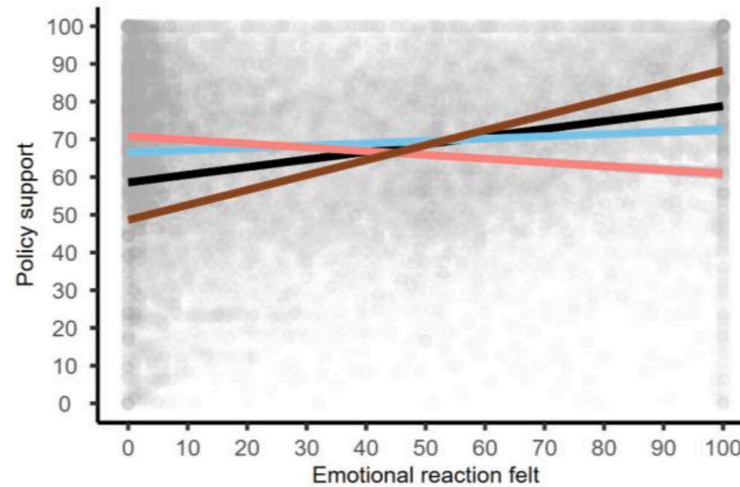
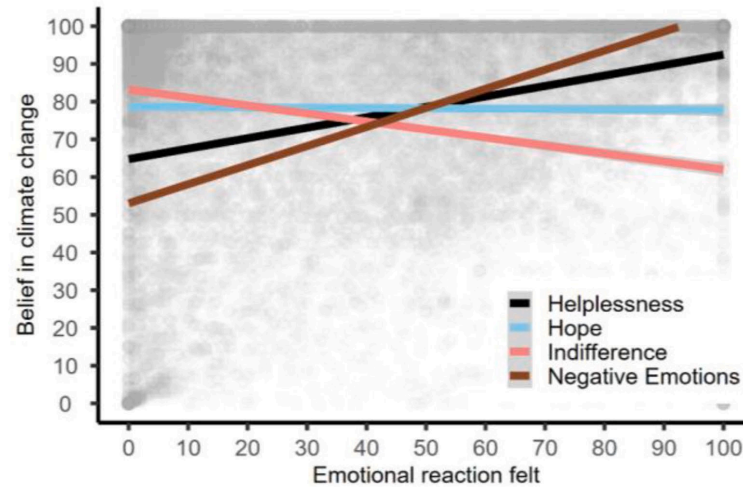
Negative emotions:
Anger, anxiety, depression,
fear, and guilt



Spampatti & Doell, 2026

Emotions, belief, and policy support

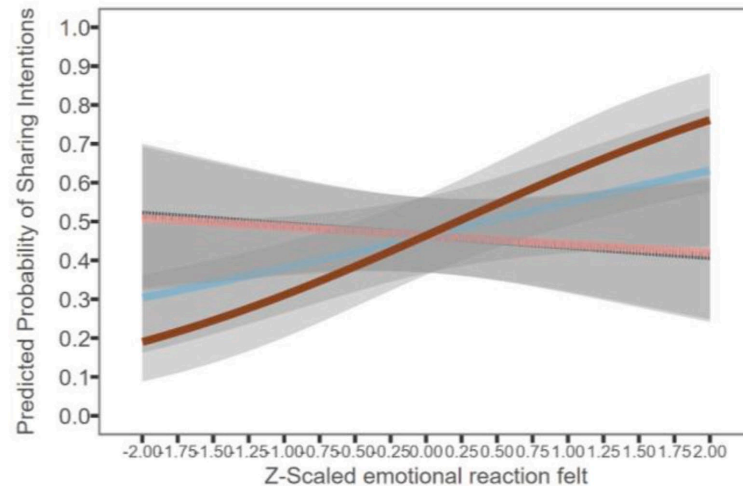
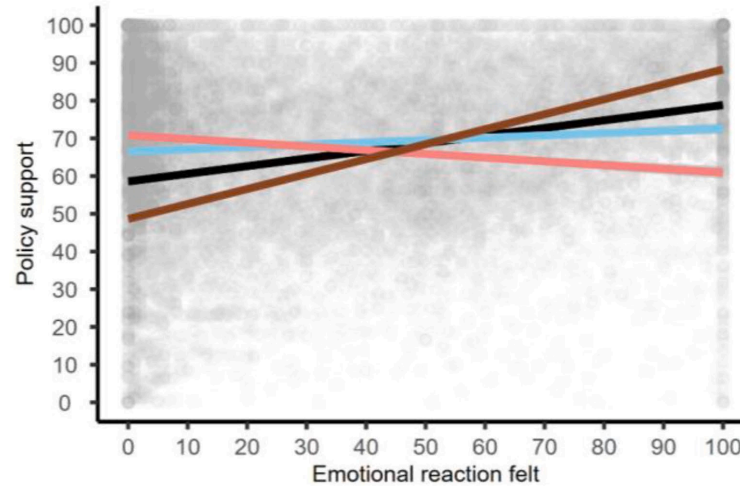
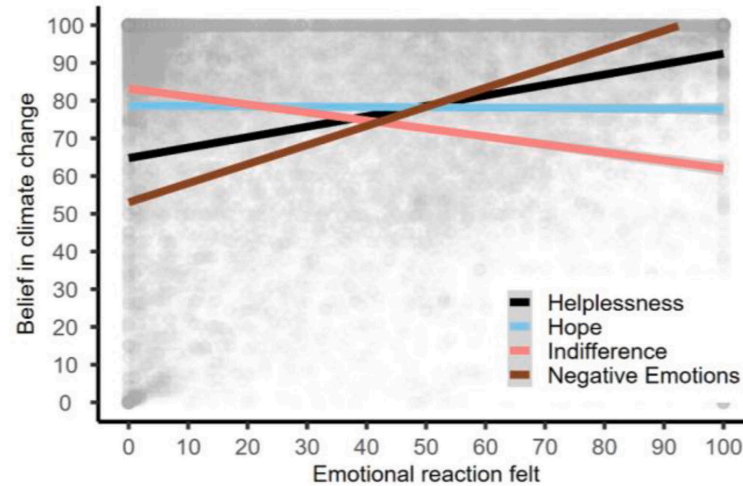
Negative emotions:
Anger, anxiety, depression,
fear, and guilt



Spampatti & Doell, 2026

Emotions, belief, and policy support

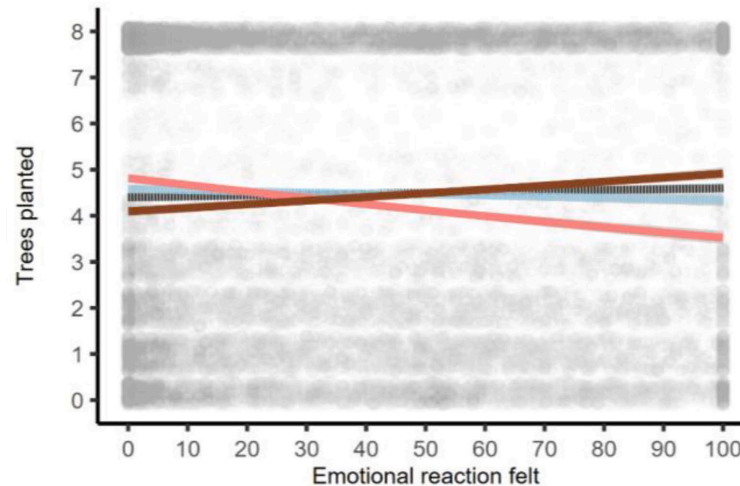
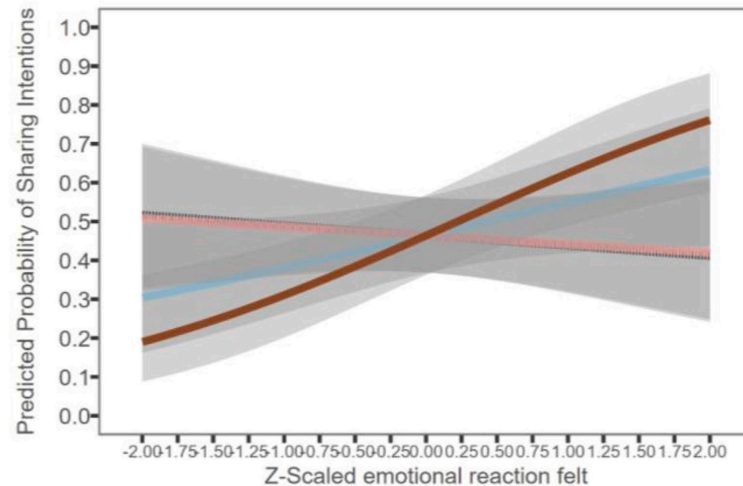
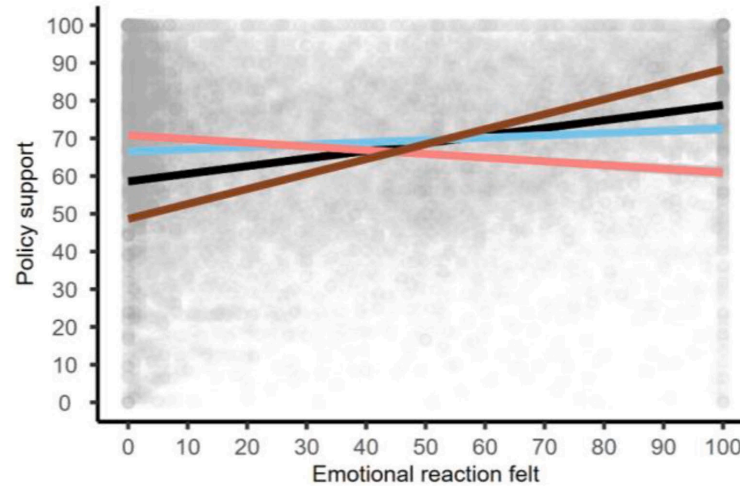
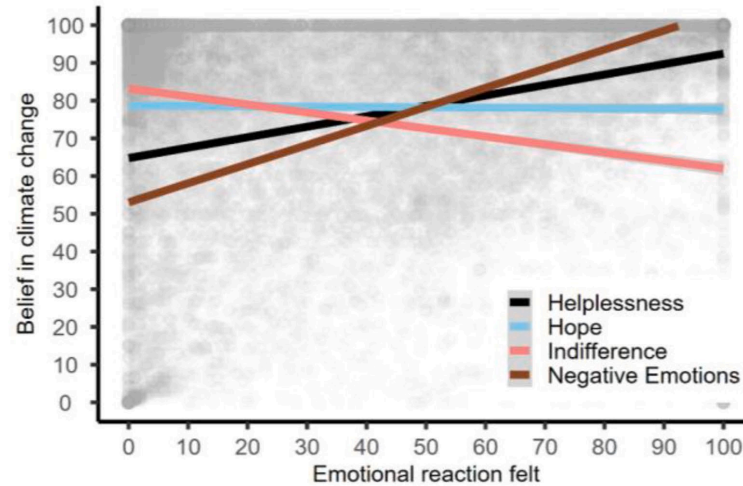
Negative emotions:
Anger, anxiety, depression,
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Spampatti & Doell, 2026

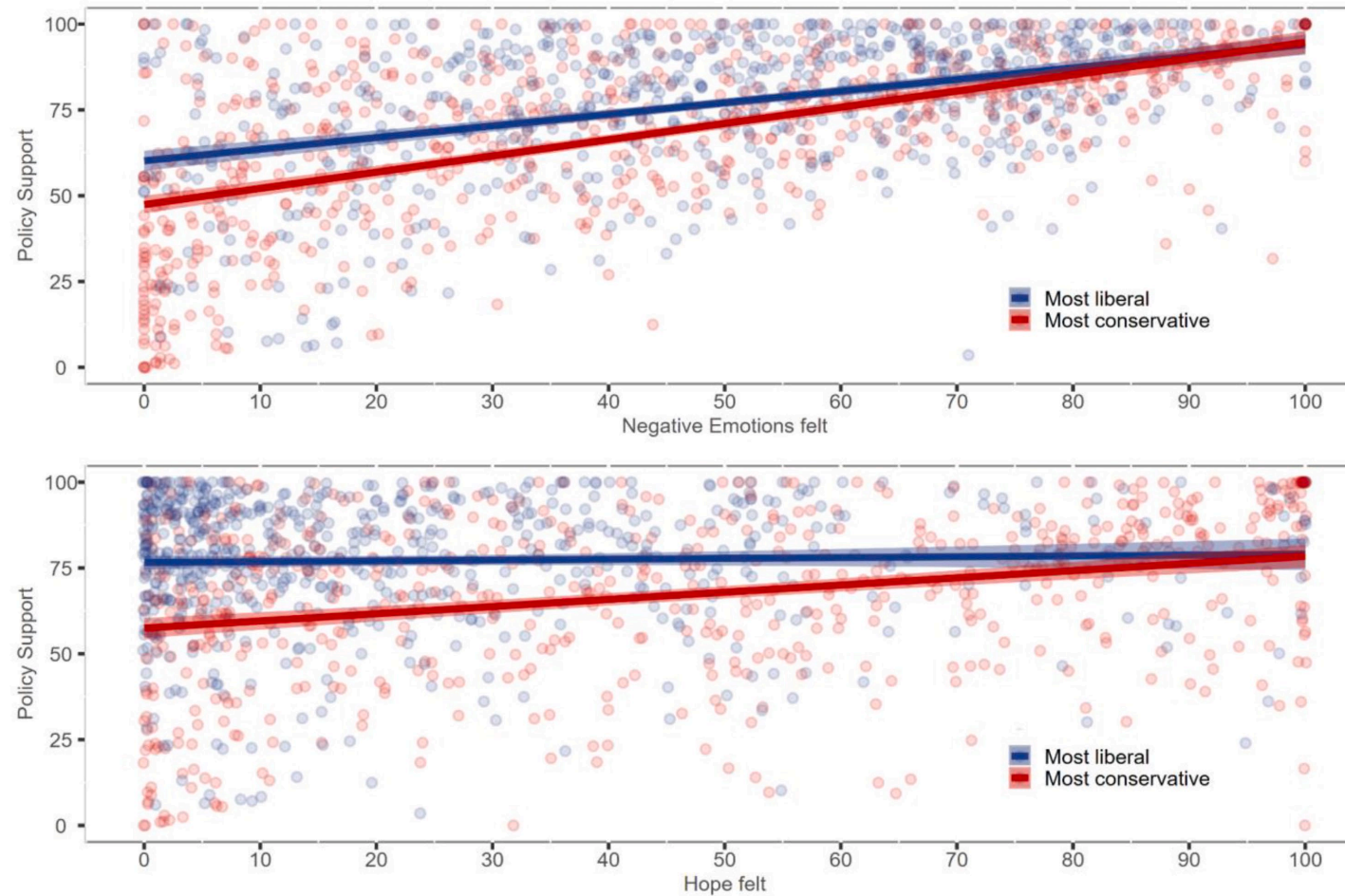
Emotions, belief, and policy support

Negative emotions:
Anger, anxiety, depression,
fear, and guilt



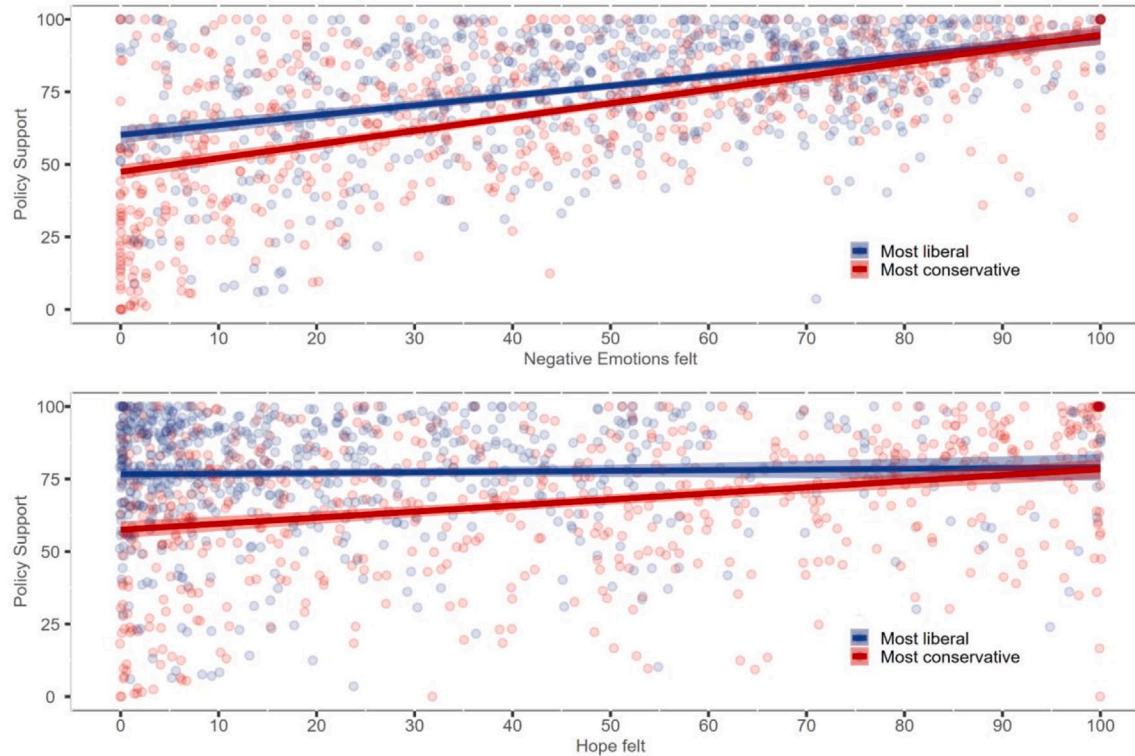
Spampatti & Doell, 2026

Emotions and policy support



Spampatti & Doell, 2026

Emotions and policy support



“Conservatives who felt strong negative emotions and were hopeful about climate change supported climate policy as much as liberals. This implies that feeling strong emotional reactions might overcome the climate skepticism that characterizes modern conservative ideology.”

Spampatti & Doell, 2026

Negative emotive content effective across audience segments

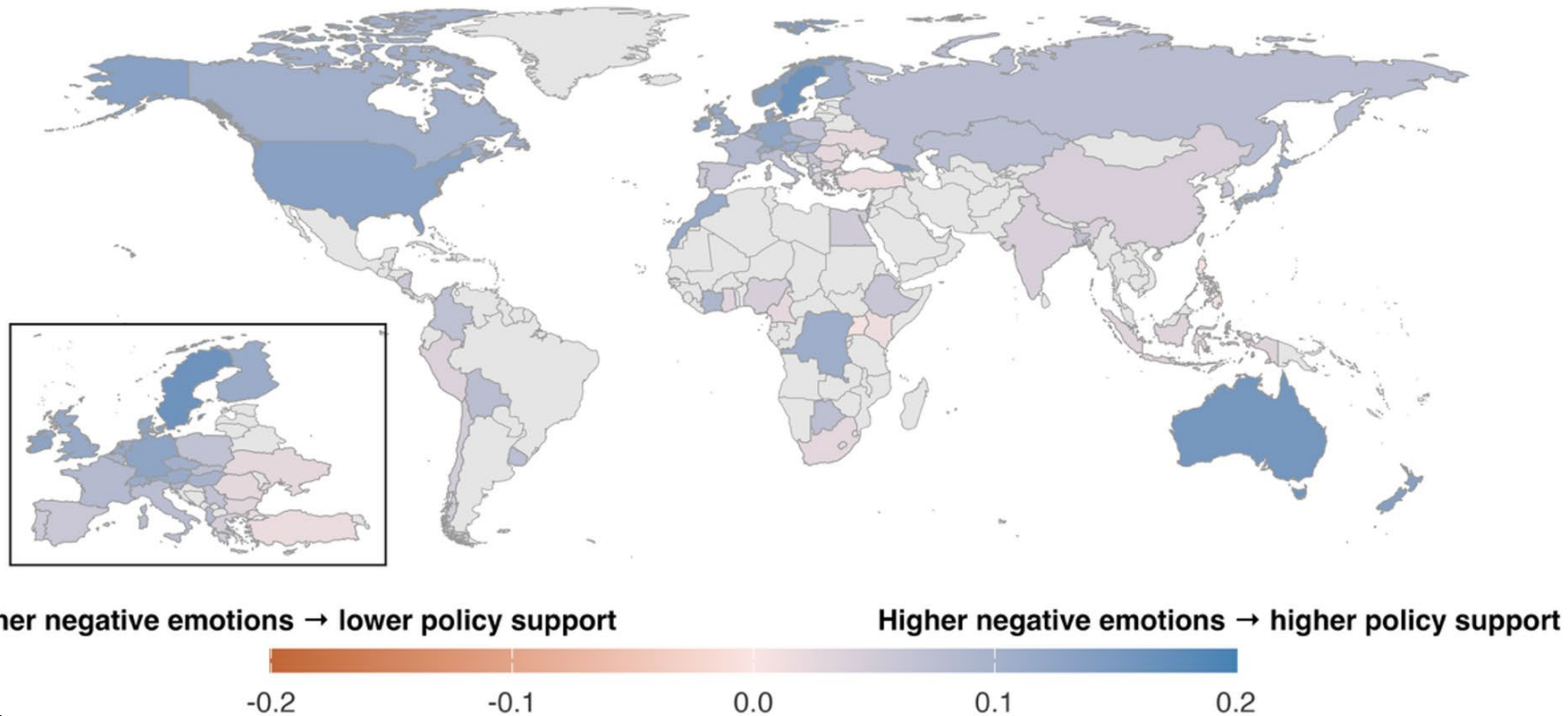
Table 5. Summary of messaging recommendations for motivating dismissive, uncommitted, and alarmed audiences to adapt to climate change.

Message attribute	Dismissive	Uncommitted	Alarmed
Refer to climate change	Detrimental	No effect	No effect
Specific adaptation advice	Beneficial	Beneficial	Beneficial
Negative emotive content	Beneficial	Beneficial	Beneficial
Highlight collective responsibility	No effect	No effect	No effect
Highlight local impacts	Beneficial	No effect	No effect
Highlight financial impacts	No effect	No effect	No effect

Hine et al., 2016

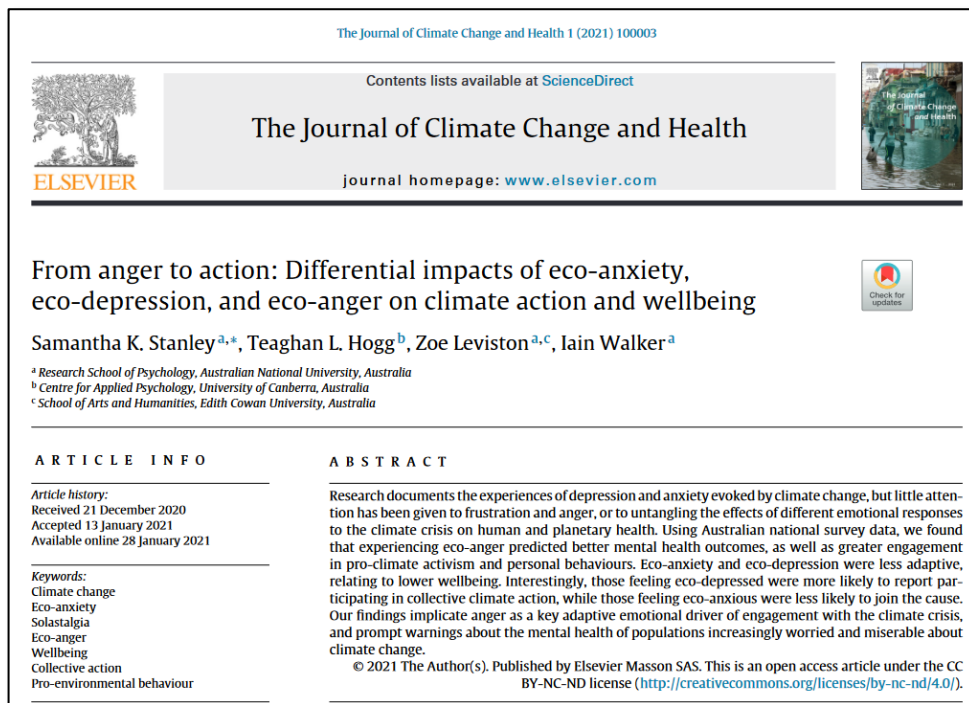
Negative emotions and policy support across countries (TISP Data)

Association between negative emotions and support for climate policies across countries



Ghasemi et al., under review

Eco-anxiety, eco-depression, eco-anger



Samantha Stanley

Emotions studied

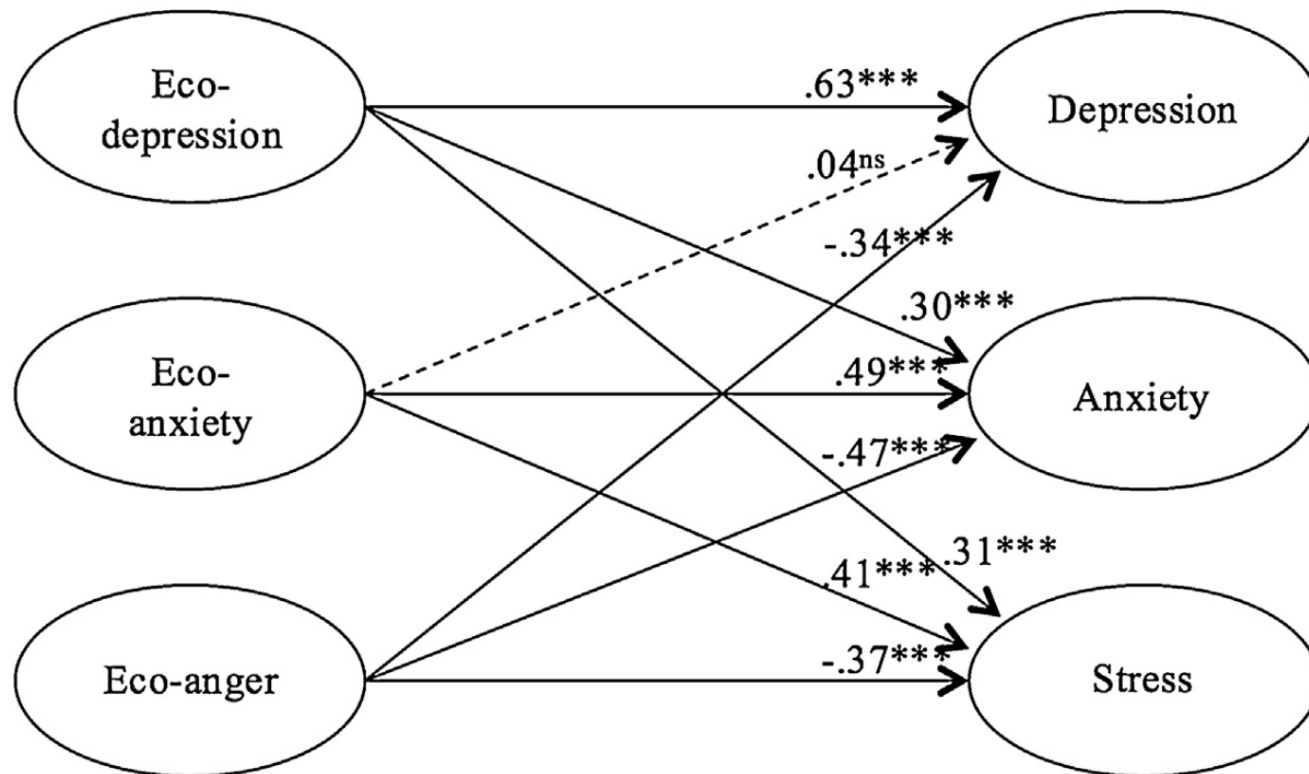
- Depression is a deactivating emotion, unlikely to motivate action.
- Anxiety is an activating emotion provoking avoidance of threat (i.e., flight). Although painful and distressing, climate anxiety does not imply mental illness.
- Anger is activating and associated with an approach tendency (i.e., fight).

Measurement of emotions

Eco-emotions

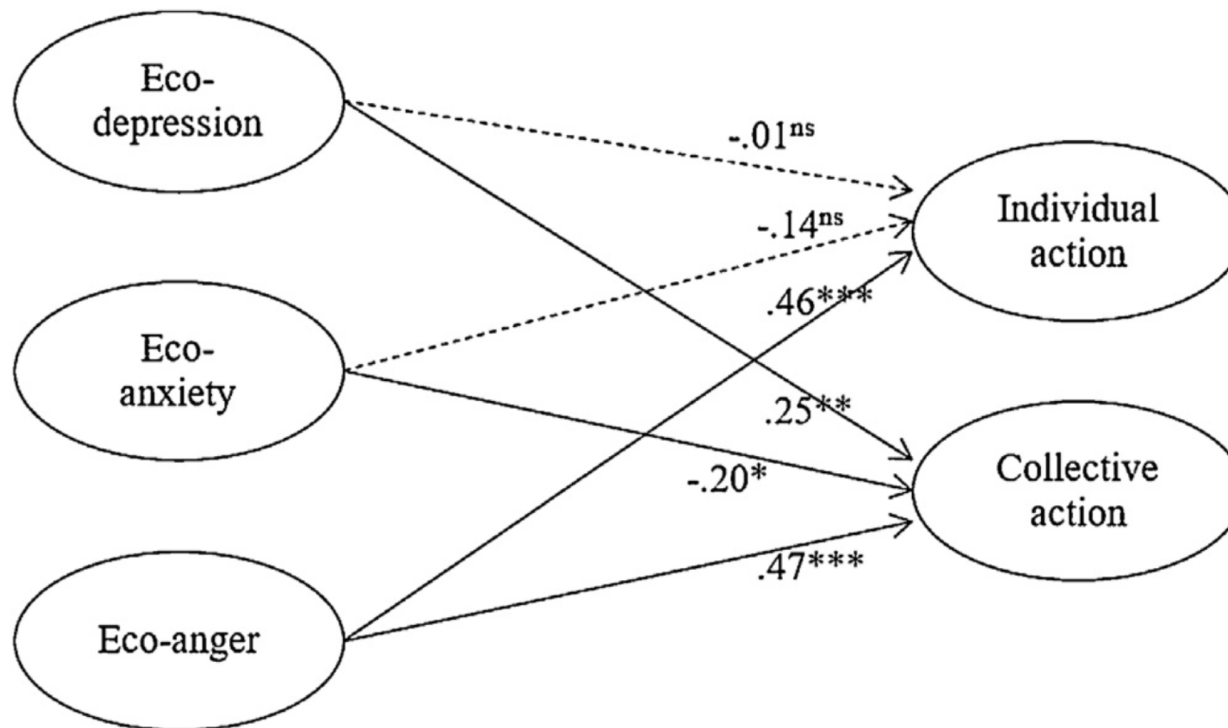
- Participants rated the extent climate change makes them feel on sliding scales from 0 (not at all this way) to 100 (a great deal):
 - Eco-depressed (depressed, miserable)
 - Eco-anxious (anxious, afraid)
 - Eco-angry (angry, frustrated)

Negative eco-emotions and mental health



- Relationships between eco-emotions and experiences of depression, anxiety, and stress in participants' daily lives.
- Eco-anger** may be a uniquely adaptive response to the climate crisis, as it related to lower anxiety, depression, and stress.

Negative eco-emotions and climate action



- Eco-anger may be a healthy and adaptive form of expressive coping, while eco-depression and eco-anxiety may instead be debilitating.

Summary: Negative emotions and climate action

- Research has consistently found that climate change affect and negative emotions are among the most important predictors of climate change-related judgments and behaviors. (Brosch et al., 2021; Goldberg et al., 2020)
- Recent evidence from global studies supports this. (Spampatti & Doel, 2026; Ghasemi et al., under review)
- Negative emotive content has been shown to be effective across audience segments. (Hine et al., 2016)
- Eco-anger, in particular, may be a powerful emotion for behavior change. (Stanely et al., 2021)
- However, effects are generally small.
- Findings differ depending on which emotions are measured and how.

Hope and climate action

- Critics of hope-based appeals argue that hope may lead to complacency, as people may not see the need for personal action anymore. (Brosch et al., 2021)
- Optimistic messages about progress in reducing global carbon emissions increased hope, but reduced risk perceptions, and did not increase mitigation motivation. (Hornsey and Fielding, 2016)
- However, messages focusing on solutions and efficacy (e.g., how easily an individual can take action, how effective proposed climate policies will be) increased climate-related political participation via increases in hope. (Feldman & Hart, 2016, 2018)

What kind of hope?

- Meta-analysis:
 - Hope regarding the possibility of respondents taking action was strongly associated with greater engagement.
 - Hope grounded in climate change not being a problem was associated with less engagement.
 - Hope in response to climate change generally was weakly associated with greater engagement.
 - Hope *manipulations* fostered increased engagement, though the increase was small.

Geiger et al., 2023

Emotions are not simple levers (Chapman et al., 2017)

- Emotional responses to messages about societal risks are influenced by the beliefs, worldviews, and existing emotions each individual brings to the table.
- Emotions should be viewed as one element of a broader, authentic communication strategy rather than as a magic bullet designed to trigger one response or another.
- An emotional reaction to an event might sometimes include an immediate behavioral response but is more likely to influence important cognitive responses, motivating further information search, and prompting further self-directed thought such as reappraisal and rumination.

Conclusion

- Negative (e.g., anger) and positive emotions (e.g., hope) are important correlates of climate change-related judgments and behaviors.
- The effects of increasing negative and positive emotions on behavioral outcomes are small.
- Emotions are conceptualized and measured differently across studies, making them difficult to compare.
- Emotions are not simple levers, but an essential part of climate change communication efforts.

Presentations Group 1 & Group 2