P04 / Public policies responses to climate risks and adaptation for the habitability of territories

Topic : ENVIRONMENT, SDGs, ENERGY

Chair : Sophie NEMOZ (Université de Franche-Comté)

Second Chair : Jarukit Kanokjaros (Chiang Mai University School of Public Policy)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

The panel calls for critical reflection and data driven social science responses within the overlapping political themes of climate risks and adaptation. While droughts and other severe natural phenomena are historically nothing new, the scale of global warming is evidenced by their recurrent intensity over recent years, during which record-breaking temperatures have consistently been experienced worldwide. In all scenarios for greenhouse gas emissions produced by human activities, the sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) estimated last year that the global surface temperature will increase by 1.5°C by the early 2030s (IPCC, 2023). Research has also shown that, even if individuals adopt eco-friendly practices, production of greenhouse gases would only fall by 30%1.

This call for papers aims to understand how public policies, the practices and representations of stakeholders can be or not adjusted to ensure better governance (prevention, anticipation, reduction of environmental and socio-economic consequences). The objective is to develop and capitalise on knowledge about strategies for reducing climate vulnerabilities. The relevance of this virtual panel is also to shed light on the policies for dealing with this major risk to the habitability of territories by addressing the many issues they raise. Who is calling for the issue to be dealt with? How are environmental crisis thresholds and socioeconomic damage indicators determined and discussed? In which arenas does this take place and what kind of knowledge and metrics are used? How does it affect organisations, professional practices and individuals? To what extent are different options and responses compared?

In particular, the call for papers seeks to critically explore the public policies metamorphosis taking place, the possibilities of coping and adaptation, and how societies confront evolving risks and growing insecurity. The proposals should provide a title and a brief abstract with information on the topic, format and contributors (200-300 words, plus names of proponents, affiliations and email addresses).

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https://www.carbone4.com/files/wp-content/uploads/2019/11/Doing-your-fair-share-for-the-climate-Carbone-4.pdf

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Session 1

Friday, July 4th 16:00 to 18:00 (C4)

(Virtual) Education in Ashes: How Wildfires Impact Test Scores and the Future of Generations

Ana Neves de Oliveira (Universidade do Estado de Santa Catarina)

Marcos vinicio wink junior (Universidade do Estado de Santa Catarina)

Aline Dalcin (Universidade Federal do Rio Grande do Sul)

Luis Henrique Zanandrea Paese (Elections Ontario)

The intensification of wildfires, exacerbated by global climate change, poses significant risks to the habitability of territories and generates cascading environmental and socio-economic consequences. While the ecological and health impacts of these events are extensively studied, their effects on human capital development - particularly through education - remain underexplored. This study focuses on the socio-economic dimension of climate risks, analyzing how wildfires disrupt educational systems in Brazil and identifying actionable insights for public policy to better anticipate, mitigate, and adapt to these challenges.

Building on international research linking environmental disasters to adverse educational outcomes, this study examines how wildfires undermine learning in elementary schools. Key mechanisms include temporary school closures caused by air pollution, increased health-related absences among students and teachers, and the psychological stress of living near fire zones. Such disruptions disproportionately affect socioeconomically vulnerable communities, exacerbating pre-existing inequalities and limiting the opportunities available to impacted students. In these regions, already marked by resource scarcity and infrastructural challenges, the cascading effects of wildfires deepen disparities in educational access and outcomes.

Methodologically, this research employs a spatial and evidence-based approach. Georeferenced wildfire data, sourced from Brazil's National Institute for Space Research (INPE), are integrated with educational performance metrics from the national Basic Education Assessment System (SAEB). This combination allows for the precise identification of schools exposed to wildfire risks and the measurement of their impacts on learning outcomes. By adopting a spatial Difference-in-Differences (Diff-in-Diff) method, the study provides robust insights into the causal relationship between wildfire proximity and academic performance.

The findings of this research have significant implications for public policy and governance. Wildfires not only disrupt the immediate educational process but also have long-term socio-economic effects by impairing human capital formation. Addressing these vulnerabilities requires proactive governance strategies that integrate climate risks into educational planning. Such strategies might include improving school infrastructure to withstand environmental crises, investing in health and psychological support for affected communities, and developing adaptive education policies tailored to regions prone to climate-related disasters.

This study contributes to the broader discourse on climate risks and adaptation by situating education as a critical component of socio-economic resilience. It highlights the necessity of evidence-based approaches to guide public policies aimed at reducing the socio-economic consequences of environmental crises. By shedding light on how wildfires disrupt education and deepen inequalities, the research provides actionable knowledge to support the prevention, anticipation, and mitigation of climate vulnerabilities, ultimately contributing to the habitability and sustainability of affected territories.

Addressing Climate-Induced Displacement: Policy Gaps in Thailand's National Adaptation Plan.

Jarukit Kanokjaros (Chiang Mai University School of Public Policy)

This research investigates the vulnerabilities faced by agricultural households in Thailand due to the impacts of climate change and correlates this information with data on villages at very high risk of flooding and chronic drought, to evaluate their susceptibility to climate change. This study analyzes the deficiencies and ultimate measures within Thailand's National Adaptation Plan (NAP). It adopts a qualitative approach, combining a literature review with a thematic analysis of relevant policy documents and existing studies. The research identifies adaptation strategies for vulnerable farming communities. The agricultural sector, which is significantly dependent on climate-sensitive crops, is under considerable threat, as evidenced by its ninth-place position on the Global Climate Risk Index. There are notable regional disparities, with northern and southern areas under very high risk of flooding and the northeastern region facing chronic drought, affecting millions and contributing to rural-urban migration. Although the NAP includes integrated strategies across six sectors, such as water management and agriculture, it encourages farmers to modify production schedules and create farm ponds to mitigate flooding. The essential sector of human settlements and security emphasizes mitigation measures and integrated risk reduction planning for metropolitan and larger cities; however, medium and small cities, along with communities, need emphasis on urban planning, land use, and climate change considerations. Importantly, low-income and at-risk populations must have equitable access to resources, such as funding for climate change adaptation and climate risk insurance. However, the NAP fails to address the needs of vulnerable groups thus effective adaptation necessitates a comprehensive approach, the implementation of displacement policies is essential to alleviate the ongoing effects on at-risk households and to decrease long-term expenses for the government. Due to Thailand's lack of policies for climate-induced displacement, addressing this policy is crucial.

Keywords: Climate-Induced Displacement, Thailand's National Adaptation Plan, Vulnerable Groups, Climate Vulnerabilities, Policy Analysis.

Climate and resilience: a look at vulnerable rural communities in Brazil and public policies for adaptation

Vitor Santana (Ministry of Social Development of Brazil)

The world has been moving towards an intense process of degradation of natural resources, with a direct impact on the conditions of access to water. Recent data shows the reduction of water surface, groundwater sources and irregular distribution of rainfall.
Changes in climate have been a major driver of more severe droughts, desertification processes and reduced biodiversity, with a direct impact on reduced food security and increased poverty. In this context, climate adaptation policies are increasingly necessary, as we are increasingly close to a point of no return. Technological solutions need to dialogue with and adapt to a changing context, which are based on the nature and social and cultural dynamics of communities.
In Brazil, there is a curious scenario, since the most vulnerable population from the point of view of income and access to basic services is located in rural communities in located in regions with the highest and lowest volume of water available, the North – covered largely through the Amazon, and the Northeast – where most of the semi-arid region is located.

In this context, since 2003 the Brazilian government has been working to promote access to water for rural populations in situations of poverty through simple and low-cost social technology, based on the Cisterns Program. These technologies mainly involve the capture and storage of rainwater. This is a broad process of decentralization and democratization of access to water, in response to the difficulties in implementing collective water supply systems that are more common in urban areas.
What differentiates the Cisterns Program from other water access initiatives is not just the rain capture component, but an entire logic of social empowerment. Communities and beneficiaries are involved throughout the process, participating in training activities for the use and management of water. At the same time, continuous exchanges of experiences take place, with dialogue about common difficulties and challenges.
Therefore, the objective of the article is to present the mechanisms and institutional arrangements for implementing the Cisternas Program - which has enabled it to reach more than 1.3 million families and 8 thousand public schools isolated in the rural areas, with elements which demonstrate its impact on reducing water-borne diseases, generating income and increasing climate resilience in the group of vulnerable rural communities served.