Emotions towards Climate Change and (Online and In-Person) Climate Action: Some Evidence from Focus Groups

Mara Martini[*], Angela Fedi[*], Annabelle De Jong[*], Sonia Coppola[**], Christian Compare[***], Iana Ivanova Tzankova[****], Cinzia Albanesi[****]

Received on 30 March, 2026
Accepted on 4 August, 2026

Abstract

Climate change can provoke strong and varied emotional reactions. These emotions may either encourage or diminish the willingness to act and participate in different ways and forms, to counteract climate change. However, little research has examined the relationship between emotional reactions and various forms of participation, including online participation. Even less attention has been given to the emotions that participation itself can elicit. The aim of this qualitative study is therefore to explore, through 10 focus groups in Italy (96 participants), the emotional reactions climate change provokes and how these interact with engagement to counteract it, while also considering the emotional impact that pro-environmental engagement has on the focus group participants.

Keywords: emotions, climate change, participation, pro-environmental behaviour, online, focus group

[*] Dipartimento di Psicologia, Università degli Studi di Torino, Via Verdi 10, 10124 Torino (TO), mara.martini@unito.it, angela.fedi@unito.it, annabelle.dejong7@gmail.com
[**] Dipartimento di Scienze Politiche, Università Federico II di Napoli, via Rodinò 22, 80138 Napoli (NA), sonia.coppola@unina.it
[***] Dipartimento di Scienze Economiche, Psicologiche, della Comunicazione, della Formazione e Motorie, Università Niccolò Cusano, Via Don Carlo Gnocchi 3, 00166 Roma (RM), christian.compare@unicusano.it
[****]Alma Mater Studiorum, Università di Bologna, Via Zamboni 33, 40126 Bologna (BO), iana.tzankova2@unibo.it, cinzia.albanesi@unibo.it

Psicologia di Comunità (ISSNe 1971-842X), 1, 2026
DOI: 10.3280/psc2026oa23868

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

Riassunto. ***Emozioni nei confronti del cambiamento climatico e delle azioni per il clima (online e di persona): alcuni risultati emersi dai focus group***

I cambiamenti climatici possono suscitare reazioni emotive anche molto forti e diversificate. Tali reazioni emotive sembrano favorire o ridurre la propensione ad agire e partecipare, in modi e forme diverse, per cercare di contrastarli. Poco studiate tuttavia sono le relazioni tra le reazioni emotive e le diverse forme di partecipazione, tra cui quella online. Ancor meno studiate sono le emozioni che la partecipazione può suscitare. Obiettivo di questo studio qualitativo, perciò, è esplorare, attraverso 10 focus group in Italia (96 partecipanti), quali reazioni emotive i cambiamenti climatici suscitano e come si intrecciano con l'impegno personale e collettivo per contrastarli, considerando anche l'impatto emotivo che l'engagement pro-ambientale ha sui partecipanti ai focus group.

Parole chiave: Emozioni, Cambiamenti Climatici, Partecipazione, Comportamenti Pro-Ambientali, Online, Focus Group

1. Introduction

Climate change is an increasingly urgent emergency (Pierrehumbert, 2019) with ever more evident effects, as clearly evidenced by United Nations (https://www.unep.org/climate-emergency). On one hand, almost every day, we witness natural disasters, extreme weather events, and their impact on many areas of the planet and their populations. On the other hand, despite international agreements and United Nations directives, many actors on the international stage with political or economic power neglect the issue and, indeed, act in ways that exacerbate it. This situation can also cause intense emotional reactions, especially among young people (Clayton *et al.*, 2023). In recent decades, numerous studies (e.g., Ágoston *et al.*, 2022; Pihkala, 2020, 2022) have analysed the so-called eco-emotions, focusing in particular on eco-anxiety and eco-anger (Marczak *et al.*, 2023; Pihkala, 2020, 2022). Some authors have suggested the existence of a wider range of emotions towards climate change (Ágoston *et al.*, 2022; Marczak *et al.*, 2023; Pihkala, 2022).

Eco-emotions are studied for two main reasons: a) to understand their impact on psychological wellbeing, and b) because they can be important motivations sustaining actions to counter climate change. This second branch of studies is particularly developed in social and community psychology, in works aimed at identifying factors that can trigger or hinder participation (Stanley *et al.*, 2021).

However, the relationship between emotions and participation in actions to combat climate change can be bidirectional. Participation itself can also arouse emotions, which in turn can modulate eco-emotions and/or support or reduce the motivation to continue participating (Ojala, 2023).

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

The emotions associated with participation have been studied much less extensively; in particular, to our knowledge, previous studies have not examined in depth whether different forms of participation (e.g. in-person and online) elicit different emotional reactions.

2. Literature Review

2.1 Emotions towards climate change

The corpus of studies analysing emotional reactions to climate change is extensive, as shown in, for example, Brosch and Sauter (2023), Momenpour and Choobchian (2025), and Pihkala *et al.* (2022).
Great part of works that studied emotions towards climate change focalized on negative reactions (Marczak *et al*., 2023; Pihkala, 2022). One of the first (Albrecht, 2011) and perhaps most studied (Coffey *et al.*, 2021; Pihkala, 2020) emotional reactions is anxiety, or "eco-anxiety", which can be defined as «a chronic fear of environmental doom» (Coffey *et al.*, 2021, p. 1). This refers both to possible natural disasters caused by climate change and to fear of the progressive destruction of the planet itself, and thus for the future of humanity and all other forms of life. Several scholars have highlighted the negative impact that eco-anxiety has on the mental health of those who experience this emotion (Lawrance *et al.*, 2022). Others have shown that a high level of eco-anxiety can have a "paralysing" effect, reducing motivation both to achieve personal objectives and to take action to counter climate change (Brosch, 2021, 2025; Harth, 2021; Stanley *et al.*, 2021), or, on the contrary, can trigger motivation to act to mitigate the causes of climate change (Boluda-Verdu *et al.*, 2022).

Some authors have pointed out that anxiety is just one of the negative emotional reactions that can be triggered by climate change (Ágoston *et al.*, 2022; Coffey *et al.*, 2021; Pihkala, 2020, 2022). Many have described anger towards those who continue to damage the environment or do not care about reducing such harm. Others have described grief or sadness, or a form of nostalgia for what may be lost (solastalgia). Still others have referred to a sense of helplessness (Ágoston *et al.*, 2022; Pihkala, 2022). Several works have referred to eco-guilt for the damage that humans cause to the planet and to other species, or for not being able to do enough to protect the planet (Mallet *et al.*, 2012). Several research works evidence the impact that such negative emotions can have, specifically in terms of reduction of mental health (Lawrence *et al.*, 2022)

Some scholars (e.g., Marczak *et al.*, 2023; Pihkala, 2022) have more re-

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

cently shown that emotions related to environmental matters can also be positive: in some cases, hope and optimism about the possibility of counteracting climate change, or involvement and motivation to act, are cited.

2.2 The role of "eco-emotions" in sustaining participation counteracting climate change

Beyond the impact on individual psychological well-being, numerous studies have highlighted the central role these emotional reactions can play in commitment and participation in contrasting climate change.

Among others, social and community psychologists have devoted considerable attention to understanding what can promote or, conversely, hinder participation in combating climate change, as well as the types of participation that may emerge (occasional or continuous, partial or intense, individual or collective, in person or online). Only through broader and more widespread citizen engagement and participation we can attempt to address the dramatic climate crisis we are currently witnessing. Studying emotions as drivers to sustain climate participation is a promising line of research to inform political and social interventions (Brosch & Sauter, 2023).

Although the results of previous studies are not conclusive, it appears that certain types of emotions towards climate change either encourage or inhibit willingness to participate in pro-environmental activities. There is broad consensus that positive emotional experiences (hope, optimism, involvement) encourage participation (Pihkala, 2022; Schneider *et al.*, 2021).

Negative experiences, on the other hand, seem to be associated differently with willingness to participate (Saalwirth, 2026; Stanley *et al.*, 2021). An emotion such as anger, due to the perception of injustice, is often associated with the desire to get involved, specifically by acting or protesting against those deemed responsible for the climate crisis (policy makers, multinational corporations, etc.). Other emotions, such as anxiety or guilt, in some cases act as barriers, like powerlessness (Stanley *et al.*, 2021). Other studies show that fear, worry or guilt can activate coping strategies, including participatory action (Clayton & Parnes, 2025; Saalwirth, 2026). The results on this point are not unanimous: for example, Lorenzini & Rossett (2024) found that both fear and anger about climate change sustain participation, perhaps because of the focus on different types of pro-environmental actions, e.g., individual and collective actions (Lorenzini & Rossett, 2024).

Several studies focus on emotions as triggers of collective actions (Stanley *et al.*, 2021; Harth, 2021). In particular, some studies evidence as col-

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

lective and group-based emotions foster collective action as they can override self-interests and increase group cohesion and identification (Brosh, 2025).

Another area of research analyses emotions as possible predictors of pro-environmental individual behaviours. For example, many studies have included emotions in extensions of the TPB-based model to explain the intention to perform sustainable behaviours (e.g. Lavuri *et al.*, 2022; Martini *et al.*, 2024).

Less frequently, to our knowledge, emotions have been considered as possible predictors of online or in-person forms of commitment to combating climate change, taking into account differences and similarities. Even less attention appears to be paid to emotions that may arise from efforts to counter climate change and their potential consequences for personal well-being and future engagement.

2.3 Emotions activated by participation

Few psychosocial studies have highlighted that environmental participation is not only driven by emotions but also recursively generates distinct emotional outcomes. Engagement in collective or individual pro-environmental action is associated with increased hope, particularly when individuals perceive their actions as meaningful or socially supported. For example, Ojala (2023) demonstrates that constructive hope – rooted in collective efficacy – tends to grow through participation itself, sustaining long-term engagement. Similarly, participatory behaviours can enhance perceived agency and reduce feelings of helplessness (Hamann *et al.*, 2024). However, other studies note that involvement, particularly in activist contexts, can also lead to emotional exhaustion, frustration, and climate-related distress, especially when individuals encounter institutional inertia or limited visible impact (e.g., Pihkala, 2022). This dual effect can be represented as an affective feedback loop, where participation either reinforces engagement through positive emotions (virtuous loop; Dillenseger & Mouminoux, 2026) or contributes to disengagement through burnout if emotional resources are not replenished.

However, at our knowledge, the few studies that considers emotions activated by the experience of participation, do not distinguish between different forms of participation (e.g., online or in-person).

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

3. The present study

The qualitative findings presented in this paper are based on the qualitative component of a larger research project funded by the European Union, entitled "(Citizen) Engagement on Climate Change and Environmental Sustainability: (How Does It Work/Change) Online, Offline or Onsite? (E-CLIC)", and approved by the Ethics Committee of the University of [anonymous for peer review]. The overarching aim of the E-CLIC project is to systematically examine forms of civic engagement related to climate change and environmental sustainability, with particular attention to both digitally mediated and in-person participation. The qualitative component of the project has explored beliefs, representations, and experiences associated with online and in-person participation. The present paper focuses on analysing those sections of the focus group transcripts in which the topic of emotions is discussed in relation to climate change or participation.

3.1 Aim of the study

This study, specifically, aims to analyse distinctively the emotions aroused by climate change – which have been examined in various other research studies – and those aroused by the experience of participation, with a specific focus on possible differences between different kinds of participation which have received far less attention in previous studies.

4. Method

4.1 Participants

The 96 interviewees who participated in the study included 64 women/young women; 38 lived in Northern Italy, 29 in Central Italy, and 29 in Southern Italy, with most residing in urban areas. As university students were included, most interviewees were aged between 18 and 40 years (M = 39), and the most common occupational category was students (N = 38) (Table 1).

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

Tab. 1 – Focus groups participants' characteristics

Variables		*FG 1-4*[*]	FG 5-7[**]	FG 8-10[***]	Total
Gender	Men/Young men	16	10	5	31
	Women/Young Women	21	19	24	64
	Gender-diverse	1	/	/	1
Age	18-40	19	13	16	48
	40-60	13	11	12	36
	> 60	6	5	1	12
Occupation	Office workers	6	12	7	25
	Freelance professionals	7	1	1	9
	Teacher/ Educator	4	3	6	13
	Salesperson	1	/	/	1
	Student	14	10	14	38
	Unemployed	2	/	1	3
	Retired	4	3	/	7
Total		38	29	29	96

Note. FG = focus group. FGs 4, 7, and 10 involved only students.
[*] *Northern Italy;* [**] *Central Italy;* [***] *Southern Italy.*

4.2 Procedures

Ten focus groups were conducted between April and November 2024 across three large Italian cities in distinct areas (Southern Italy, N = 3; Central Italy, N = 3; Northern Italy, N = 4), each involving between eight and eleven participants. To avoid terminological overlap between the substantive concept of "participation" under investigation and participation in the research setting itself, individuals taking part in the focus groups are hereafter referred to as "interviewees".

Interviewees in six focus groups were recruited through a professional agency, which ensured a balanced sociodemographic composition from a general population sample, and were rewarded with a €40 gift voucher. The inclusion criteria defined by the research team also referred to interest in environmental issues (at least 3 on a scale from 0 to 5) and level of involvement, with the majority of interviewees stating C, D, or E on the self-positioning item adapted from the Pyramid of Engagement. This pyramid metaphor represents the intensity of involvement – from lower to higher – and the number of people usually found at different levels – large at the lower levels, fewer at the higher levels (Rosenblatt, 2010). As younger people tend to engage more frequently in digitally mediated forms of civic participation, we decided to focus in particular on their perspectives, re-

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

cruiting university students via internal calls disseminated within the three partner universities. These students took part in four focus groups involving only this type of participant.

The sessions were facilitated by two researchers and followed a semi-structured discussion protocol developed collaboratively by the research team. At the beginning of each session, the facilitators introduced themselves, provided an overview of the project aims, and presented an operational definition of environmental issues to ensure conceptual alignment.

All focus groups were conducted in Italian, lasted on average approximately two hours, were audio-recorded, and transcribed verbatim after obtaining informed consent from all interviewees. The transcripts were analyzed using thematic analysis (Braun & Clarke, 2006), a method that, through successive steps, allows researchers to inductively identify themes and meanings emerging from the data. Referring to Braun and Clarke's (2006) six-phase thematic analysis framework, in the present study the researchers repeatedly read the transcripts and identified the main themes emerging inductively from participants' narratives of their experiences of participation. The researchers then coded the themes and, after a discussion to reach agreement on them, defined the structure of the themes for the presentation of the results. The analysis was conducted using Atlas.ti 24 software by three independent researchers. These researchers also served as facilitators during the focus groups; their direct experience during data collection contributed to reaching agreement on the themes during the thematic analysis process.

The discussion protocol addressed previous experiences, beliefs, and representations of online and face-to-face participation in relation to various aspects (e.g., motivation, efficacy).).

Because the research focused on comparing the experiences and perceptions of in-person and online participation, a specific in-depth analysis of the emotional dimension was not originally planned. However, emotions related to climate change and participation emerged prominently and frequently in participants' discourse, so a detailed study on this topic was subsequently undertaken. In the following pages, the themes that emerged will be described; for each of them, both the frequency of quotations and an example quotation will be reported.

In the following pages, the emerged themes will be described; for each of them both the frequency of quotations and at least an example quotation will be reported.

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

5. Results

Although emotional reactions related to climate change were not the focus of our qualitative study, they were frequently mentioned (63 quotations) by most interviewees in two main ways. In several cases, respondents described their emotional responses to climate change itself; in others, they referred to emotions generated by their experiences of participating in efforts to tackle climate change. Emotions towards climate change were sometimes cited to describe interviewees' reactions to the seriousness and extent of the current situation, and sometimes as reasons for their behaviours and choices to participate in efforts to counter climate change.

5.1 Emotional reactions towards climate change

Interviewees repeatedly described their emotional reactions and feelings regarding climate change. Consistent with previous studies, the emotional reactions reported were predominantly negative (46 quotations), although several positive emotions were also expressed (10 quotations).

The most frequently cited emotions were anxiety and worry (13 quotations): witnessing natural disasters and climate change, at different levels of intensity, generates fears for the future, for one's own children, and for the planet, sometimes accompanied by a sense of powerlessness in the face of the enormity of what is happening: «It makes me very anxious to think about the future and these rapid and sometimes even catastrophic changes, which often make me feel powerless» (FG 7). One person stated that this tragic scenario can even lead to depression (1 quotation): «The idea of everything that happens makes me depressed...» (FG 9).

These emotions are intensified by the perception that many people do not care, which can make matters worse. One interviewee stated: «I have a lot of eco-anxiety, meaning I really feel that... there's no time. I see a lot of indifference from most people, so I feel it even more urgently» (FG 4).

The fact that many people are not concerned about this at all, even more so than about climate change itself, angers some respondents (12 quotations): «It makes me angry that people may not even want to look at this aspect» (FG 4).

Some respondents also describe feelings of demotivation and frustration, often linked to the perception that many people do not care about the climate crisis and therefore take no action to change things (12 quotations): «I don't have much faith in the world, so I've given up too, and I'm a bit sorry about that, because in reality it's the actions of individuals

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

that add up to tangible results, but... I've lost my motivation in some way» (FG 2).

The perception that many people do not worry about it and do anything to counter climate change, and even more so when those with political and economic power do nothing to reverse the trend, leads to a sense of powerlessness (5 quotations): «It is perhaps common to feel powerless in the face of large corporations or politics» (FG 10).

Some (3 quotations), conversely, express feeling somewhat co-responsible for what is happening, as they did not do enough or were not aware of the seriousness of the problem, and thus felt guilt: «I feel guilty, guilty because I was ignorant» (FG 5). However, some interviewees expressed positive feelings and emotions towards the matter, specifically, confidence and optimism (4 quotations) regarding the possibility that things will improve: «I am more optimistic about the young people's abilities» (FG 6).

Someone stated that they deeply love nature (4 quotations), felt a strong urge and therefore experienced the desire to try to protect it: «Sometimes you can really get emotional when faced with the beauty of nature and the awareness that you may have made a difference in some way» (FG 2).

The link between positive feelings (and sometimes negative ones) and the drive to engage (6 quotations) is clearly emphasised by some interviewees: «Transforming our feelings, passions, instincts, even anger, into something transformative» (FG 4), «Acting on anger is extremely powerful. ... It is pure fuel and must be converted [into action]» (FG 4).

5.2 Emotions activated by action and participation

If emotions can trigger action and participation in addressing climate change, they can also be elicited by such actions. Several interviews referred to emotional reactions resulting from experiences of participation (65 quotations): in some cases, participation itself elicited emotions (16 quotations). In other cases, emotional reactions were explained by the specific form of participation: in-person (20 quotations) and online (29 quotations) experiences of participation appeared to involve different kinds of emotional activation.

Emotional reactions due to participation itself can be divided into two main types. One is positive (5 quotations), involving satisfaction and fulfilment from having contributed directly (for example, by cleaning up a green area) or indirectly (through awareness-raising) to improving the situation, increasing awareness, or encouraging others to get involved. Some interviewees said: «Keeping a place clean, our place clean, was something

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

that gratified us from this point of view» (FG 9); «It is also nice to be able to pass on a value to someone» (FG 7).

Another emotional reaction described by the interviewees was the support perceived by sharing experiences, negative feelings and hopes with other people: «The idea of finding other people who feel the same way you do… helps you» (FG 8).

The other has a negative connotation (8 quotations), implying dissatisfaction, uselessness or discouragement: It refers to the perception of not having achieved significant or sufficiently effective results, especially if those with political and economic power or the majority of others do nothing to change things: «Sometimes I'm not so active because I often get discouraged when I see how difficult it is to get the people around you involved» (FG 2); «You can collect signatures, you can promote good causes within your family, such as solar panels or recycling, but when you are faced with institutions, the local council, which continues to take harmful actions in terms of the environment [...] it can sometimes be demoralising» (FG 6).

Negative reactions may also be provoked by witnessing certain forms of extreme activism, such as defacing monuments to influence public opinion (3 quotations): «I detest those groups that deface works of art to draw attention to environmental issues... It's something I truly abhor, it makes me extremely angry because it's a waste of public money to clean it up afterwards, so no... » (FG 9).

5.3 Emotions activated by different forms of participation

If emotions can trigger action and participation in addressing climate change, the interviewees reported various emotions when discussing and comparing their experiences of different forms of participation, specifically in-person (21 quotations) and online (29 quotations).

Experiences of in-person action and participation appeared to elicit mainly positive emotional reactions (18 quotations). Interviewees expressed satisfaction and gratification with the results they achieved, which were usually visible (6 quotations): «These are the things that give you satisfaction because you can see that, in your own small way, you've managed to…» (FG 3).

Several quotations (9) referred to the positive feelings and momentum, that come from doing things together, sharing an experience and its results, and, sometimes, from friendships that developed, or simply from enjoying an immersive, all encompassing experience: «You feel so full of energy… when you're together it's even better; you feel so full of energy and it's

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

even more fun» (FG 9); «I have experienced the beauty of immersive experiences – something that has truly changed my life» (FG 3).

However, in-person participation can also provoke negative reactions (4 quotations). One person reported perceiving possible risks in attending demonstrations (2 quotations): «I don't go to protests much anymore because… it makes me feel quite uneasy. Not the Fridays for Future ones… but things have happened at other protests I've been to, so I've stopped going because I'm scared» (FG 10).

Another expressed frustration because the scope for action is inevitably limited, or because efforts invested in in-person activities do not yield long-term results: «Seeing it covered in graffiti and littered with rubbish again is also frustrating» (FG 10).

Compared to in-person forms of participation, online participation was more frequently associated with negative emotions (13 quotations). However, in some cases, ambivalence (3 quotations) and positive emotional reactions (4 quotations) were also reported.

Most interviews expressed negative emotions regarding online participation experiences (13 quotations). The most frequently cited issue was the perceived lack of concreteness and the inability to see results, which led to a sense of frustration (4 quotations): «Online, frustration prevails because it feels as though there is a physical barrier and no results are visible» (FG 10).

Another one described the solitude, boredom, and alienation of being alone in front of a screen (6 quotations): «From personal experience, during the periods when I was on social media, I was far unhappier, far more… unmotivated to see other people, or even just to go out for a bit» (FG 3).

For others, online participation meant less trustworthiness (3 quotations): «Online, I don't know, it doesn't give me the same sense of trust as, say, being there in person» (FG 10).

Other respondents report more mixed experiences regarding online participation (3 quotations). Some explicitly describe themselves as ambivalent: they find the loneliness of being online and the lack of tangible interaction off-putting, but cannot help but appreciate its usefulness in certain situations or for certain purposes: «My relationship with the internet is very ambivalent, because part of me is tormented by it; part of me condemns it, hates it. Another part of me, however, … realises just how bright and wonderful it is» (FG 3).

Someone else reported positive emotions (4 quotations) associated with online participation experiences. In three cases, satisfaction and gratification at the possibility of reaching many people through the online medium are expressed: «That's the greatest satisfaction – not saying 'I did it, it's me, I went', but saying 'let's raise everyone's awareness, let's all do it'» (FG 4).

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

One interviewee said that sharing their anxiety on social networks with other people with the same sensitivity is relieving: «I think that part of the appeal of the internet, at least for me, lies in the fact that I'm sharing this news – which, in a way, upsets me and, in a way, I believe affects everyone – and I'm sharing it to relieve some of that negative feeling I have» (FG 4).

6. Discussions and conclusion

The present paper aimed to examine emotions related to climate change and to the forms of action and participation undertaken to counter it. Although previous studies did not explore the latter in depth, in ten focus groups addressing both in-person and online forms of action and participation, interviewees frequently described emotional reactions, sometimes as motivations and at other times as consequences of climate-related action and participation. Furthermore, although we were unable to identify specific patterns of emotional responses among interviewees or any statistically significant differences (which we were not interested in examining), we did observe a high frequency of quotations from the focus groups with students. No relevant peculiarities, on the contrary, were found among focus groups in the different geographical areas.

Emotions arising from climate change awareness were mainly negative for the interviewees, consistent with previous studies (Pihkala, 2020, 2022; Martin *et al.*, 2023), although some positive, optimistic reactions were also described (in line with Pihkala, 2022; Marczak *et al.*, 2023). The most frequently mentioned emotions were anxiety, worry, anger, and frustration. These were often cited as motivators for action (especially anxiety and anger, together with hope and optimism) or, conversely, as barriers to participation (mainly frustration, but also anxiety), in line with previous studies on these topics (e.g., Brosh, 2025; Davidson & Kecinski, 2022; Harth, 2021; Stanley *et al.*, 2021).

However, emotions are often the outcome of experiences of action and participation, whether in virtuous or vicious circles. For example, sharing experiences can alleviate anxiety, while frustration may increase if it becomes apparent that efforts remain limited or fail to produce tangible and lasting results.

Although this point has been largely neglected in previous studies, not all forms of action and participation appear to evoke the same emotions. A comparison between in-person and online participation shows that emotional reactions can vary considerably. Online forms of participation, the central topic of our focus group exploration, were more frequently associated with negative feelings. Several interviewees considered online participa-

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

tion more frustrating and less satisfying because the results are less tangible than those of in-person participation. Online participation generates greater solitude and, in many cases, diminishes the sense of belonging compared to opportunities for in-person engagement. For some, the absence of physical involvement seemed less trustworthy.

However, online participation also seems to generate positive feelings. It can be perceived as a protected space. For some, it offers the opportunity to participate without concerns about the violent extremism that can occur at certain in-person events. For others, it provides a chance to share negative emotions about climate change and to be understood and supported, offering relief from anxiety.

Other respondents, however, expressed ambiguous feelings towards online participation: they recognise its potential but also its limitations. A positive reaction can therefore be associated with a balanced use of online and in-person forms of participation. This last consideration may also offer some suggestions for practical application. Emotions towards climate change and towards participation itself can, at times, sustain or hinder actions to address climate change. Understanding the interplay between different forms of participation, and particularly the role of hybrid forms, can help communities and political actors to promote positive initiatives that involve citizens in tackling the climate crisis, which can no longer be postponed.

6.1 Limitations

The study has certain limitations. Firstly, although the sample size was fairly large and participants were distributed across the country, the study was conducted exclusively in Italy. Secondly, it explored an aspect that emerged spontaneously within the context of a broader research project; therefore, it did not permit a detailed examination of the implications of emotions, both in terms of psychological well-being and willingness to participate in efforts to counter climate change, although it does offer some points for reflection. Future studies may focus specifically on this point, with a more in-depth investigation of understudied emotions related to participation itself. A further limitation is that we did not systematically compare patterns of emotional reactions for students and for the general population, as this was not among our initial aims; future studies should specifically explore this aspect in greater depth.

Despite these limitations, the work can make a valuable contribution to these issues and suggest avenues for both theoretical exploration and, as noted above, practical application.

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

References

Ágoston, C., Csaba, B., Nagy, B., Kőváry, Z., Dúll, A., Rácz, J., & Demetrovics, Z. (2022). Identifying types of eco-anxiety, eco-guilt, eco-grief, and eco-coping in a climate-sensitive population: A qualitative study. *International journal of environmental research and public health*, *19*(4), 2461. https://doi.org/10.3390/ijerph19042461

Albrecht, G. (2011). Chronic environmental change: Emerging 'psychoterratic' syndromes. In *Climate change and human well-being: Global challenges and opportunities* (pp. 43-56). New York, NY: Springer New York.

Boluda-Verdu, I., Senent-Valero, M., Casas-Escolano, M., Matijasevich, A., & Pastor-Valero, M. (2022). Fear for the future: Eco-anxiety and health implications, a systematic review. *Journal of Environmental Psychology*, *84*, 101904. https://doi.org/10.1016/j.jenvp.2022.101904

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Brosch, T. (2021). Affect and emotions as drivers of climate change perception and action: a review. *Current Opinion in Behavioral Sciences*, *42*, 15-21. https://doi.org/10.1016/j.cobeha.2021.02.001

Clayton, S., & Parnes, M. F. (2025). Anxiety and activism in response to climate change. *Current opinion in psychology*, *62*, 101996. https://doi.org/10.1016/j.copsyc.2025.101996

Clayton, S. D., Pihkala, P., Wray, B., & Marks, E. (2023). Psychological and emotional responses to climate change among young people worldwide: Differences associated with gender, age, and country. *Sustainability*, *15*(4), 3540. https://doi.org/10.1016/j.copsyc.2025.101996

Coffey, Y., Bhullar, N., Durkin, J., Islam, M. S., & Usher, K. (2021). Understanding eco-anxiety: A systematic scoping review of current literature and identified knowledge gaps. *The Journal of Climate Change and Health*, *3*, 100047. https://doi.org/10.1016/j.joclim.2021.100047

Davidson, D. J., & Kecinski, M. (2022). Emotional pathways to climate change responses. *Wiley Interdisciplinary Reviews: Climate Change*, *13*(2), e751. https://doi.org/10.1002/wcc.751

Dillenseger, L., & Mouminoux, C. (2026). The virtuous loop between affective well-being and pro-environmental behaviors. *Journal of Environmental Psychology*, *111*, 102947. https://doi.org/10.1016/j.jenvp.2026.102947

Hamann, K. R., Wullenkord, M. C., Reese, G., & Van Zomeren, M. (2024). Believing that we can change our world for the better: A Triple-A (Agent-Action-Aim) Framework of self-efficacy beliefs in the context of collective social and ecological aims. *Personality and Social Psychology Review*, *28*(1), 11-53. https://doi.org/10.1177/10888683231178056

Harth, N. S. (2021). Affect, (group-based) emotions, and climate change action. *Current opinion in psychology*, *42*, 140-144. https://doi.org/10.1016/-j.copsyc.2021.07.018

Lawrance, E. L., Thompson, R., Newberry Le Vay, J., Page, L., & Jennings, N. (2022). The impact of climate change on mental health and emotional wellbeing:

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org

a narrative review of current evidence, and its implications. *International review of psychiatry*, *34*(5), 443-498. https://doi.org/10.1080/09540261.2022.2128725

Lorenzini, J., & Rosset, J. (2024). Emotions and climate strike participation among young and old demonstrators. *Social Movement Studies*, *23*(1), 39-55. https://doi.org/10.1080/14742837.2023.2178406

Mallett, R. K. (2012). Eco-guilt motivates eco-friendly behavior. *Ecopsychology*, *4*(3), 223–231. https://doi.org/10.1089/eco.2012.0031

Marczak, M., Wierzba, M., Zaremba, D., Kulesza, M., Szczypiński, J., Kossowski, B., Budziszewska, M., Michałowski, J. M., Klöckner, C. A., & Marchewka, A. (2023a). Beyond climate anxiety: Development and validation of the inventory of climate emotions (ICE): A measure of multiple emotions experienced in relation to climate change. *Global Environmental Change*, *83*, 102764. https://doi.org/10.1016/j.gloenvcha.2023.102764

Martin, G., Cosma, A., Roswell, T., Anderson, M., Treble, M., Leslie, K., ... & Gislason, M. (2023). Measuring negative emotional responses to climate change among young people in survey research: A systematic review. *Social Science & Medicine*, *329*, 116008. https://doi.org/10.1016/j.socscimed.2023.116008

Momenpour, Y., & Choobchian, S. (2025). Emotional climate: a bibliometric analysis of the psychological consequences of climate change. *Frontiers in Psychology*, *16*, 1521771. https://doi.org/10.3389/fpsyg.2025.1521771

Ojala, M. (2023). Hope and climate-change engagement from a psychological perspective. *Current Opinion in Psychology*, *49*, 101514. https://doi.org/10.1016/j.copsyc.2022.101514

Pierrehumbert, R. (2019). There is no Plan B for dealing with the climate crisis. *Bulletin of the Atomic Scientists*, *75*(5), 215–221. https://doi.org/10.1080/00963402.2019.1654255

Pihkala, P. (2020). Eco-anxiety and environmental education. *Sustainability*, *12*(23), 10149. https://doi.org/10.3390/su122310149

Pihkala, P. (2021). Eco-anxiety. *Situating sustainability: A handbook of contexts and concepts*, 119-133.

Pihkala, P. (2022). Toward a taxonomy of climate emotions. *Frontiers in climate*, *3*, 738154. https://doi.org/10.3389/fclim.2021.738154

Saalwirth, C. (2026). Motivated by worry, burdened by hopelessness: Emotional correlates of climate action and personal well-being. *Applied Psychology: Health and Well-Being*, 18(4), e70183. https://doi.org/10.1111/aphw.70183

Schneider, C. R., Zaval, L., & Markowitz, E. M. (2021). Positive emotions and climate change. *Current opinion in behavioral sciences*, *42*, 114-120. https://doi.org/10.1016/j.cobeha.2021.04.009

Stanley, S. K., Hogg, T. L., Leviston, Z., & Walker, I. (2021). From anger to action: Differential impacts of eco-anxiety, eco-depression, and eco-anger on climate action and wellbeing. *The journal of climate change and health*, *1*, 100003. https://doi.org/10.1016/j.joclim.2021.100003

Copyright © FrancoAngeli This work is released under Creative Commons Attribution - Non-Commercial - NoDerivatives License. For terms and conditions of usage please see: http://creativecommons.org