Young people and climate change in Brazil

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Table of contents

1.
Introduction

This report discusses the question of climate change from the perspectives of young people in Brazil.[i]

The study rests on the supposition that there are gaps in our knowledge of what young people think about the topic especially given the urgency of the impacts of the climate crises on present and future generations. Multi-disciplinary studies produced in Brazil and internationally point out that there is a paucity of studies that focus on children and young people under the age of eighteen (Fernandes & Correia, 2025; Pereira & Freire, 2021; Chawla, 2020) and which touch on the various childhood and youthful experiences from a local perspective (Lee et al., 2020; Thomas et al., 2022).

The present study seeks to increase our knowledge of youth and climate change[ii] and at the same time discover and disseminate strategies to promote the engagement of young people in an effort to ease or reduce its impacts[iii].

To understand what young Brazilians think and do about the topic, we interviewed 200 respondents between the ages of 12 and 18, students in public and private schools in the five regions of Brazil in the following cities: Brasília, Goiânia, São Paulo, Rio de Janeiro, Fortaleza, Salvador, Curitiba, Porto Alegre, Manaus e Belém.

2025 is a good year for this analysis given the reality of the climate crisis internationally and in particular for the fact that the 30th UN Conference on Climate Change (COP30) will take place in Brazil in the city of Belém, Pará.

2. A brief overview of research on the topic

The preservation of the environment and the mitigation of the effects of climate change are directly related to the rights of children and youth.

Inadequate and insufficient measures to confront the climate crisis can be considered one of the major threats to the current generation and will compromise the fundamental right to health and well-being of children (UNICEF, 2023a). Recognizing the gravity of the problem, the UN Committee on the Rights of the Child published a General Comment for the signatory countries about the rights of the child in relation to the environment with a special emphasis on climate change (General Comment nº 26, 2023)[iv].

This document recognizes that environmental degradation, especially the climate crisis, jeopardizes the exercise of the rights proclaimed in the Convention on the Rights of the Child and reinforces the obligations of the States to prevent and repair the damages caused by that degradation. As holders of rights, children should be protected against these violations and should be fully recognized and respected as environmental actors.

The term climate change refers to alterations in the patterns of climate and temperature which can be provoked by natural phenomena as well as by human action. Climate change is considered one of the most significant threats for humanity. The challenges imposed by climate change affect all sectors of society including agriculture, health and transportation as well as threatening the survival of ecosystems and biodiversity caused by rising sea levels and extreme temperatures.

However, the intensity and complexity of its effects are experienced in different ways in different contexts as a function of socio-economic inequalities and local geography among other variables. Poverty is one of those variables.

Multi-dimensional poverty affects 63.1% of the Brazilian population under 18 or 32 million children and adolescents out of a total of 50.8 million. In addition to the young population, climate change profoundly impacts women, those living in the north and north east regions of the country and black and indigenous people.[v] These factors also affect access to knowledge about the environment as well as impacting quality of life and causing malnutrition, increased illnesses and negative impacts on mental health (Pereira & Pereira, 2021; Watts et al, 2021; Bowers et al, 2021).

In a study conducted in Brazil and Mexico by the Center for Defense of Childhood-Grupo Marista (2022) with 457 young people between the ages of 10 and 18, 90% of the Brazilian respondents said they had heard mention of the rights of children and adolescents such as the rights to education, health as well as the right to participate in decisions about their lives. This study also showed that 60% of all the participants were worried about the consequences of the climate crisis and 79% believed that its effects could jeopardize future generations. However, 64% of the respondents said they did not think their views were respected or taken into consideration.

Some studies conducted with children and youth (Dawson, 2015; Taber & Taylor, 2009; Varma & Linn, 2012) showed that young people's knowledge about climate change including its causes tends to be vague[vi]. Other studies emphasized different aspects of the theme such as that action and participation help to reduce the symptoms of stress, anxiety and fear related to climate change (Collado & Corraliza, 2015; Collado, Staats & Corraliza, 2013), and can contribute to improving the quality of life (Cui & Yang, 2022; Harvey et al., 2020; Pirchio et al., 2021; Sobko et al., 2018; Wiens et al., 2019; Zamora et al. 2021). The establishment of positive relations with and memories of nature promote participation in activities to preserve the environment throughout life. (Soga & Gaston, 2016; Talebpour et al., 2020; Malone, 2015; Tam, 2013; Tiriba, 2010).

On the topic of access to information and level of knowledge, the study Childhood (UNICEF-Gallup, 2023), conducted with young people between the ages of 15 and 24 in 55 countries including Brazil, investigated both the understanding young people had about climate change and their main sources of information on the topic. 56% of the Brazilians interviewed correctly defined climate change and 71% said that social networks were their principal sources of information. While platforms such as Instagram and Tik Tok were mentioned, there is no public data about young people´s ranking of sites or about the content of the information accessed.

There are several kinds of impacts associated with climate change in the literature (Pereira & Pereira 2021). The first are direct effects such as floods and drought. The second are second order effects connected to the social and economic context such as bad impacts on health. The third set refers to impacts on mental health. These impacts are experienced intergenerationally. Some authors, however, point out the tendency to focus solutions on the young incurring the risk of making them responsible for promoting change (Gauvain, 2018), Sanson et al. 2018 and Clemens et al. 2020) This tendency reinforces the importance of finding a balance between the expectations laid on the young and those on adults though taking into account the perspectives of the young.

Multi-disciplinary studies suggest that that debates and actions that emphasize the local level including inter- and intra-generational experiences can reveal concrete actions to confront the problem (Hu & Chen, 2016). Experiences such as floods, fires, and landslides happen at the local level

Paradigm changes in relation to climate change can also be examined by studies which question the colonial ideas that embraced a utilitarian view of nature (Karsgaard & Shultz, 2022). A decolonial pedagogy offers a body of theory and practice which emphasizes local visions and includes alternative knowledge including for example indigenous ontologies. A number of studies suggest that young people´s responses which point to the increasing intensity of and inequality caused by climate change, provide an opportunity to rethink and integrate systems of knowledge to discover inclusive solutions and include the perspectives of indigenous peoples (Datta et al., 2024; Datta & Kairy, 2024; Datta & Chapola, 2023, Kovach, 2021, ICA 2024, Nisbett, & Spaiser, 2023; MacKay et al, 2021). Even so, many initiatives on climate change do not include indigenous groups in decision making, so

it is necessary to amplify legal mechanisms to respond to their demands for respect for their rights to land and water, the protection of their languages and cultural traditions, the promotion of sustainable development and the maintenance of their connection with ancestral territories.

We conclude this section with some key points arising from these studies which have guided the discussion of the present study. We wish to 1: deepen our knowledge of the problem; 2: give rise to new paradigms for interacting with the natural world with short, mid-term and long-term effects 3: recognize and value local knowledge and the local situation; and 5: stimulate the engagement and participation of younger generations in individual and collective actions to mitigate the effects of climate change.

While the studies incorporating the perspectives of children and youth are relevant to our work, they have limitations in terms of their sampling procedures. A majority of them were based on questionnaires delivered virtually such as Google forms, through social media, electronic messaging or email. On the one hand, these methods increase the range of the study permitting a large number of people to have access to the questionnaires. On the other hand, they restrict participation to only those who have online capacity (both the equipment and reliable access to networks) potentially excluding a significant section of the young population. We could also infer that this type of study is likely to attract respondents who already have a previous interest in the topic because often the nature of the study is advertised in advance to recruit participants. An online study makes it difficult to verify the identity and characteristics of the sample. It also lacks a mediator, an in-person interviewer who can deal with divergent interpretations of the questions and lack of precision in the responses.

These factors contributed to the design of the current study. We chose in-person interviews and in-person selection of the sample ensuring the participation of young people of different economic levels, focused on daily local issues and assured the greatest diversity possible as we will discuss in the methods section. Since many of the cited studies were international, they tended not to concentrate on local issues or the local situation. We also, unlike many of other studies, included closed and open-ended questions, the latter of which allowed us to explore the participants views more deeply.

3. Methodology

The purposive sample included 200 adolescents and youth between the ages of 12 and 18 who were diversified by socio-economic condition, sex and color or race.

The socio-economic diversity was achieved by choosing students from both public and private schools. About 13% of Brazilian high school students go to private schools and they come from predominantly middle and upper class homes (Statistia, 2025).[vii] The rest, lower- and low-income students, go to public schools. The field researchers were instructed to seek out young people from both types of schools. Sex and color or race were determined from the self-declaration of the respondents. In Brazil, ethnicity in the national census is self-determined by skin color.

Subsamples were taken from major cities in Brazil in some of which CIESPI/PUC-Rio had contacts with nonprofit organizations. The cities chosen, which represented the five regions of Brazil and different biomes, were: Brasília and Goiânia (Center-West); São Paulo and Rio de Janeiro (South East); Fortaleza and Salvador (North East); Curitiba and Porto Alegre (South); and Manaus and Belém (North). The two last cities stand out by being Amazonian cities where various programs are running to preserve the tropical rain forest and where the next meeting of the UN Climate Change Conference (COP30) will take place.

We contacted ten interviewers, who were post-graduate students or qualified professionals, each of whom conducted twenty interviews in their city. They were instructed to seek out students living in different localities in their city to maximize geographic coverage. They each received an

orientation and training manual about the project which included strategies for approaching participants and conducting the interviews. The individual approach to students was dictated by the fact that approaching individual boards of education to obtain permission to interview students in schools is a very difficult task and time was short. So, in some instances, interviewers looked for students accompanied by parents at the exit of schools. In other cases, where interviewers had contacts with schools, they found their samples through the schools. The interviewers were also instructed to ask respondents to suggest other young people. There are elements of both random and non-random selection in these processes.

The majority of interviews were conducted in two months between September and December, 2024.

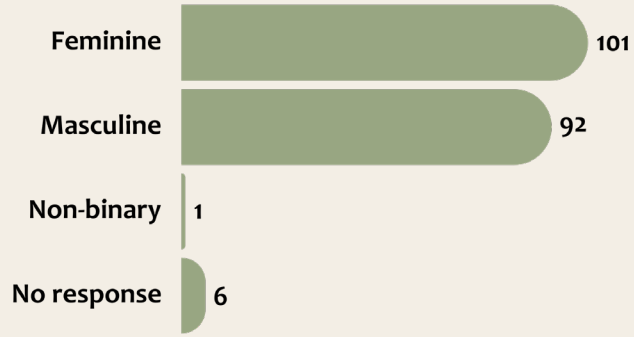
The sample process suggests the following: (1) The respondents were not chosen through an online invitation to talk about climate change, a common method among other studies and one that would bend a sample in the direction of those with a previous interest in the topic; and (2) the purposive sample sought to and succeeded in producing a balance by age, sex, color/ethnicity, socio-economic status, and national geographical region (though given their size and the time available, within each city geographical balance was not possible); (3) The interviewers received detailed instructions about how to put the sample together and how to conduct and record the interviews; and (4) The responses were taped and then transcribed allowing the interviewers to concentrate on the interview itself.

4. Sample characteristics

The following questions were closed ended and represent the self-identification of the respondents.

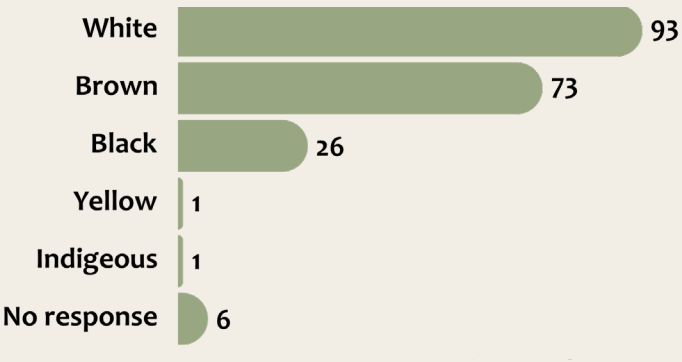
Gender of respondents, according to self-identification

The sample had 101 participants female respondents and 92 who were male. Any percentages not adding up to 100 are the result of non-responses.[ix]



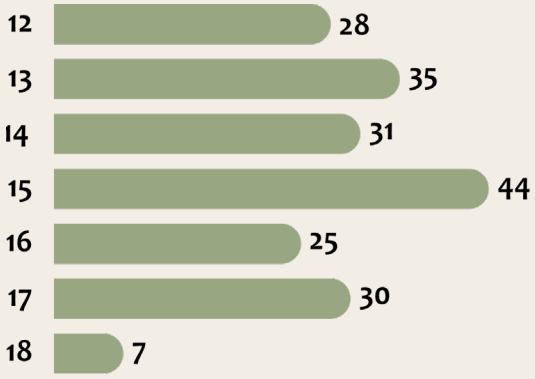
Race or color of respondents, according to self-identification

Using the classifications of the Brazilian Census Bureau (IBGE) in respect of color/ race the sample contained 93 whites, 73 browns, 26 blacks, 1 yellow, 1 indigenous and 6 no responses.



Age of respondents, according to self-identification

The age distribution of the sample shows the largest number of respondents in the 13-15 age bracket. They constituted 55% of the sample. In contrast, the 18-year-old age group (a single year category) was just 3.5% of the sample.

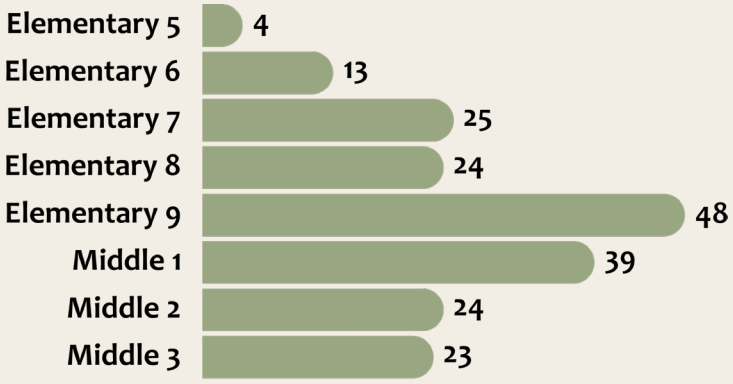


Number of respondents attending public or private schools

51.5% of the sample attended private schools and 48.5% public schools.

Number of respondents by school grade/ year

A majority of the students were in elementary school (24%) or the first year of middle school (19%). In Brazil, elementary school goes from age 6 to age 14.



Given these data, we can say that we constructed a sample which produced an appropriate diversity of respondents. While the color/race numbers reflect the national 2022 census, our analysis would have been richer with the inclusion of a number of indigenous students especially given indigenous peoples´ fundamental role in the protection of the environment.

5. Survey results

What do adolescents and young people know about climate change?

In the first question we asked the respondents if they had already heard about climate change. The vast majority, (99.5%) said yes.

We asked those respondents who said yes what they had heard about the topic. Respondents mentioned several things and 54% mentioned global warming. Among the responses were: "*I have heard about global warming and intense rains*". Some respondents elaborated a little more: "*I have heard about global warming which is the increase in temperatures which could be harmful and which in a while will reach the point of no return, I forget the word, complicating the situation on earth*".

Many of the respondents connected global warming and climate change with human action: "*I have heard many things about warming, that one of the principal causes of global warming are industries. So, there are things which relate to humans which are causing global warming*". Many of those who made this connection elaborated: "*After a lot of exploration, using materials, the prime materials that the environment produces and which in certain way involves the western economy, the climate is being deregulated. This is causing many climate changes*". There were also more generic responses: "*I know there are direct influences on changes in the season but I only remember this*".

Fires were mentioned by 38 of the young people as well as their impact on deforestation (16): "*Ah, I am going to speak about the Amazon Forest and the Atlantic Rain Forest of which we have already lost 74% which will not return. Probably in 50 years there will not be an Atlantic Rain Forest because we will not be able to restore it. I have studied about this*".

Other topics mentioned connected to climate change were pollution (19), melting icebergs (10), floods (9), the greenhouse effect (9) and droughts (6).

Forty-four of the respondents said that had learned about the topic at school and in general they rated that learning a positive experience: "*I have recently been seeing more of these situations at school through geography. People have been talking recently a lot about solid residues, about the question of garbage, and how it is negatively affecting the country and our city.*" But others indicated they had learned "*very little because they were not very specific, I learned more from the newspaper*".

Twenty-three participants said they had watched news shows about environmental disasters: "*But a lot appears principally in newspapers. I watch a lot with my mother*". Many seemed to share the following perception: "*Yes, I have already heard about this and it appears in many newspapers. In newspapers and magazines in gossip columns and what we hear from day to day*". But three participants said they knew nothing about the topic: "*I have not heard much talk. I hear very little, I see some reports but I have not learned much*".

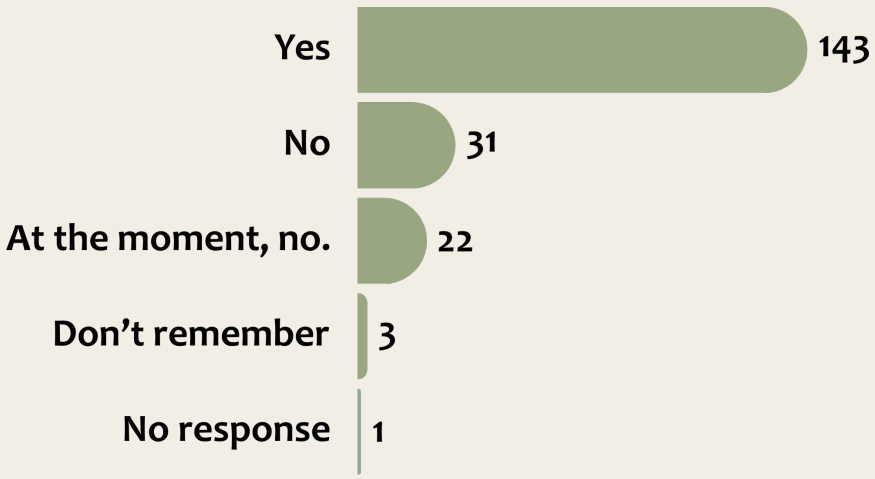
We should note that the year 2024 was marked with a large number of environmental disasters in Brazil.[x] While there was a major drought throughout the country, fires spread in Amazonia, in the Cerrado and the Pantanal. That year was also marked by floods which left thousands of people homeless in the state of Rio Grande do Sul. This meant that the impacts of climate change occupied the thoughts of Brazilian society in the year of the study when more climate change information was in circulation. Nonetheless, the level of knowledge about climate change varied considerably among the students. While some deepened their knowledge of the issue citing the situation of environmental refugees or the problems of agro-industry, the majority said they had only heard about the issue in a superficial way: "*Little, I have heard very little in the newspaper, and I haven´t watched much, then I end up being a somewhat out of the loop, but I think it is very interesting and it worries me a lot*".[xi]

Is climate change being taught in schools?

We then asked the respondents whether they had learned anything about climate change at school. A large majority (71.5%) said yes. But a significant number said they were learning nothing about the topic at school (11%) or had never learned anything (15.5%). Among the 31 students who said they had learned nothing at school, 9 studied in private schools and 22 in public schools.

The fact that more than 25% of the students said they were not studying climate change in school is worrying considering the importance of the debate and the fact that in 2025 a very important event on climate change will happen in Brazil, the 30th UN conference on climate change, COP 30, in the city of Belem in the state of Para. Only two respondents in all the interviews mentioned COP 30. One came from a private school in Salvador and one from a private school in Manaus who said who said "*Ah, clearly, I completely agree that it's something (climate change) which is harming the planet in general. So, people have been discussing this issue for some time, we had COP24… But we have not seen many changes, it was a good debate, but it´s been some time that these COPs occurred and there has been enough talk but we have not seen many actions for change*".

Did you learn anything about climate change about school?



what they had learned. Twenty-eight students mentioned global warming, 17 mentioned pollution, 15 the greenhouse effect, and 9 the inadequate disposal of garbage. The topics that also stood out were fires (20), melting glaciers (9), and floods (8). Thirteen respondents cited human action: "*In geography, last year, I believe I and people were learning about how cattle farming and other things like factories and transnational industries affected the environment through pollution, the emission of gases*".

Some students did not specify the content they had learned or were learning (28) and some cited only the discipline in which they encountered it, for example in geography (35) and the sciences (14). Fifteen respondents said they did not remember anything about the topic. "*I guess we did learn something about this but I don´t remember much*", and eight indicated that the material and content in school were superficial. "*I did learn, it was mentioned to us but it was not a subject that was very present. We saw more in news reports than school gave us but in truth we followed the news, magazines, and such things. But in school itself little was mentioned about the issues like fires*". One respondent expressed a desire to learn more: "*In public school where I study, we learnt nothing about this question of fires. And I believe that we should learn. We do learn a lot, but on the street rather than in school. They talk very little about it*". Despite the gaps in knowledge and the few structured discussions in school, the interest of the young people about environmental disasters and their socio-economic impacts was very significant as we shall see later. Given this, it is clear that the debate and promotion of actions that stimulate the knowledge and engagement of the young in the search for solutions is vital (Rosa et al., 2015; Matsuo & Silva, 2021; Balduíno Junior et al., 2024).

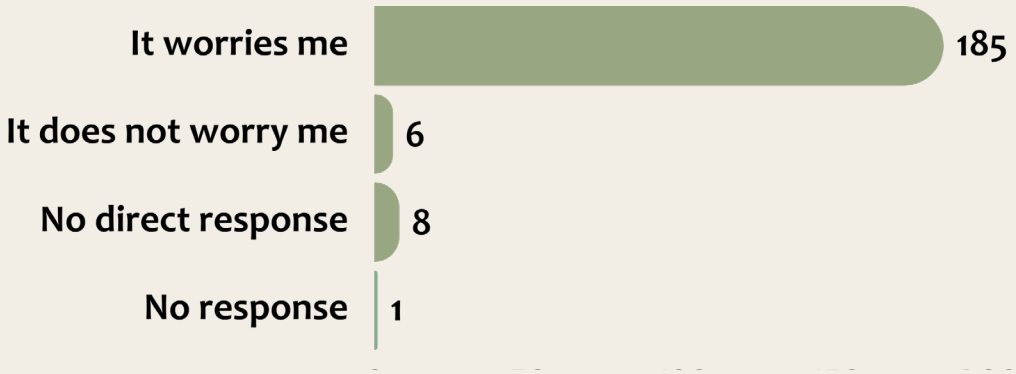
While the issue of 'how can I can contribute to the environment?' is little mentioned, some of the activities that occurred in schools should be highlighted. These included the construction of a miniature greenhouse (Brasilia), an initiative to increase awareness about the selective collection and recycling of garbage (Salvador), a collective effort for all the disciplines to discuss the issue (Curitiba), material about residential sustainability (Manaus), and a work camp in the Amazon (Rio de Janeiro). These five initiatives were mentioned by students in private schools Three public school students said they had learned about preservation: "*I am learning to preserve, to prevent certain things from happening but only one of the three cited a specific school-based project. I have seen something, such as a*

conversation wheel which we were able to open about our opinions, about how to improve things and the things which we could change in our own daily lives also to improve" (São Paulo). The paucity of these initiatives is a sign of students´ limited access in school to actions on the environment.

Are young people concerned about climate change?

We also asked the young people if they were worried about climate change. More than 90% said they were worried. Only three percent said they were not worried.

The question of climate change worries me.



The respondents who said they were worried were asked what specifically they were worried about. A large number, 59, were focused on the future. They were worried about the next generation: *"I am worried about the people here in this world in the future. when I won't be here... but there will be other people and I want to leave a good place for them to be".*

"I am very worried because at the end in some years this will affect us. If there is not a rapid change, it will basically affect everyone, all the world just as now it is affecting many people". They mentioned their children: "*Because of my children, right, that they will live in such a tense period*". Eleven students cited the end of the planet or the extinction of life on earth: "*Because in the long run I think the world will seek to exist*".

Thirty-nine respondents mentioned specific impacts which concerned then such as the various impacts which effected ecosystems. There were preoccupations with the air: "*I worry, I worry because of changes in the air which we need to breath. And the oxygen comes from plants and fires make the plants die. And the smoke affects people. It can impact animals' homes*".

"Global warming, there will be heat and the destruction of glaciers. The level of water will rise and I think this will impact many ecosystems in Brazil".

Worries about the global temperature were mentioned by 26 respondents. Some respondents mentioned the impacts on health: "*I think and other people talk about which I have seen on the internet, that the temperature will increase a lot. And I have this problem with health that when it gets very hot, I faint, and this worries me a lot*". Some 30 young people mentioned problems with health: "*Because there are people with asthma and many respiratory diseases which can make them sick and send them to the hospital*".

Respondents saw the relationship between global warming and environmental disasters: "*So, the principal climatic change is global warming. I worry that the ozone blanket is getting smaller, and there is an increase in droughts, and that will kill what little of the forests remain*".

"Every time we see more people suffering with these disasters, losing their homes, their relatives".

Some mentioned events in Brazil: "*I worry a lot because it's not just me, but it creates a certain empathy for those who suffer such as the people in Rio Grande do Sul which had a disaster. I am left very anguished for these people and very frustrated that I cannot do anything to help*".

A small number of respondents gave more detailed responses and that small number suggests the need for deepening the debate.

Five students asked about the lack of attention in society to the issue: "*I worry.... that many people are not concerned with this despite the fact that every day climate change is causing many things for people and for nature. So, what worries me is not so much nature but what people are doing to nature*"

, "*Look, what is the principal issue is that the highest class in society does not worry about this. So much of the existence of climate change is due to these people. And it doesn't seem if anything big is going to change*".

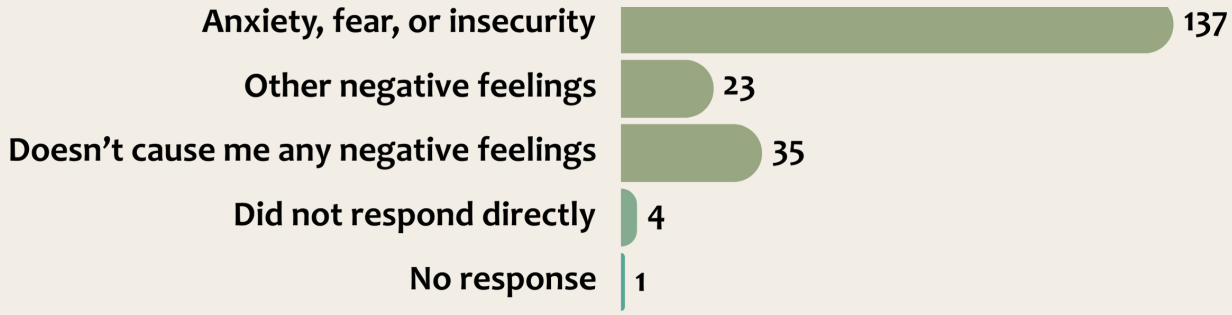
Only two respondents mentioned the lack of government action: "*I, like, I worry, like I worry that they are not seeing the government, it seems like they are not doing anything, they are not making it a priority. There are not policies about this, people are not making it a priority. In just a short time it will be hard to live on the earth. It appears they are not doing anything*", "*Like I see videos on Instagram the social media I use most. I really had fear for my future for the first time, because it's not something that depends on me, it depends on the whole world. And to know that many governments in the world are not giving the required attention to this topic*".

While the majority of respondents recognized that some people were more affected by climate change than others, four respondents were eloquent on the topic: "*Because it can invade the territory of indigenous people and end up killing half the population*", "*Sometimes I worry about people living on the streets*", "*Because it will worsen the lives of those in the poorest communities where life is not good*", "*What worries me that those most harmed are those who are in need or do not have any income. Like people who live on their agricultural plots, which aren't particularly good places to live, and then when the rains come, everything gets flooded*".

How do young people feel about climate change?

Another set of questions was whether climate change caused specific feelings such as anxiety, fear, or insecurity. Respondents could check more than one option or name another feeling or say that they didn't experience any negative effect. The majority of respondents said they felt anxiety, fear, or insecurity (68.5%). Another 11.5% mentioned such feelings as concern anguish, sadness, anger, and revulsion. Seventeen and a half percent said they felt no negative feelings about climate change.

Does it cause you anxiety, fear, or insecurity or something else?



Fear appeared in 90 responses. Most respondents referred to the future: "*It causes fear, as I said, it causes fear about the future which may come*". Some pointed to present events to talk about what they felt: "*Because when there were fires, I could not breathe and so I was very frightened. And I saw my family get sick, my brothers became very ill and so there was a feeling of fear, and in a short space of time, the hospitals here in Brasilia became full*".

Insecurity was cited by 58 of the students. They too related that feeling to the future: "*What causes me a certain insecurity because I do not know if tomorrow will come or if it will be total catastrophe*". Concentrating on the present, one said, "*it causes me insecurity to know that many people have already died because of this. And so it can worry me if this will happen to me one day*". One young person referred to the lack of awareness in society about the impact of climate change: "*Yes and no because at the same time that we have a way to reverse this what gives me insecurity it to say that that majority of people are not concerned with the issue. What makes me most curious is to see there this will lead*".

One participant said he was worried about what could be done to reverse the impacts of climate change: "*I guess most anxiety thinking about what should be done to improve things, what change*".

One person talked about being concerned with his own actions: "*And*

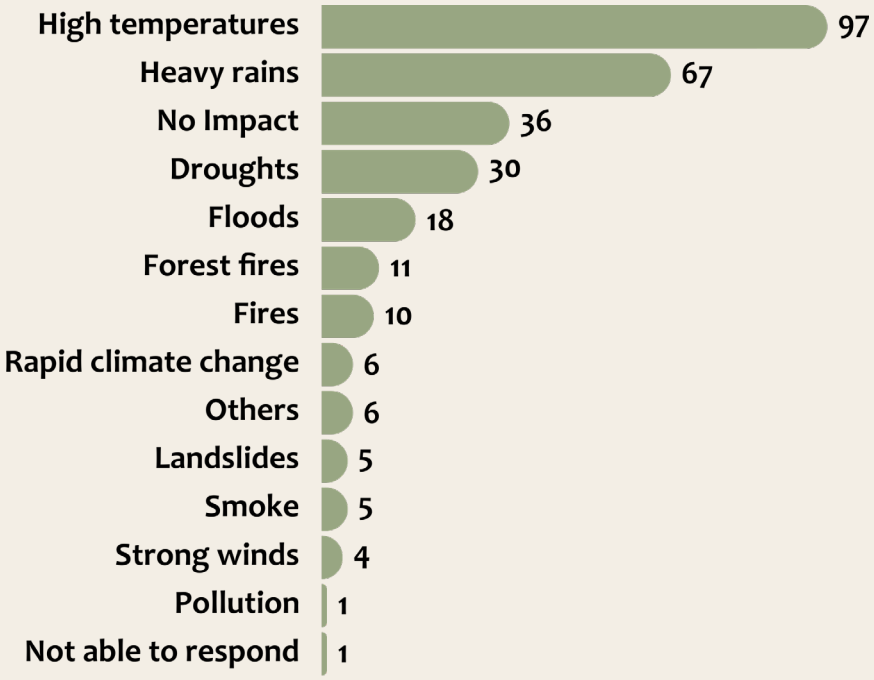
there are many times when I start to think about climate change that I think about my impact too, about the actions that I sometimes take, such as the act of taking the car to school, which in a way contributes to climate change at a certain level and when I begin to think I begin sometimes to have curiosity to study what I could do to avoid such things and how much my actions contribute . I guess this causes my worry and this wish to better understand what is happening".

We note that among those who said they felt no negative effect from climate change, three justified this response by saying that the impacts were still very distant: "*I don't think that everything is fine. But I guess that it will take some time for anything worrying to appear*". Another young person said that since it was a collective matter it took away his responsibility: "*At the beginning it gave me anxiety because there is one planet. And it's my planet where I live which is possible because the trees give oxygen for us and it is possible to kill the trees and to kill the survival of animals and to end everything. At the beginning it worried me but then it passed because the attitude doesn't have to come from me, it has to come from humanity*". Studies suggest that when individual actions are seen as insufficient, what results is inaction especially when there is a lack of viable structure to make engagement possible (Olson, 1965). This effect is reinforced by the perception of spatial and temporal distance, when the problem is seen as remote affecting other populations or happening in the future (Gifford, 2011).

Do young people think their neighborhoods are affected by climate change?

We asked our respondents if the neighborhoods in which they lived had been affected by climate change. They responded with incidents of heavy rains, mud slides, high temperatures, drought, and forest fires. The question also allowed them to choose another impact not on the list. The greatest number of respondents, 48.5%, mentioned high temperatures with 33.5% mentioning heavy rains. (Multiple responses were permitted.) Only 18% said their communities had not been affected by climate change.

How does climate change affect your community?

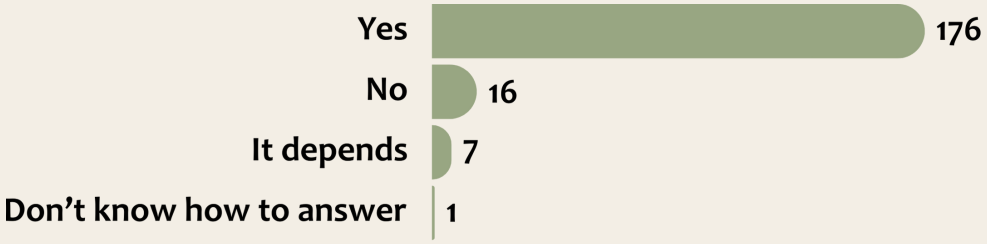


In most of the cities high temperatures were the most cited impact but in Manaus and Brasilia heavy rains were most mentioned. Heavy rains came in second in most other cities.

Are some young people more affected than others?

The next question was whether some young people were more affected by climate change than others. Eighty-eight percent of the respondents said yes. These responses showed a sympathy for others and a knowledge of differential impacts.

Are some young people more affected by climate change than others?



When respondents replied yes, we asked how some were more affected. Sixty-seven young people said that the poor were most affected. Some (57) said that the home´s location was critical and others (57) that those with health problems were most impacted. In general, respondents did not mention age as a factor except for the five who pointed out the difficulties in studying when experiencing heavy rains, high temperatures or fires.

Some respondents enlarged on the impact of poor families: "*So, I am almost certain that young people with less money and who live in homes and neighborhoods with less infrastructure, when there is strong rain there are landslides which cause them to lose their home, everything, basically everything that they have. Another said: It depends. So, for example, when there are fires, everyone is equal. But people who have nothing can´t stay at home with air-conditioning in their homes. Those who really have to leave their homes to work, they feel it most*".

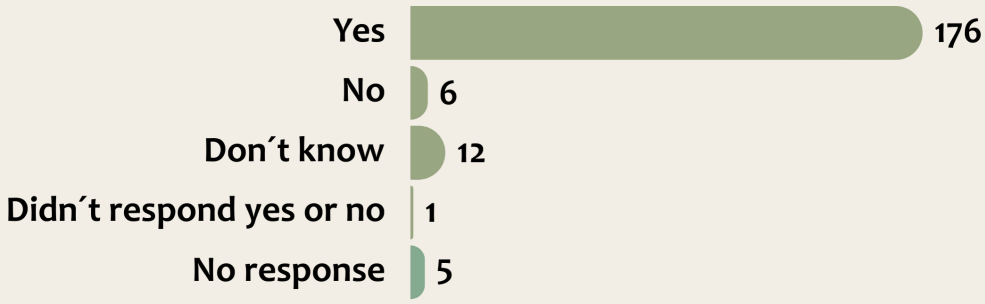
Some of the youth gave responses which touched on important social issues such as the inattention of the public sector to favelas and communities on the periphery of cities: "*I think that for young people who have most resources, who live in a better place, a better context, they are not so affected but the people like me who live in communities in the periphery, they see these realities very close, they see the lack of basic sanitation, the neglect. Another said: I live here in this community and I have a friend in the southern zone who does not suffer the same things as I do. He lives in an apartment, there things are safer. There the politicians concern themselves more with safety but not here. There in the southern zone they don´t suffer. Not with the heat because they are closer to the ocean. The temperature is not the same here and there*".

Some seven respondents mentioned issues of mental health: "*The folk who has more anxiety, these things cause fear. And it depended on individual reactions. Because there are folk who worry more about this and others who at times do not know what is happening*". Or as another respondent put it: "*Indeed, everyone is affected. But some ignore the fact, they are in a bubble of ignorance*".

What do young people suggest?

We also asked our sample whether anything could be done to diminish the negative impacts of climate change. A large majority (88%) said yes and only 3% said nothing could be done.

Can anything be done to reduce the impacts of climate change?



Those who said yes gave one or more example of what could be done with some citing individual actions and others collective actions

One group of young people (37) was concerned about forests and mentioned the importance of putting a break on deforestation and forest fires as well as incentivizing reforestation and tree planting including in urban areas.[xii] This concern took the tone of giving responsibility to the market for the problem: "*It is because I have the knowledge that a good part of the situation in which we are living is because of deforestation but a good part of deforestation is caused by capitalism and because of intensive agriculture. I know there must be a diminution of industrial scale agriculture but it is one of the goods most consumed today. If I start to develop this more, I will start to talk badly about agriculture*". Thirteen young people primarily blamed large companies and industries: "*We must do individual things like stay shorter time in the shower, put our garbage in the proper place, not consume excessively, but in truth what must change also is the influence of the large companies who have very large emissions of carbon gasses, and other gases causing the greenhouse effect, they have more influence. So, to make a real difference it is they who have to change*".

The importance of state action to reduce negative impacts appeared in twenty one responses: "*I believe that the state must act, very strongly with a big investment because it is something that impacts people directly and being human people cannot change everything on their own. It has to have an impact on something much greater than a person*".

The treatment and disposal of garbage appeared in 31 responses: "*So, a person must have a conscience about what she is doing. Because many people throw... lollipop paper, throw it in the street, thinking that nothing will happen but they are harming the environment. One of our respondents wanted to develop an innovation especially directed at the young. In my head there is an idea which I don't know whether it will help a lot but today people are very affected by technology. Perhaps someone will create an app which will be just about getting rid of garbage. Then we will be able to locate a trash can closest to our house and when a person discards garbage correctly, he will place this information on the app and the app will give him points. ...and the coupons will be used to buy something*".

Some 21 participants mentioned that they would like to see changes in transportation such as the reduction in the number of cars: "*So here Brasilia is a place with many cars. And when you look inside the cars there is normally one person in each vehicle. So, I think we could reduce the number of cars*". This respondent wanted more electric cars but another had doubts: "*But there will be electric cars which will need a lot of energy and will have a battery that is toxic*".

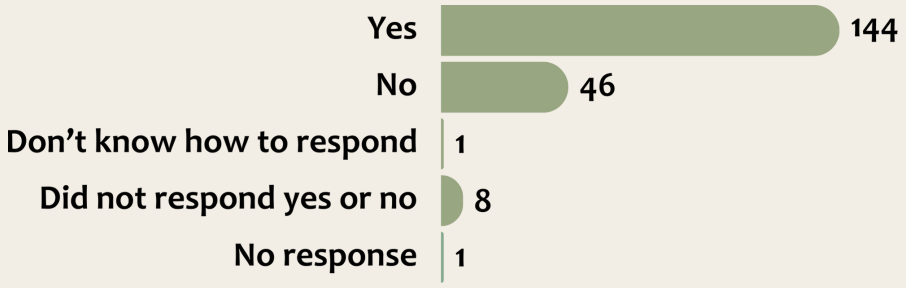
Also mentioned were a reduction in the emission of polluting gases (19), the need for using renewable sources of energy (6), and a reduction in the use of water and electricity (6).

Twenty-nine students mentioned the necessity for a greater awareness of the issue. This was sometimes stated in a generic form: "*I think we need more awareness that this can be avoided and that it could cause quite an impact on society*". Others indicated what was necessary for this to happen: "*I think that we need to start change through people, through lectures, education to explain, starting with the basics. Why people should not throw garbage in the streets. Five participants directly mentioned the importance of education in the schools. There are adolescents who are very moved by these issues and end up talking to their parents. If there were people in schools to talk about environmental issues in the schools like my teacher, I have no idea what impacts this would cause in the future. I got scared about this issue. And so, I talk with my mother about leaving paper, throwing garbage in the river*". This last quote is an issue which directly touches on our objectives which is to increase conversations about this theme in an accessible form especially for younger youth to stimulate the development of collective action.

Do young people take steps to protect the environment in their daily lives?

We then asked whether the young people did anything in their day to day lives to preserve the environment and 72% answered yes. This is less than the 88% who said things could be done to reduce the impacts of climate change. It could be that some did not realize that the small efforts they made could contribute to the goal.

Do you do anything in your daily life to preserve the environment?



Many of the responses showed an understanding that preserving the environment required more than individual effort: "*I know that I contribute very little and that alone I cannot do much because I do not have the political power and am not very strong financially. But I can at least sort the garbage, not use so much plastic, like straws, use a metal one. I try to do at least the minimum that I can*". This feeling about the weakness of individual action stood out: *Look, there are not many things I can do to directly alter the environment but I try, I preserve especially animals because I adore animals, but within my reach I can do nothing but what I can do I try to do*". This perception of the magnitude of the problem was reflected in respondents' sense of the responsibility of the large corporations: "*We are always seeing commercials about not throwing garage in the street, about not doing this but we are only a small part. The majority of the garbage which is thrown out is discarded by the large businesses so I think we should start there, understand?*"

Most participants referred to the disposal of garbage (115) when they

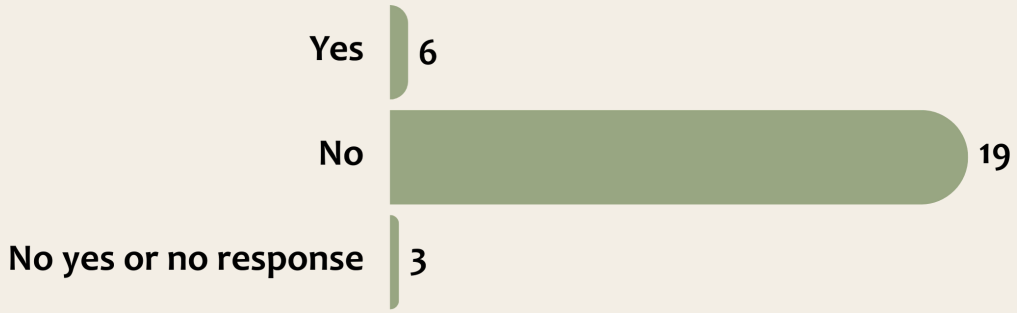
talked about what they did and also about the importance of recycling: "*I try to be as sustainable as possible, recycling my items which normally they put in the garbage and I can reuse to prevent them going in places that they shouldn´t be in*". These actions by young people are important considering the general trends. According to the 2023 Indices of Sustainability of Urban Cleaning of the Brazilian Association of Residues and the Environment, about 43% of Brazilian cities discard their waste incorrectly and domestic collection doesn't reach 25% of homes in the country whereas the median index of recycling is only 3%. These problems of waste disposal are well known by Brazilians especially the inhabitants of favelas and communities on the periphery of large cities.

Thirty-one respondents talked about economizing on electricity and water. There were also references (12) to plants: "*Yes, I care for my plants and purify the air*". And nine references to the type of products used: "*I try to use less plastic. But I cannot vote because I am only 15 years old. But when I can vote I want to vote for people with this kind of understanding*". Seven respondents mentioned the use of public transportation or other alternatives: "*Because I have a bicycle, I avoid using a car and also a bus go to local places*".

Are young people organizing collectively?

Our next question was whether the young people participated in any organized initiative with an organization or social movement which worked to diminish the impact of climate change and only 3% said yes. This important result shows the gap between young people´s knowledge of the problem, wish for change and ability to connect with groups working on the issue.[xiii]

Do you participate with any group, organization or social movement that works on the problem?



six who said yes to this question mentioned initiatives connected to schools and four of them attended public schools while two attended private schools. This result shows both the possibility of schools being a locus of action and the present paucity of action in schools.

Three of these students participated in discussions and actions about the issue. One mentioned the involvement of the student council which among other things stimulated the recycling of plastic lids. One participated in a collective focused on climate issues and the last said that one of the actions promoted by the school was the collection of garbage and the cleaning of public squares in the region.

Among those who did not participate, some indicated a desire to participate and talked about the obstacles to participating. One of those who was 15 years old said he didn´t know of any initiatives: "*No, I do not participate but I would like too, because I do not have much access, but I have been doing some research to get in, but no right now I do not participate*". A twelve-year-old respondent said that his parents could not accompany him: "*Unfortunately, no, my parents are conservative and cannot participate much in anything with me*". And a 14-year-old said he had a very rushed schedule: "*I know one initiative through my cousin and she participates. I would like to participate with her but I am very rushed*".

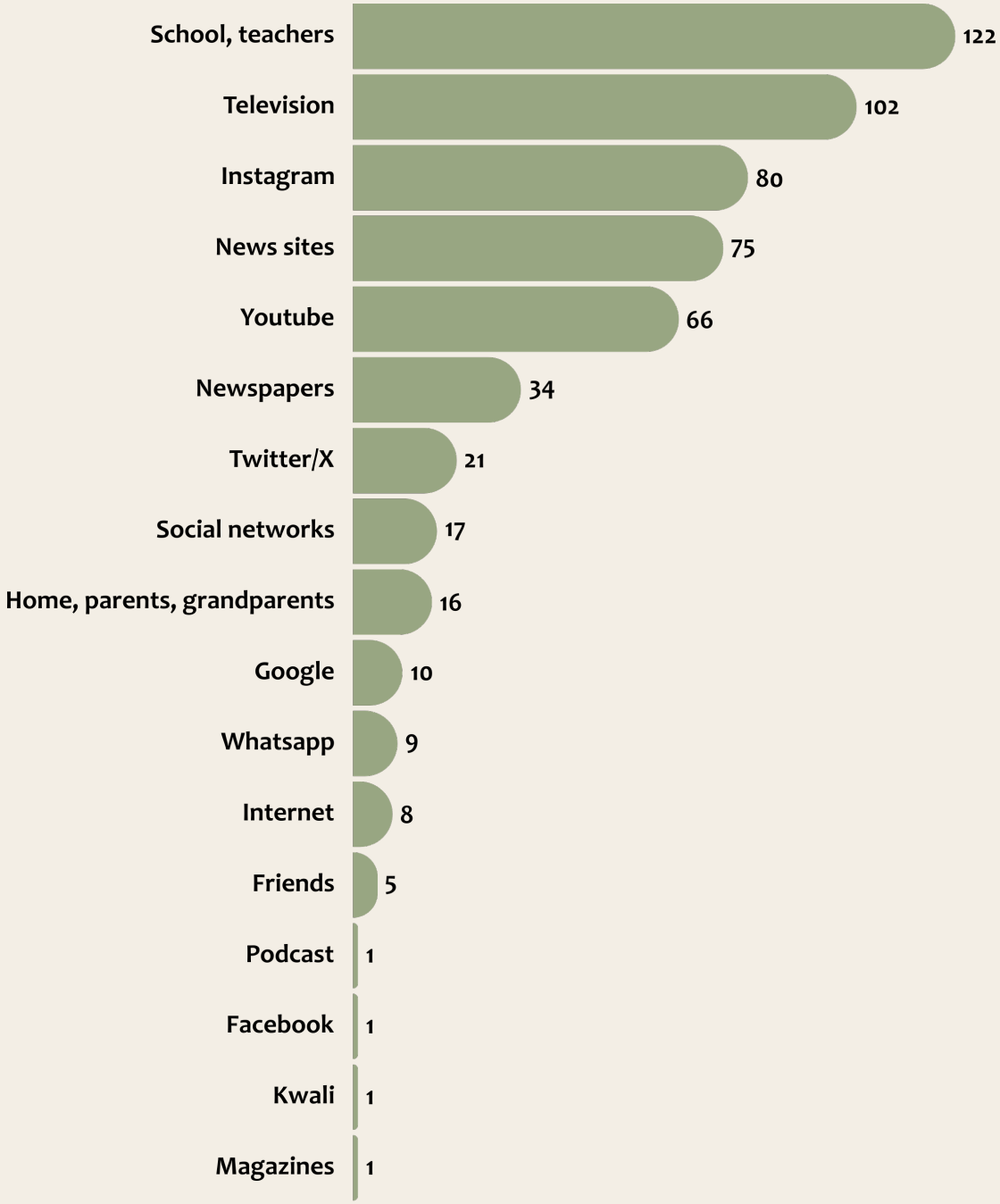
The core of our study was the impacts and consequences of the climate crisis and environmental disasters on the daily lives of young people and the feelings they generated such as anxiety, fear, and insecurity among others. To understand these feelings, we concretely examined them including the impacts on their communities. Our literature review showed that one way to reduce the impacts of climate change on mental health was through engagement, participation and action which could contribute to improving the quality of life. So, we asked if the young people understood what could be done and what they could do in their daily lives to contribute to the reduction or mitigation of the problem and whether they were connected to any initiative with these goals.

How do young people get informed about the topic?

In particular we asked them which methods they used to stay informed. The options are listed in the table detailing question 10 below. The young people could choose more than one option and choose options not listed in

the question. Teachers and schools were mentioned in 61% of the response with television mentioned by 51%. Among the social networks, Instagram was mentioned by 40% and TikTok by 37.5%.

Where do you get informed about climate change?



It is perhaps surprising that in a digital age that television appeared so prominently. This might be due to limitations in internet access, the way internet algorithms work, and the knowledge of false information on social networks. One young person said: "*I get more information on television. On Instagram. On TikTok I watch more, but it's like this, there is a habit of fake news appearing, so I'm more just for these two only*".

It is worth pointing out again that the study points to the importance of the involvement of the professionals who work in schools in formative dialogues with their students. While currently schools play a limited role they are, in fact, the main source of knowledge from the perspective of our respondents and a place where young people are engaged and learn. Furthermore, the national policy of environmental education, enshrined in law (Lei #14.926/2024) aims to promote the insertion of material linked to climate, climate change, the protection of biodiversity and the environmental risks in all levels of school as well as in informal educational activities.[xiv]

6. Final considerations

In this study we discuss the question of climate change from the perspectives of adolescents and youth in the context of urban Brazil.

A major finding is that young people care about and are preoccupied with the question, especially when they reflect on their futures and the future generations. They know that climate change has negative impacts on their lives and in their communities causing environmental disasters as well as anxiety, fear, and insecurity.

But in general, our respondents demonstrated a limited knowledge of the topic. There are many gaps in what they know about the extent of the problem and what they are taught about the topic in school. While some of the young people talk in some detail about the issues, the majority had little to say in the open-ended questions.

At the same time most of them tried to carry out small scale actions in their own lives especially about the proper disposal of garbage, saving electricity and water and the care of plants but they were not connected to collective action or enterprises.

We emphasize this point because this population has an enormous potential to engage in more learning and action. The literature review and our own research shows that engaging in the topic through action can contribute to the reduction of symptoms

of stress, anxiety and fear about climate change.

While schools emerged as a major source of knowledge compared with other sources, what young people learned about climate change in school was still sparse. Many of the youth said they did not remember what they had learned in school or that what they had learned was very superficial. The study clearly shows the urgent necessity to promote more knowledge on the topic with appropriate materials and language so that the young people enlarge their horizons and see the importance of their individual and collective actions for mitigating the harms of climate change. We see the need for enlarging and improving learning strategies and strategies for engaging more in personal and collective action.

We repeat our commitment to young people´s right to social participation on this key topic which impacts their lives. And who better than them to remind us that they will inherit what we failed to do, and that there is no planet B.

7. Notes

I. The terminology of this project is aligned with the Statute on the Child and the Adolescent (ECA) which labels young people 12–18 as adolescent and the Statute of Youth which considers people between the ages of 15 and 29 as youth. In the English version of the report, however, we refer to all our respondents as young people or youth in recognition of some English language usage.

II. The project originally called Youth and Climate Change in Brazil was approved by the Council of Ethics in Research of the Pontifical Catholic University of Rio de Janeiro (Protocol 90-2024).

III. The data collected in this research will be the base for future CIESPI actions directed at informing young people about the problems, and of possible initiatives for engaging young people in actions which might contribute to the mitigation of the impacts of climate change.

IV. General Comment n. 26 complete version and for children can be found at Comentário Geral nº 26 – Comitê dos Direitos da Criança.

V. According to the last census from the Brazilian Institute for Geography and Statistics (IBGE 2022) the largest group among traditional people in Brazil are the Indigenous with 0.83% of the population or 1,693,535 people, of whom about a half live in urban areas.

VI. We note that there can be differences between age level and year in school level.
VII. Statista, 2025, Brazil: high school students by type of school 2023 | Statista

VIII. We recognize important advances in the current debates about gender. But in this study we choose assigned sex as the measure. This choice does not imply any exclusion of people with other identifications of gender or pronouns.

IX. Whenever no response occurs in the tables it indicates inaction by the interviewers who for whatever reason did not ask the question.

X. According to the National Center for Monitoring Warnings of Natural Disasters, 2024 resulted in more than 1.6 thousand such events. Available on: https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/noticias/2025/01/cemaden-registra-recorde-de-alertas-e-mais-de-1-6-mil-ocorrencias-de-desastre-no-brasil-em-2024

XI.https://revistacasacomum.com.br/jovens-se-preocupam-com-meio-ambiente-mas-ha-um-desconhecimento-real-sobre-o-tema/

XII. We note that our participants' preoccupations are closely related to those in international debates. The theme of deforestation and reforestation, for example, are at the center of global agreements such as the Global Agreement on Forests announced at COP 28.

XIII. A parallel concern and action is noted in the infographic "A relação dos jovens com as mudanças climáticas" (Globo, 2024). This publication, which focuses on youth between 18 and 24, notes that whereas a large part of young Brazilians are concerned with environmental questions, only 38% of them have succeeded in transforming this concern into action.

XIV. In the same spirit, the National Base for a Common Curriculum foresees the implementation of environmental education in a transversal form. (Barbosa & Oliveira, 2020; Oliveira et al., 2021). Acompanhamos também um debate sobre a importância da Educação Ambiental Crítica (Quintas, 2006; Loureiro, Layrargues & Castro, 2015; Silveira & Lorenzetti, 2021).

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9. Anex

About the International Center for Studies and Research about Childhood (CIESPI/PUC-Rio)

International Center for Research and Policy on Childhood (CIESPI/PUC-Rio) is an international research and reference center associated with the Pontifical Catholic University of Rio de Janeiro. Since 1984, it has been dedicated to studies and social projects about children, adolescents and youth, their families, and communities throughout Brazil.

CIESPI acts in conjunction with partner organizations and the Canadian Children´s Rights Partnership (ICCRP) in more than twenty countries. This latter partnership is an international research and action to improve knowledge and practices integrating many aspects about the rights of children and youth including environment and climate protection. This partnership will significantly amplify the reach of this study.

We note that CIESPI/PUC-Rio is a founding member of the Brazilian Coalition for Climate Children and Youth (CLICA), a civil society organization aimed at saving the environment for present and future generations. Since its founding in March 2023, CLICA has become a leader in a variety of actions including work to revise the United Nations General Comment No. 26 on the Rights of Children and the Environment and its launching in Brazil´s National Congress.

CIESPI staff with CLICA have been involved in various actions in Brazil including participation in the Social Summit of G20; and contributing to the National Program for the Protection of Children and Adolescents on the Impacts on Climate Change for the Participative Climate Plan. Parts of this plan were selected to be incorporated in the national policies in the Sectorial Transversal Plan. The Center was also represented in the 18th Annual Seminar on Early Childhood of Rio Grande do Sul giving a major presentation on the interconnections between social justice and the environment. Our

goal is to spread the data from this study as widely as possible with the active participation of young people to better communication with different groups of children and youth nationally and internationally.

In addition to longstanding partnership, we have recently formed a partnership with the organization City, School and Learning (Cidade Escola Aprendiz) to increase the potential for dissemination and action.

In November 2025, Brazil will host the 30th International UN Conference on Climate Change-COP30. This is a significant opportunity for Brazil for the preservation of various eco-systems and to enlarge the role of climate change in the national agenda and reduce its impact on indigenous people. We hope that this study in including the perspectives of young people will contribute to debate and action on this topic which is crucial to all countries.

Tables

Gender of respondents, according to self-identification

Sex	Number	Percent
Feminine	101	50.5
Masculine	92	46
Non-binary	1	0.5
No response	6	3
Total	**200**	**100**

Race or color of respondents, according to self-identification

Color/race	Number	Percent
White	93	46.5
Brown	73	36.5
Black	26	13
Yellow	1	0.5
Indigeous	1	0.5
No response	6	3
Total	**200**	**100**

Age of respondents, according to self-identification

Age	Number	Percent
12	28	14
13	35	17.5
14	31	15.5
15	44	22
16	25	12.5
17	30	15
18	7	3.5
Total	**200**	**100**

Number of respondents attending public or private schools

Type of school	Number	Percent
Private	103	51.5
Public	97	48.5
Total	**200**	**100**

Number of respondents by school grade/year

Year in school	Number	Percent
Elementary 5	4	2
Elementary 6	13	6.5
Elementary 7	25	12.5
Elementary 8	24	12
Elementary 9	48	24
Middle 1	39	19.5
Middle 2	24	12
Middle 3	23	11.5
Total	**200**	**100**

Have you ever heard of climate change?

Question 1	Number	Percent
Yes	199	99.5
No	1	0.5
Total	**200**	**100**

Did you learn anything about climate change about school?

Question 2	Number	Percent
Yes	143	71.5
No	31	15.5
At the moment. no.	22	11
Don't remember	3	1.5
No response	1	0.5
Total	**200**	**100**

The question of climate change worries me.

Question 3	Number	Percent
It worries me	185	92.5
It does not worry me	6	3
No direct response	8	4
No response	1	0.5
Total	**200**	**100**

Does it cause you anxiety, fear, or insecurity or something else?

Question 4	Number	Percent
Anxiety, fear, or insecurity	137	68.5
Other negative feelings	23	11.5
Doesn't cause me any negative feelings	35	17.5
Did not respond directly	4	2
No response	1	0.5
Total	**200**	**100**

How does climate change affect your community?

Question 5	Number
High temperatures	97
Heavy rains	67
No Impact	36
Droughts	30
Floods	18
Forest fires	11
Fires	10
Rapid climate change	6
Others	6
Landslides	5
Smoke	4
Strong winds	4
Pollution	1
Not able to respond	1

Are some young people more affected by climate change than others?

Question 6	Number	Percent
Yes	176	88
No	16	8
It depends	7	3.5
Don't know how to answer	1	0.5
Total	**200**	**100**

Can anything be done to reduce the impacts of climate change?

Question 7	Number	Percent
Yes	176	88
No	6	3
Don´t know	12	6
Didn´t respond yes or no	1	0.5
No response	5	2.5
Total	**200**	**100**

Do you do anything in your daily life to preserve the environment?

Question 8	Number	Percent
Yes	144	72
No	46	23
Don't know how to respond	1	0.5
Did not respond yes or no	8	4
No response	1	0.5
Total	**200**	**100**

Do you participate with any group, organization or social movement that works on the problem?

Question 9	Number	Percent
Yes	6	9
No	191	95.5
No yes or no response	3	1.5
Total	**200**	**100**

Where do you get informed about climate change?

Question 10	Number
School, teachers	122
Television	102
Instagram	80
News sites	75
Youtube	66
Newspapers	34
Twitter/X	21
Social networks	17
Home, parents, grandparents	16
Google	10
Whatsapp	9
Internet	8
Friends	5
Podcast	1
Facebook	1
Kwali	1
Magazines	1

Organized by

Support

Partner

The International Center for Research and Policy on Childhood (CIESPI) is a study and reference center affiliated with the Pontifical Catholic University of Rio de Janeiro (PUC-Rio). Since 1984, the Center has been dedicated to conducting research and developing social projects focused on children, adolescents, youth, and their family and community connections, across different contexts and regions of Brazil.

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