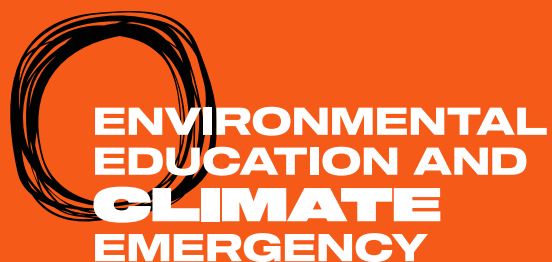


CLIMATE ENVIRONMENTAL EDUCATION GUIDELINES



ENVIRONMENTAL
EDUCATION AND
CLIMATE
EMERGENCY

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Participation in the online public consultation:

236 people whom we thank immensely and who contributed
decisively to this process.

Coordination of the execution strategy of the Online Public Consultation:

Entremeios - Articulação e Formação

Participatory elaboration of the Climate Environmental Education Guidelines

The partnership between FunBEA - Brazilian Environmental Education Fund, Institute for Climate and Society and Cemaden Education Program of the National Center for Monitoring and Warning of Natural Disasters provided a participatory process for the elaboration of educational guidelines to face the climate emergency.

The development of this document involved several stages of listening and reflection:

1. Conducting bibliographic research on environmental education practices and climate change in Brazil, from 2016 to 2022;
2. Focus groups with experts working in climate education;
3. Preparation of the first version of the guidelines;
4. Online public consultation open to society;
5. Production of the final version of the guidelines and release of the document.

These steps aimed to ensure the construction of a document that includes different perspectives on the subject, with conceptual density and ethical commitment, highlighting guidelines, indicators and values to guide climate education in a critical and transformative perspective.

Bibliographic search

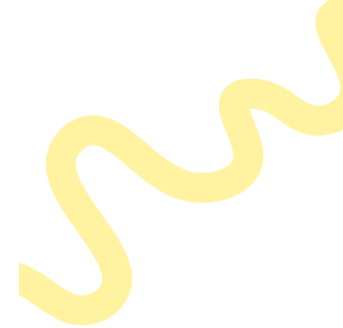
This stage was exploratory, with the aim of prospecting experiences, initiatives and practices of climate and environmental education in Brazil, in the areas of formal and non-formal education, based on works published between 2016 and 2022. The goal was to identify key trends and gaps.

In the first stage of the research, search descriptors used in both Google Scholar and Google Open were created, followed by a manual analysis to select experiences that addressed educational practices and inspirations for the development of the guidelines.

Table 1 shows the details of the first stage with the search results by descriptor.

Table 1 – First stage of the research.

DESCRIPTORS/SOURCE	GOOGLE SCHOLAR		GOOGLE OPEN	
	RESULT	SELECTED	RESULT	SELECTED
"climate education"	16	16	3.150	80
"practice"+ "climate change" + "environmental education"	8.080	80	135.000	80
"case study"+ "climate change" + "education"	8.810	80	205.000	80
TOTALS	16.906	176	343.150	240

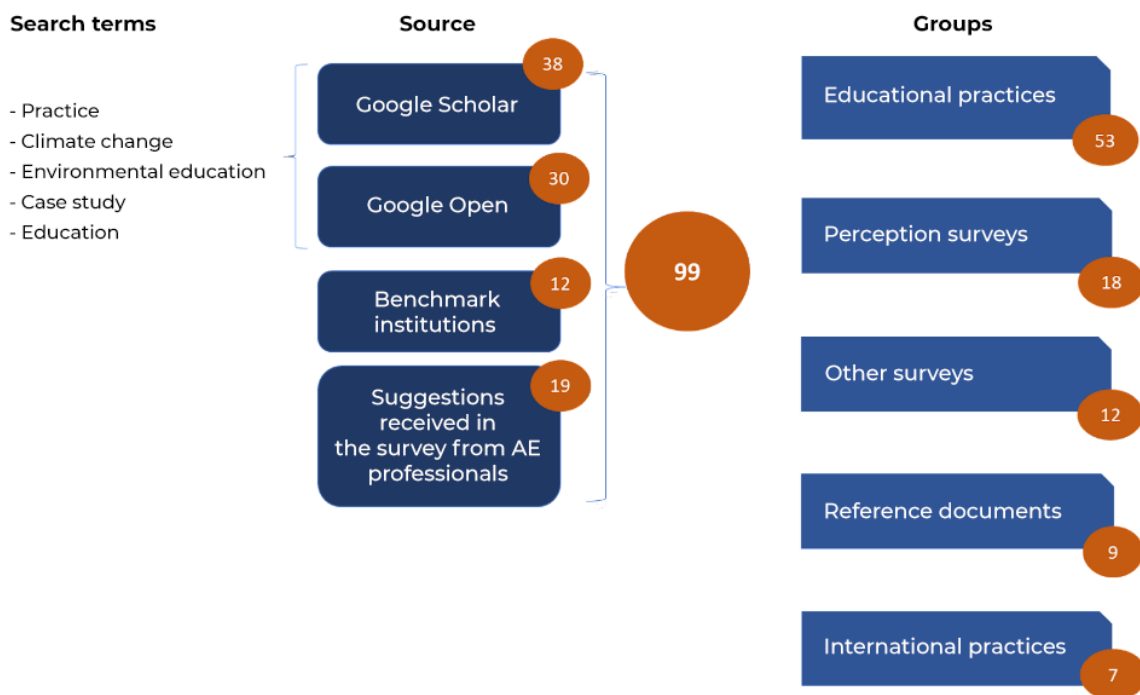


In the second stage of the research, the abstracts of the 416 selected papers were read and refinement was established, with the following steps:

- Verified that the document focused specifically on climate change education practices (e.g., some only mentioned the term in the introduction);
- Identification of recurring jobs that appeared in both Google Scholar and Google Open;
- Confirmation of educational practices.

This refinement process resulted in the identification and analysis of 99 documents. These were further divided into five categories: Educational practices, perception surveys, other research, reference documents, and international practices (Figure 1).

Figure 1 - Refinement performed in the stage phase of research.



In order to complete the analytical corpus obtained through the initial survey, the experience of the reference institutions on the subject was included, as well as the suggestions of the experts invited to participate in a survey, which is detailed below.



Focus groups

Inspired by the Delphi research method, the survey “Environmental Education and Climate Emergency*¹: consultation and reflections for a collective proposal” was carried out to enrich the online survey, to identify educational experiences that did not appear in the initial search, to validate some inspiring practices and to create a collaborative, dialogued and participatory space on aspects to be considered in the construction of the guidelines.

This stage involved 25 experts in climate and environmental education from universities, the third sector and the government sector in two ways: online form and focus groups (Figure 1).

Table 1 - Details of the strategies used for the survey and expert dialogs.

STRATEGY	QUESTIONS	PARTICIPATION
FORM (GOOGLE FORMS)	1) Your name and institution. 2) Please indicate project(s) or practice(s) that you find interesting/inspiring in the field of environmental education and climate change. 3) Identify the main desirable content of environmental education practices in addressing climate change. 4) What are the most desirable methods for environmental education in the face of climate change? 5) What elements do you think are essential to include in environmental education and climate emergency guidelines? 6) Other comments.	14 PROFESSIONALS
FOCUS GROUPS (MEET)	1) Line to be adopted 2) We believe that education has the freedom to be Utopian. What approach should be taken to the processes we can achieve with the guidelines? Considering these gradients: - Continue with environmental education as it stands with mention of climate change - Think about reform (reformism, small changes) - Transition (gradual changes) - Transformation - Revolution 3) Bring in the national curriculum guidelines for environmental education and propose to revise them with complementary guidelines dealing with climate education? 4) Where do we want to go in terms of sustainable schools and	3 ROUNDS CONDUCTED 9 PROFESSIONALS

Public consultation

The public consultation was conducted via an online form from June 12 to July 23, 2023, and 236 people participated.

The document made available for consultation consisted of the 10 guidelines, organized into a statement and points of detail. Each participant was able to think about the goals of the guidelines, the set of guidelines, and each guideline individually, with the first two steps being mandatory and the last optional.

The first two stages were designed to gather perceptions of the statements in the guidelines and provide an overview of the document. The third stage allowed each respondent to select the guidelines they considered most relevant in order to make specific contributions in relation to the points of detail.

In the questionnaire, it was possible to suggest the exclusion, modification or inclusion of details in the guidelines. This enabled us to obtain contributions from people with different levels of involvement in the topic and different amounts of time available to respond.

The invitation to participate was spread through social networks, and we also made personal contacts with several organizations, networks and movements dedicated to environmental education, climate change, environment, education and other related issues. This strategy included the use of emails, WhatsApp messages, and phone calls.

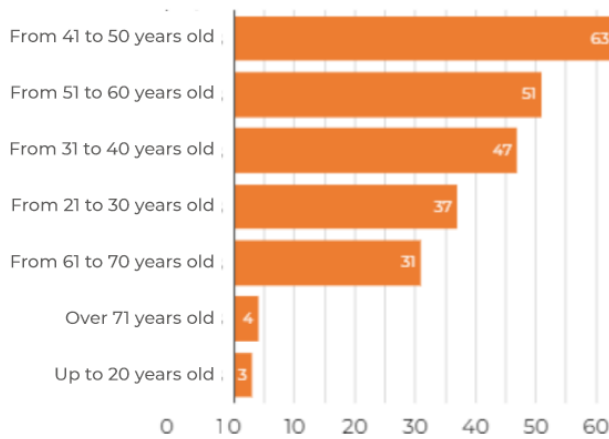


Profile of the respondents

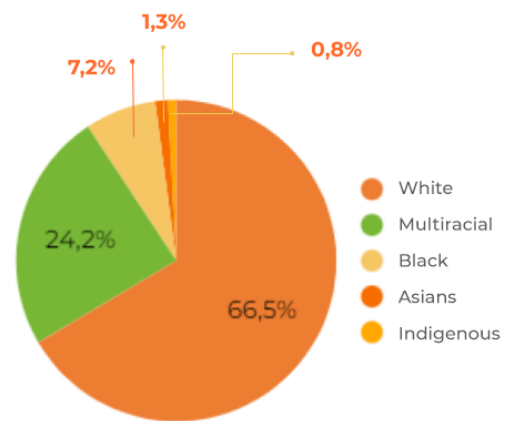
Out of a total of 236 respondents, 51.3% chose to respond in full to the consultation, expressing their views on the detail of at least one guideline.

In terms of the profile of respondents, the following stand out:

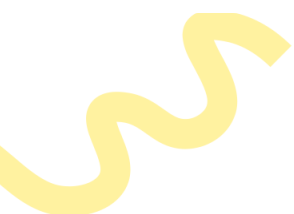
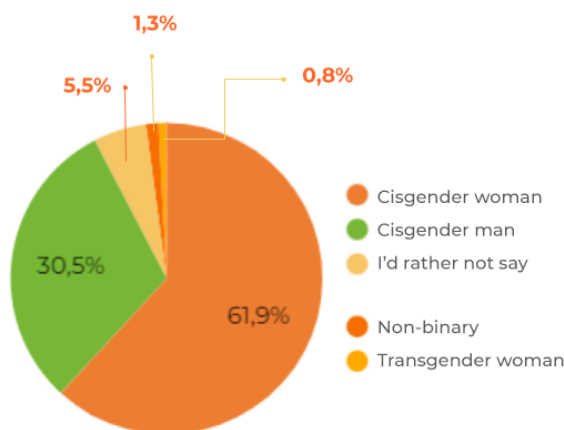
AGE GROUP:



RACE:



GENDER IDENTITY:



Representatives from 23 Brazilian states participated in the survey, with São Paulo, Rio de Janeiro and Santa Catarina having the highest participation rates.

Respondents work in various types of institutions, including universities, civil society organizations, networks, schools, collectives, social movements, corporations, and research institutes.

By cross-referencing the data, we can see that the majority of respondents are women, between the ages of 31 and 60, from the South and Southeast regions, with strong representation in universities and civil society organizations.

You can view the detailed data of the respondent profile [here](#).



<https://encurtador.com.br/uvIUZ>

General considerations about the guidelines

When analyzing the set of guidelines, the respondents indicated that the main goals of the document were to: “Contribute to the structuring of a National Program for Environmental Education in the climate emergency” and “Collaborate to developing guidelines that can guide educational actions to face the climate emergency in the territories”. They also indicate full or partial agreement that the guidelines contribute to the achievement of these goals.

The relevance of the guidelines to the theme of Climate Emergency was noted by 97% of respondents. It should also be noted that 163 comments were made on the set of guidelines, which generally address the following issues:

- Education and knowledge - 25.8%
- Merging academia and people - 16.4%
- Climate emergency - 11.7%
- Combating and coordination - 10.2%
- Inclusion of minorities - 6.3%
- Implementation of public policies - 5.5%
- Expansion to states and municipalities - 3.9%
- Practicality of the guidelines - 3.1%
- Community participation - 2.3%
- Collective and individual actions - 2.3%
- Effective actions - 2.3%

- Inter-sectoral planning - 1.6%
- Integration with other projects - 1.6%
- Required resources - 1.6%
- Use of technology - 1.6%
- Practical examples - 1.6%
- Socioeconomic context - 1.6%
- Informal spaces - 0.8%

Another way to visualize these comments is this word cloud:



The word cloud was generated based on the content of the answers to three questions on the form: “Considering what you have read so far, would you like to make any comments on the set of guidelines?”, “If you have suggestions for new guideline(s), please note them below” and “Please leave your comments and any suggestions for change in relation to guideline X here”.

Statistical analyses were used to identify words in the singular and plural, as well as variations in verb tense, and to group them with other words and phrases of similar meaning. For example, if the words “create,” “creating,” and “creation” appeared in responses, they were grouped under “creation,” along with “understand” and its related verbal and plural forms.

The word cloud automatically excludes articles, highlighting the keywords in the replies. For example, in the phrase “I think they should have investments” the identified keyword would be “investments”. Furthermore, similar words in a question of interest, such as the word “guideline,” were manually eliminated.

Learning from the process

It is increasingly clear that environmental education is essential to face the climate emergency, whether it is to strengthen the adaptive capacity of peoples and communities, to face the consequences of the changes that have already occurred, or to act in the radical transformation of the ways of being and being in the world of hegemonic society, of production and consumption, which are the root causes of this crisis. This participatory process of drafting the Climate Environmental Education Guidelines, the result of which you will read below, showed us how fundamental it is to bring together fields such as environmental education, so-called climate education, education for risk and disaster reduction and the struggle for climate justice, collectively identifying, explaining and building common premises and strategies for action that expand and enhance the impact of climate environmental education.

**Final version of the
guidelines, produced
based on the results of
the public consultation**

GUIDELINE 1

Structuring of a National Climate Environmental Education Program that will help bring scale, continuity, synergy, access to resources, and quality to transformative processes.

DETAILS

1.1. Recognize that without effective environmental education, other sectoral policies to face a climate emergency will be fragile, as the mobilization of the population is fundamental for building and strengthening their adaptive capacity and resilience, prioritizing socio-environmentally vulnerable communities;

1.2. Allocate sufficient resources (financial, material and human) to conduct the training and communication processes of the Program, in accordance with the urgency, magnitude and challenge that climate change represents, including through FunBEA - Brazilian Fund for Environmental Education, recognized by ProNEA - National Program for Environmental Education;

1.3. Create mechanisms for monitoring, evaluation and indicators jointly based on the practices, programs and projects developed in the territories and in the public policies of climate environmental education, based on the accumulation generated by the Platform of the Monitoring System.





GUIDELINE 2

Environmental education is a powerful process that brings political and ethical sense to face the crisis in civilization and the climate emergency, going beyond and breaking with the transmission of hegemonic development thinking.

DETAILS

2.1. Treat a critical and comprehensive approach to the care of life's territories, including animal rights, from an understanding of the complex interconnectedness of all living beings;

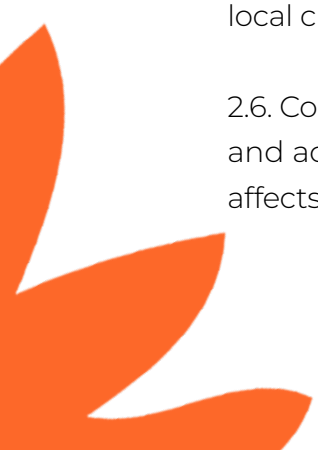
2.2. Create dialogical processes on public communication, explaining its controversies and tensions in the sciences, in research processes, in transmedia;

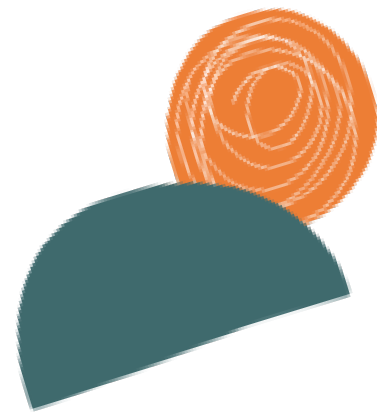
2.3. Communicating scientific evidence and evidence from the arts, their methods and creations, dealing with different time periods and scales, establishing the local-global relationship without falling into a misleading perception of totality;

2.4. Overcome the concept of objective and remote knowledge by promoting the collaborative production and communication of diverse knowledge through citizen and participatory science practices;

2.5. Develop formal and non-formal, decentralized but articulated, continuous, multiplying and permanent processes that promote the local creation of educational practices in the territories;

2.6. Consider the ethical and moral implications of everyday practices and actions, as climate change is a global environmental issue that affects all living beings on the planet.





GUIDELINE 3

Promotion of participatory methodologies, innovative practices and appropriate technologies in line with educational processes that actively and inclusively engage multiple social actors in the protection of their communities with socio-environmental sustainability, risk management, vulnerability reduction, going beyond and breaking with the transmission of a hegemonic development thought.



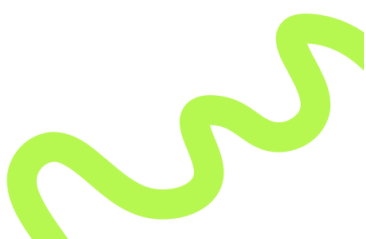
DETAILS

3.1. Provide initial teacher training involving instances of dialog in the degrees of Human Sciences, Natural Sciences and Exact/ Technological Sciences, with an inter and transdisciplinary environmental-climate approach;

3.2. Include an integrated approach to the risks of the climate crisis involving multiple fields of knowledge, scientific fields of study combined with popular knowledge, differentiating each territory, biome and ecosystem;

3.3. Include the climate emergency in curricula at all levels of formal education, with a focus on young people, to broaden worldviews (epistemologies, ways of knowing and knowing), perspectives (perceptions and ways of seeing, speaking, and living), and methodologies (ways of knowing, learning, and doing);

3.4. Conduct socio-educational interventions, with eco-educational practices, interactive activities, local research, case studies, educational communication, public debates, creation of pedagogical materials (printed, videos, online simulations, virtual field trips and other digital resources), creating opportunities for their construction in each territory of life and their interconnections;



3.5. Enhance the interaction of Climate Environmental Education with Education in Disaster Risk Reduction (ERRD) and Climate Education at (i) multi-scale (local, regional territories, different ecosystems and biomes, national and global), (ii) inter-sectoral (governments, social movements, communities, river basin committees, councils, networks and collectives, educational and research institutions, companies, etc.), (iii) transdisciplinary (scientific, traditional, original knowledge);

3.6. Guide public policies for practices and actions that actions that can be scaled up without imposing initiatives with a single hegemonic thought;

3.7. Encourage reflection from a social science perspective, broadening the interfaces between science and citizenship to develop critical thinking, knowing arguments and counter-arguments;

3.8. Express in nonviolent ways how we fit into existence as part of the cosmos, our planet, other nations, our country, our city, our neighborhood, our community, fighting totalitarianism and hate speech;

3.9. Use critical and reflective thinking to question, seek evidence, and evaluate the credibility of sources of information, including the media, politicians, activist groups, and especially social networks and other platforms, especially those powered by algorithms and artificial intelligence (AI);

3.10. Be wary of scientific “skepticism” based on uncertainties about the causes and possible consequences of the climate phenomenon, be critical of “denialism,” a neo-conservative and neo-capitalist view, and be aware of the fact that the two mix;

3.11. Recognize that education alone cannot combat disinformation and climate denial, which are generally rooted in ideological, political, and economic interests.

GUIDELINE 4

Understand the science of climate change, even if that alone is not enough to understand the problem or to decide how to address it effectively and with the urgency it deserves. The scientific vision, when systematically integrated with multiple contemporary crises, can encourage people to trace the complex relationships that exist, to think about ways to mitigate the negative effects of the climate emergency and take responsibility for prevention.

DETAILS

4.1. Explain the causes and dynamics of global warming so that each person can understand both the planetary dimension of the crisis and its effects, such as the melting of the polar ice caps and the rise in sea levels, as well as its effects at the micro-local level, in each territory, such as the lack of drinking water, water and energy crises, aridity of soils, loss of biodiversity, loss of agricultural crops and consequent reduction in food supply, desertification and forest fires;

4.2. Show the difference between weather and climate, and how global and regional warming can affect the dynamics of the water cycle, so that each person understands how the climate emergency has led to an increase in the intensity and frequency of extreme precipitation events that can trigger disasters (such as droughts, floods, landslides, floods, earthquakes, tsunamis, and hurricanes);

4.3 Demonstrate that the enormous transformation of everyday life has a social, political and ethical dimension, not a logical-scientific one, since the same technoscience that has made possible the predatory model of production and consumption, and that is the anthropic contribution to climate change, can never, by itself, outline the solutions, much less implement them;

4.4. Address the relationship between the increase in the average surface temperature of the planet and the conditions for the development of life, emphasizing the effect of each tenth of a degree Celsius of elevation on these conditions of coexistence, and also discuss the causes of these effects themselves and the unequal distribution of their consequences.

4.5. Address the consequences of the current anthropogenic alteration of the greenhouse effect, and therefore of the climate, from an ecological point of view, considering the effects on the various environmental indicators of the planet, and also the interactions between them, which, by influencing each other, amplify the widespread crisis that is now unfolding, approaching a point of no return with serious consequences;

4.6. Understand the greenhouse effect and its intensification. This is a component of the climate system that is essential for life on Earth, with its dynamics that are in a transient regime due to the massive emissions of certain gases that have rapidly accumulated in the atmosphere, especially in recent decades;

4.7. Understand the inertial nature of this process in a permanent energy imbalance, since in the current regime more energy enters than leaves the Earth system, which should continue until the continuous heating that is underway reaches a new stage of equilibrium and then enters a steady state in which the rate of energy radiated out of the system is equal to the rate of energy absorbed by us from the sun;

4.8. Discuss the causes of the borderline situation in which we find ourselves, from the perspective of a critical and consistent argumentation regarding solution proposals such as “net zero”, the carbon market, etc.

4.9. Address the relationship between deforestation and land use change in all Brazilian biomes and climate change, focusing on the role of agricultural expansion in the Brazilian Amazon-Pantanal-Cerrado border interface;

4.10. Articulate the environmental (carbon emissions), ethical-political (public policies, roles of the state and the private sector) and socio-economic dimensions (such as market pressures, implications of beef and soy consumption and the model of their production) with the different activities developed in each biome;

4.11. Address the conflicts between different actors operating in the territory, highlighting the relevance of the ways of life and world views of indigenous peoples, traditional populations and local communities, on the one hand, and the interests of illegal miners and loggers, land grabbers and, in particular, large rural producers, on the other;

4.12. Invest in structuring measures of environmental education and prevention, adaptation, mitigation and regeneration actions, which, despite their medium- and long-term results, are low-cost, enable risk perception and increase the capacity to act, while structural measures such as engineering works are palliative and expensive, and may even create others environmental impacts and a false sense of security.



GUIDELINE 5

Education becomes vital to the production of knowledge and collective actions for the Common Good. It emphasizes the urgency of using every minute of our days to act in a radical transformation of means and ways of life. Shared knowledge helps strengthen integrated public policies for climate justice, human rights and nature conservation.



DETAILS

5.1. Ensure that the spread of concepts about the seriousness of the situation in the Anthropocene and Capitalocene does not panic or paralyze people into feeling powerless in the face of the magnitude of the problem;

5.2. Consider that this historical construction of an unsustainable hegemonic society can be deconstructed by encouraging engagement in collective actions, orchestrated by integrated and transversal public policies, with knowledge sharing;

5.3. Allow popular environmental education to bring the places of life closer to the study of the thematic universe of the people by the people themselves who inhabit the territories, to problematize and map the conflicts, to understand the complexities and contradictions that characterize them;

5.4 Encourage participation and intergenerational dialog in organizations, activism, youth movements, environmental militancy, climate strikes, struggles for decolonization or counter-colonization, etc.

5.5. Defend sustainable policy initiatives in their communities based on the defense of the common good and territories of life, strengthening global alliances and movements of anti-capitalist action;

5.6. Act to prevent the worsening of the climate crisis by identifying its causes and effects, illuminating and strengthening other ways of being and living together that confront colonial capitalism;

5.7. Correlate the scopes of consumption and production in the model in which we live in most of the world, identifying its different agents and highlighting the ability to make choices through collective action. These can problematize the current model of production in order to overcome the social and environmental exploitation of unsustainable human activities on the planet, in articulated actions of social movements, states, the business sector and public policies.

GUIDELINE 6

Environmental education is civic education, responsible, critical and participatory, capable of supporting transformative decision making based on the natural or built environment.

Therefore, EE helps prepare learning spaces, both socially and physically, to promote interventions in situations of risk and vulnerability, including those exacerbated by extreme weather events.

DETAILS

6.1 Environmental climate education in schools also means addressing the structural problems that make the working and living conditions of educators and the teaching-learning process precarious;

6.2. Educate the population to face the climate emergency, especially in disaster prone areas, in peripheral areas where vulnerability increases - age (children and elderly), gender (women and LGBTQIAP+ community), race (black and indigenous people), people with disabilities (such as visually impaired, deaf, wheelchair users and neurodivergent people, among others);

6.3. Valuing community knowledge and presenting good practices for adapting to the tragic impacts of climate emergency, based not on market logic, but on the existence/resistance of peoples and communities seeking well-being, climate justice and the reduction of socio-economic inequalities;

6.4. Deconstruct the vision that separates nature from society and value the knowledge and practices of traditional peoples and communities in perceiving and addressing the climate crisis, especially in historical strategies for building adaptive capacity.

GUIDELINE 7

Creation and maintenance of formal and non-formal spaces built with educational intentionality of sustainability and resilience, anchored in the principles of integral education, educational cities and sustainable and resilient educational spaces to address non-sustainability and climate change.

DETAILS

7.1. Invest and decentralize resources to build sustainable and resilient schools, spaces for the daily experience of a changing society, becoming dynamic references for their communities, integrating curriculum, management and construction and protecting their territory of life;

7.2 Support the creation of articulating spaces for Climate Environmental Education with the contribution of resources (financial, material and human), so that they can develop territorial projects, including the training of educators;

7.3. Consider the complementarity of the components of the sustainable and resilient school in the transdisciplinary curriculum, in democratic governance, in the school space with sustainability and capacity to host the community in case of disaster, and in the school-community relations that consider permanent and lifelong education for the local community.

GUIDELINE 8

An integrated view of society, the environment, management and the economy is essential to mitigate the effects of the climate emergency.

DETAILS

8.1. Prioritize renewable energy, such as wind and solar, and minimize the social and environmental impacts of implementing them in large enterprises;

8.2. Encourage the conservation and restoration of natural environments;

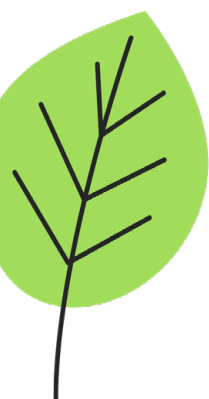
8.3. Challenge consumerism (disposability, predation, ostentation) and reduce waste;

8.4. Advocate for sustainable transportation, with an emphasis on affordable and quality public transportation and active forms of mobility;

8.5. Research on sustainable and supportive practices and lifestyles, many of which exist in traditional and indigenous communities, but also in new alternative experiences;

8.6. Provide guidance on Nature-Based Solutions (NBS), such as agroecology and permaculture, which have the potential to mitigate the impacts of climate change and increase biodiversity, while seeking to balance the environment with economic activity and social well-being;

8.7. Encourage admiration and respect for life by promoting a sense of co-responsibility for environmental management, emphasizing the crucial role of federal entities (national, state and municipal).



GUIDELINE 9

Addressing the climate emergency requires climate justice, prioritizing measures based on equity (right to difference and reduction of socio-economic inequalities), inclusion (right to access) and well-being (right to life).

DETAILS

9.1. Address the disproportionate impacts of the climate emergency on marginalized and peripheral communities, emphasizing the need for equitable solutions that strengthen their adaptive capacity, combat environmental injustice, and recognize the diversity, knowledge, and practices of those who contribute least to climate change and who suffer (and will suffer) most from its impacts;

9.2. Prioritize the voices and perspectives of vulnerable communities in decision-making processes;

9.3. Hold accountable the economic groups in countries and regions that have historically contributed most to the climate crisis, so that they radically change their modes of production and adopt mitigation and adaptation measures in the countries and regions where they operate.

DIRETRIZ 10

Climate environmental education must be based on listening to the instituting movement that is built from the perspective of everyday micropolitics, recognizing the action of local collectives and organizations of peoples and communities in different territories .

DETAILS

10.1. Promote more democratic processes of knowledge construction and communication that enable people and communities to make decisions and take a civic stand on events in their daily lives;

10.2 Promote the decentralization of financial resources to grassroots organizations, collectives and social movements, promoting territorial initiatives to face the civilizational and climate crisis.

10.3. Mobilize and hold scientists accountable to their primary purpose: to systematize knowledge for the common good of society, territories, and the planet;

10.4. Support continued training processes with different audiences, prioritizing the strengthening of grassroots organizations, collectives and local existence/resistance movements,

10.5. Organize participatory processes for the elaboration and implementation of educational interventions that focus on topics of interest to groups in the territories, with an emphasis on art, culture, sports, and other daily collective and community practices.



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EXECUTION:



SUPPORT:

