

## IMPACTS OF CLIMATE CHANGE ON RURAL POVERTY IN THE BRAZILIAN NORTHEAST AND SOUTH

Elívia Camurça Cidade\*, James Ferreira Moura Junior\*\*  
and Verônica Moraes Ximenes\*

*The objective is to analyze how climate change impacts affect rural poverty dimensions of residents of communities in the backlands of the Northeast and South of Brazil. This study has a qualitative design. Seven focus groups were conducted with 79 participants from impoverished rural communities in the Northeast and South of Brazil. The content of the material collected was analyzed. The research participants simultaneously experience various levels of deprivation in the form of multiple shortcomings, such as food deprivation, improper housing and the lack of leisure areas. Also, a series of deficiencies linked to climate change is identified, such as the loss of production and the feeling of insecurity for the future.*

**Keywords:** *poverty, rural, climate change, global south*

### 1. Introduction

Favareto and Seifer (2012) point to the emergence of a new rural scenario at the turn of the 21st century, where it is not possible to understand the rural as a static opposition to the urban. The overcoming of this dichotomy in favor of an interconnected view of the two scenarios is done by virtue of interactions that are at the same time contradictory and interdependent. This is due to the influences of public policies promoting progressive investments and resources for agribusiness in the countryside, which have brought about changes in local modes of production and, consequently, new forms of interaction among the Brazilian regions. The argument of Leite et al. (2013) that the rural scenario is a space with intense diversity in its configuration agrees with this thought. There is a process of heterogeneity in the rural context and in the establishment of rurality (Leite, 2015; Landini, 2015), in the plural sense that this term implies.

The diversity of environments in the countryside is the result of the social trajectory of Brazilian history (Wanderley & Favareto, 2013), which bears the adverse environmental effects caused by climate change as one of its features. However, the impact of these variations is not expressed equally. On the contrary, climate change affects impoverished populations more severely (Barbier, & Hochard, 2018), as it evidences the extent to which individuals are being granted the necessary conditions to overcome the adverse effects of climate change.

It is relevant that psychology, which has historically focused on research and interventions in urban contexts (Leite et al., 2013; Dantas et al., 2018; Vasquez, 2009), can address this rural reality, markedly influenced by climate change. In addition, conceiving the rural environment from the perspective of urban lenses limits the possibilities of psychological interventions, which requires the development of specific studies on the psychological processes rural

---

\* Faculty Ari de Sá, Brazil

\*\* University of International Integration of the Afro-Brazilian Lusophony, Brazil

\*\*\* Federal University of Ceará, Brazil

---

residents go through (Landini, 2015). Pizzinato et al. (2015) corroborate the validity of the still unexplored rural subjectivity as a potential and relevant space for analysis and intervention. Moreover, life in impoverished rural areas poses unique and diverse implications, which are unknown to those from the urban contexts. Such fact reinforces the premise that research in this area should not adopt an urban-centered psychology as a reference (Dantas et al., 2018). Thus, the objective of this study is to analyze the impacts of climate change on the quality of life of poor residents of communities in the backlands of Northeastern and Southern Brazil.

In this article, we will argue the point that, although located in different geographic locations, rural areas in Brazil are more vulnerable to the impacts of climate change when compared to the urban scenario. This is because there is a history of neglect in government policies in order to at least mitigate the impacts of poverty in the countryside and to come up with strategies to address the side effects of climate change. The study referential includes the Community Psychology propositions on rural contexts and the implications of life under impoverished rural conditions, the Capabilities Approach, and Human Geography studies focused on the occupation of Brazilian rural lands and the consequences of climate change on deprivation experiences.

The debate on rural poverty involves the consideration that, in the countryside, there are factors responsible for both the intensification of the experience of deprivation and the perpetuation of its expression. Among the factors, it is possible to list the ways land is used and managed, socio-spatial inequality, and precarious access to public policies. These factors of rural poverty are constituents of marked social inequality in Brazilian society. According to Martín-Baró (1998), it is necessary to recover the historical memory of the phenomena, using critical realism. Thus, to understand rural poverty it is necessary to understand the macrosocial structure that constitutes the reality of the Brazilian poor population.

The modes of land use and management are thermometers of the historical denial of the right of access to land. In Brazil, family agriculture employs 80% of the workforce in the countryside and is responsible for half of all the Brazilian agricultural production cultivated on 25% of the country's total territory. The remaining 75% is under the domain of 500,000 establishments considered employers. (Lustosa, 2012). Although the populational contingent involved in family agriculture is significant, the production model, characterized by low production complexity and restricted territorial size of cultivable land, which generates highly valuable products and makes it difficult for small farmers to compete with large landowners. As a result, the activity that employs most in the countryside ends up being the one that suffers most from capitalist competition. Low profits and the risks of production loss due to climate change contribute to the indebtedness of farming families, who end up having to sell or lease their cultivable territories. Thus, land, characterized as a production factor (Ramos, 2007), is becoming increasingly in the hands of small groups. Helfand and Pereira (2012) observed that the divergence between the access to land and profitability achieved by means of agricultural practice is a determinant of poverty among agricultural producers. In turn, the significant increase in technical and monetary investment in the countryside does not mean its conversion into better living conditions for rural populations. On the contrary, what occurs is the forced removal of the of residents to other rural territories or to the urban scenario, or even their permanence under precarious conditions (Castillo et al., 2016). The decrease in productivity and the forced migration of people from their homelands have been indisputably caused by climate change (Levy, & Patz, 2015), but in Brazil they are already part of the historical picture of rural poverty and social inequalities, especially concerning the ownership of land.

The advance of capitalism in the countryside, with agribusiness as its main exponent, has resulted in the worsening of socioeconomic inequalities (Campos, 2011), legitimized the latifundium, and impacted the division of labor. Data from Buainain et al. (2012) show that 67% of people in extreme rural poverty in Brazil, considering monetary indicators, live in the

---

Northeastern and Northern regions. In the rural Northeast, poverty is approximately four times higher than in Southern rural areas (Helfand & Pereira, 2012). The level of poverty in the rural area, which is higher than in the urban population, and the unequal distribution of income throughout the Brazilian territory are serious obstacles to human development (Heltberg, 2002).

In the rural scenario, the multiple daily social aggravations that lead to the maintenance of poverty combined with unsatisfactory access to public policies (Mikulewicz, 2018) are highlighted. Maluf and Mattei (2011) included, as historical determinants of poverty, the precariousness of basic services, infrastructure, and job opportunities. We are talking about the need to guarantee the supply, access and quality of housing, education, health, transportation, culture, jobs, and income-generating policies for rural populations.

The discussions on rural poverty, even those that focus on a multidimensional analysis (Dedecca et al., 2012), consider economic and social factors, but present limitations in their understanding of the influence of poverty on the subjective constitution of individuals. An alternative to improve the rather fragile analysis of poverty impact, for Moura Jr, Almeida and Barbosa (2019), is the use of a multidimensional approach that contemplates the dimensions of housing, education, work, income, and health in addition to the subjective aspects of poverty, allowing its measurement to grasp as much as possible of the social reality of deprivation. These dimensions are also the most affected by climate change in the most vulnerable groups and the result is an intensification of their state of deprivation (Otto et al., 2017).

In that sense, it is understood that the approach on poverty must go beyond its association with material deprivation (Accorssi, 2011). The Capability Approach (Sen, 2011) has taken an important step in understanding that there are variations in people's opportunities to convert general resources, such as income and wealth, into capacities, which represent what they can or cannot actually do to achieve well-being and happiness.

According to this multidimensional perspective, the difficulty of converting income and resources into well-being is the primary cause for the maintenance of poverty, since the presence of such assets reflects the huge differences in people's personal characteristics and social circumstances (Sen, 2011). Not only does poverty expose individuals to inequalities in terms of living conditions (such as income, housing, educational opportunities, health promotion, etc.), it also makes them more vulnerable to global risks inherent the climate change effects on the environment. The rising temperatures and sea levels, the periodicity and/or the length of droughts, tropical hurricane activities, and strong rainfalls are some of the effects that, although occurring in a global scale, disproportionately affect certain social groups, especially those living under poor conditions, triggering severe backlashes as to the guarantee of human rights and social justice (Levy & Patz, 2015).

Another issue, repeatedly disregarded in poverty studies, is the psychosocial aspects that contribute to the maintenance of the poverty phenomenon, as a strategy of oppression and domination that uses subjective, cultural, and ideological issues, as much as or more than income deprivation, to perpetuate itself. Poverty exposes individuals to limited access to goods and services, social vulnerability, through risk exposure, precarious schooling, and insecurity about income and the future. In addition, it is common for poor individuals to face moral trials, which result in their victimization, villainization, (Accorssi, 2011) and stigmatization (Moura Jr et al., 2019).

Confrontation is repeatedly discussed in texts that address this issue as the provision of resources to instrumentalize those individuals to respond to poverty (IPEA, 2015) and climate change (Nash et al., 2019). However, as Montañó (2012) rightly states, "any confrontation of poverty based on the provision of goods and services is merely palliative" (p.280) because, in the author's understanding, including the individual in the logic of economic development without questioning the accumulation of wealth is not enough to alter it. This means that the

---

way individuals deal with adverse situations arising from poverty is not unified and indisputable, especially in rural areas, in which daily life is characterized by "(...) an intense heterogeneity that allows for a variety of interlocutions" (p.49) according to Leite et al (2013). The discussion on how individuals signify and stand up to the reality they experience, as questions that directly interfere in their developed confrontations, is then inserted.

When somebody in a situation of poverty is held responsible for his or her situation, the responsibility of those with political and economic power for the existence of poverty and global climate change is disregarded, and the poverty the phenomenon is seen as nonhistorical, focused, and restricted to individual issues. It is possible, and necessary, to talk about the ways subjectivation is developed in contexts of poverty in order to understand that they are influenced by forms of affection management that diminish the power to act for the common good and, consequently, social resistance (Sawaia, 2009). The psychosocial implications of poverty are precisely the result of the interconnection between the social, cultural, political, ideological and psychological components that reinforce and maintain it by means of the use of the consequences of ethical-political suffering, hopelessness, oppression, submission, and resignation. Responses to poverty are not only about manipulating practical content and concrete interventions in reality.

Before exploring the relationship between individuals and poverty as one based on a combat, as something that aims at tackling the existence of the phenomenon, it is worth considering the paths found by individuals to live with it and psychosocially overcome the adversities without implying apathy in the face of the possibility of altering the source of discomfort. Thus, it is necessary to analyze in depth the impacts of climate change on rural poverty in Brazil, because there are specific characteristics in the daily lives of people inserted in the Global South with the combination of violence and historical inequalities (Souza, 2018).

## **2. Methods**

### **2.1 *Methodological approach***

The research used the qualitative approach, which is dedicated to understanding the intensity of the phenomenon (Minayo & Minayo-Gómez, 2003) by means of an appreciation of the interaction between researcher and participants. As the objective of the study is to analyze the impacts of climate change on impoverished residents of rural communities in the countryside of Northeastern and Southern Brazil, its qualitative emphasis favors studying, in real life conditions, the meanings, opinions, and beliefs (Yin, 2016) regarding daily life in the countryside, deprivation experiences, and the perceived repercussions of climate change.

### **2.2 *Participants***

Since this research aims to discuss different ways of rural living in the Brazilian context, the research development took place in Northeastern and Southern Brazil's rural areas. Guerra et al. (2014) concluded that, although there has been a decrease in poverty and regional inequality in Brazil between 2000 and 2010, the Northeastern part of the country is still one of the regions with a high concentration of municipalities with the worst Social Exclusion Index (SEI). While the national average is 21.0% of municipalities per region with a high degree of social exclusion, in the Northeast, this Index reaches 48.8%. The Southern region presents significantly more attenuated values, with a number of municipalities with high SEI equal to 0.3%. Considering the group of people with per capita family income below ¼ minimum wage in Brazil (equivalent to \$ 252.87 dollars in the period of the field survey), a value designated

as belonging to poverty, the distribution of poverty in the Northeast and South is also heterogenous. It reaches 54% of the whole rural population in the Northeast and 27, 4% in the South (Dedecca et al., 2012).

The data ratifies the statement of Maia and Buainain (2015) when they demonstrate that the Southern region of Brazil traditionally presents good indicators of human development, with emphasis on good indices on the rural population. In contrast, the Brazilian Northeast is a region with high levels of inactivity per rural household, which would reflect the low dynamism of agricultural work. These divergences reflect the historical Brazilian regional inequality (Santos et al., 2014). A comparative study between the two regions may help verify whether or not subjective aspects of life under poor conditions present similarities in the two territories, despite their different socioeconomic and political contexts.

In the Northeastern region, the city investigated is Pentecoste, in Ceará. In the Southern region, the researched municipality is Cascavel, located in the State of Paraná. Pentecoste is considered a small town. Its population is estimated at 37,751 inhabitants (IBGE, 2019a). Data from IBGE (2011) showed that 21,394 community members (60.44%) lived in the urban area and 14,006 people (39.56%) were residents of the municipality's rural area. Among the people living in the countryside, 7,414 are men and 6,592 are women. In 2010, the rate of vulnerability to poverty reached 71.69% of the city's residents (PNUD, 2013). Cascavel has 328,454 inhabitants (IBGE, 2019b) and is considered a large city. The local rural population was estimated at 16,156 community members, 5.64% of the total number of inhabitants (IBGE, 2011), 8,958 of whom are men and 7,198, women. The percentage of households vulnerable to poverty, considering the total aggregate, is 13.68% (PNUD, 2013).

The qualitative study was developed in two communities in each of the cities investigated. As we can see in Table 1, there were 79 research participants aged between 18 and 79 years (M=49.64) in the focus groups. 40 of them were residents of the rural area of Pentecoste, and 39 were residents of the rural area of Cascavel. The majority of the qualitative sample was composed of women (77.21%). In the municipality of Pentecoste, a higher participation of men (N=14) was obtained when compared to the same public in Cascavel (N = 04).

**Table 1. General Profile of Focus Group Participants**

City	N	Women		Men		Average time living in the community (years)
		N	%	N	%	
Pentecoste (CE)	40	26	65%	14	35%	33,55
Cascavel (PR)	39	35	89,74%	04	10,26%	24,18
Total	79	61	77,21%	18	22,79%	28,92

### 2.3 Data collection

The focus group is a group interview (Minayo et al., 2010), where individuals are gathered around the discussion of a common theme or focus with the presence of a moderator. Flick (2009) argues that group interviews help overcome the limits of responses of only one interviewee, gathering, as main advantages, the richness of the data produced, the stimulus for the elaboration of contents, and the remembrance of events. During the survey, three focus groups were conducted in Cascavel and four in Pentecoste between October 2016 and January

---

2017. The sessions lasted one hour in average. The Topic Guide for conducting the focus groups covered the themes: rural population lifestyles, perceptions of poverty, and confronting local adversities, which included the effects of climate change on the perpetuation of the deprivation experience. The criteria for selecting the participants were: to reside in one of the two rural areas selected in each region for further research; to be 18 years of age or older; to express consent regarding the conditions of the research after reading the Free and Informed Consent Term; and to be available to stay throughout the whole group session, the approximate duration of which was previously informed.

## **2.4 Procedures**

The groups' facilitation was ensured by the support offered by local public policy representatives. The communities were chosen because they were close to the projects of intervention in Community Psychology developed by the universities. In Cascavel, the research was carried out in a Settlement of the Landless Workers Movement (MST in Portuguese). In Pentecoste, the focus groups were facilitated at the local Healthcare Center and School with people who were not part of any specific social movement. In the research, information derived from group activities is presented using the acronym FG, indicative of focal group, followed by the initial letter of the name of the municipality and its sequence of facilitation on the spot. Thus, for example, GFP1 refers to the first focus group held at Pentecoste. Fictitious names were assigned to all group participants in accordance with the principle of confidentiality as the ethical foundation of research with human beings.

## **2.5 Data analysis**

The data were analyzed from the perspective of Bardin's Thematic Content Analysis (2011) with the help of Atlas Ti 8.4 qualitative analysis software. Atlas.ti acts as a tool for organizing data analysis and it has no automatic commands. In the study, all inferences and categorizations were performed by the researcher based on the theoretical reference of the investigation. The focus groups had the audios recorded and then transcribed. Then the transcriptions were read preliminarily. A new fluent reading of the material was performed to elect preliminary analytical categories based on the objective of this study. Excerpts of the transcriptions were linked with these categories. Finally, relationships between these categories were established.

# **3. Results and discussion**

## **3.1 Rural poverty**

The experiences of deprivation narrated by residents provide an overview of the social problems with which they have lived historically. They are deprivations related to food availability and its quality, housing structure, and the provision of free leisure areas in the community. These problems are intensified in more vulnerable populations by climate change (Otto et al., 2017). Food and nutrition security implies the guarantee of continuous access to sufficient, quality food, without compromising the access to other essential needs, by socially acceptable means. When social inequality, an ethically unfair condition, affects the possibility of accessing food and healthy eating, we have inequity in food security (Panigassi et al., 2008). Food insecurity, manifested by means of experiences of deprivation of access to food, has been presented as a phenomenon experienced in childhood, but still shared in the recent history of the interviewees, being one of the possible consequences of climate change. However, it is

---

important to point out that there is generally no association of these situations with climate change (Nash et al., 2019). Karla (FGP4) states:

The situation was so harsh that mom told me that, when I was little, she had me go to Deca, the only shopkeeper around Providência [...] I cried, asking for a banana to eat, and there was none. She had me go to Deca and ask him. He was the only person who could provide that. So, he would wrap up two bananas and give them to me to bring home. He wrapped them so no one could see how poor we were. He would wrap two little bananas in paper and when I got home, mom would make a banana shake with water for me, we didn't have the means to buy food [...].

Paulo (FGP2) narrates an experience of food deprivation experienced in childhood that is interconnected with another deprivation: poor access to education policies. According to him: "[...] to finish high school, we had to leave early, sometimes we didn't have breakfast, sometimes we didn't have lunch, maybe you don't believe it, sometimes my lunch at home was coffee and flour. Coffee and flour!" (Paulo, FGP2). Food insecurity, therefore, reflects the already established denial of basic human rights (Panigassi et al., 2008), such as the right to be well-nourished, but which are linked to other indicators that delimit groups in situations of social vulnerability. The food-deprivation experience is not only related to the lack of financial resources to purchase what is needed. It is important to mention that the deprivation experience in rural poverty may be intensified by climate change, as food insecurity and decreased productivity are consonances of this global phenomenon (Levy, & Patz, 2015).

The experience of deprivation is also related to not offering the product in their locality, because "[...] If you have the fruit, you do not have the money. If you have the money, you don't have the fruit" (Joana, FGP1). This speech contributes to the concept that deprivations are not experienced in isolation, but are interconnected in a cyclical arrangement, since living in a rural area would mean fewer job opportunities, which would generate less financial power, weakening local commerce and reducing the availability of food items in the locality. Hence, not only is the conceptualization of poverty a complex task (Crespo & Gurovitz, 2002), but its analysis and the identification of the relationships among the factors that constitute it are also complex.

The participants suffer from what Comim et al. (2016) identified in the research participants of his studies and entitled "multiple material and psychological deprivations" (p.40), a characteristic of experiences of intense poverty. Climate change also affects the mental health of affected populations, again becoming more intense for more vulnerable populations (Nash et al, 2019). Thus, it is necessary to mention the overlapping of deprivations, which is one of the most serious phenomena contributing to poverty perpetuation. In order to deal with an issue, we must understand its structural dynamics. This perspective of analysis disrupts the thought of poverty as a consequence of the direct manifestation of a set of privations, since it is necessary to understand it in a complex, multicausal, and interconnected system, in which subjective components are interconnected to material living conditions at the same time that they constitute such conditions. Sebastiana (FGC2), in reporting on her arrival at the MST (In Portuguese) settlement, allows us to identify the concomitant expression of these questions:

When we got here, that was misery. Nobody cared about us.  
Nobody wanted to give us even odd job. Nobody cared about anything.  
Nobody gave anything to anybody. I lived with my sons on twenty-five Real [\$ 5,00 dollars] of Bolsa Família, you know, and working for day payment. Eight Real [\$ 1,60 dollars] a day. So, we started eating cakes and flour and water and that was life and we struggled on.

---

In this speech, deprivation of access to housing is identified, as Sebastiana joined the Movement as an attempt to obtain housing. However, in addition to this, there is the experience of helplessness, single parenting, fragility of access to income, food deprivation, and insecurity about the future all coexisting. Allied to the co-existence with the overlapping deprivations is the recognition that precarious housing conditions persist over time and interfere with schooling. It is also something experienced by a larger number of people than just those belonging to the household. According to Zelda (FGC2),

It took long before my mom could lay the tile floor in the little shack we lived on Primeiro de Maio settlement. That was the first time. Before that, we lived on the dirt and rain water dripped off the canvas on our heads. At the bar, we would brawl for cardboard boxes to at least cover the head, you know?! I had to wake up early to go to school and it looked like I'd showered. In cold days, the canvas would sweat and drip all over the place.

Alberta adds "Because you have to pay for lunch, you want to eat, you have to pay for everything [...] Many times we don't go out because we don't have a pension". It can be affirmed that the most perverse effects of the deprivation experiences lived by rural populations concern their overlapping, continuous, and collective character. The overlapping points out that the interviewees live concomitantly varied types of deprivation in the form of multiple insufficiencies related to food, housing structure, and the existence of leisure areas in the community. The experiences of deprivation are also continuous, as they persist over time and are related to climate change that also exist.

### **3.2. *Climate change impacts on rural poverty***

Climate vulnerability, according to Valverde (2017), is related to extreme climate changes such as floods, prolonged droughts, heat waves, typhoons and tornadoes. It can become a potential threat to certain social groups. Climate extremes are part of natural climate variability, and rainfall alone, for example, is not responsible for a threatening situation. What provides extreme events with the characteristic of a disaster is, according to Favero, Sarriera and Trindade (2014), the vulnerable situation in which certain populations already find themselves. "More than an acute event, a disaster is the acute expression of vulnerability in its different dimensions (physical, social, environmental, etc.)" (p.207).

Climate variability is a natural physical phenomenon that is related to how large economic conglomerates use the planet's natural resources. These changes in climate impact in different ways the lives of the research participants. Their consequences are not experienced with the same intensity by everyone (Barbier & Hochard, 2018). This is because access to resources and conditions to mitigate exposure to climate risks are not distributed in society in a way that serves the most vulnerable groups (Thomas et al., 2019). Thus, having their living and working conditions organized in a relationship of dependence on climate variations, as is the case of part of the rural population, represents a thermometer indicating the many vulnerabilities, in the plural sense of the term, with which they need to live daily.

In the research, the effects of climate change on climate variables are presented as a relevant issue of rural livelihoods. In the Northeastern context, the impacts of drought as factors that accentuate the vulnerabilities already expressed in the territories were more recurrent when compared to the Southern region. Climate change tends to intensify these vulnerabilities and cause a process of further impoverishment of the population (Otto et al, 2017). The latter region has other climatic and productive characteristics, with greater rainfall and greater availability of paid jobs in agribusiness and non-agricultural activities. It is also worth mentioning that



---

during the survey period, the residents counted a sequence of years with low rainfall in Pentecoste in the Northeast. Paulo (FGP2) says: 'We have not had winter for 5 years.'

Although droughts, as a weather event, are more frequent in the Northeastern region, in Cascavel, Alberta (FGC2) reports her experience of production losses: "[...] then came those years of drought, no crops. And you had to pay to plant and still owe the others". A possible characteristic of differentiation of what it means to lose production in both territories refers to the recurrence with which this happens and its impact on the generation of financial and food resources for families, causing the content produced to be used only for subsistence and not for trading. Regarding this, Juvenal (FGP2) clarifies that "I alone have been planting for 5 years and we only provide food for ourselves". Climate change can make this cycle of difficulties in production even more serious, generating forced migrations because of the climate (Levy & Paty, 2015).

Directly linked to the losses in production is the reduction of job opportunities, because the absence of rainfall impacts on the decrease of people dedicated to planting on their own land, as day laborers or sharecroppers. Cloves (FGP1) speaks of the interdependence between rainy periods and the cultivation of agricultural products: "And we, who live by ploughing, without water we cannot cultivate". The relationship between rainfall, agricultural production, and income is thus constituted. The first element is decisive for the occurrence of others, which further strengthens the evidence that there is a low productive variability shared by residents. Karla (FGP4) states that the absence of rainy periods compromises even the permanence of the population in the place: "[...] family income here comes from agriculture. And with the lack of water, it is not possible to have this income, so it is very difficult to live here". For João (FGP2), the drought directly impacts the exercise of his occupation, resulting in an adverse situation: "I'm a fisherman, how am I going to fish in a dam that doesn't even have water? It is difficult".

This information highlights the fact that, in the semi-arid context, productions that depend on rainfall predominate while generating restricted monetary resources (Vidal, 2003). In addition, the losses in production culminate, in convergence with the data pointed out by the investigations of Favero (2012) and Camurça et al. (2016), with debt situations that further intensify the situation of being vulnerable to climate conditions, falling into another cyclical point of rural poverty perpetuation. Unfortunately, it is perceived in the daily lives of the residents that the drought industry still remains vivid as a force of subordination of the northeastern rural populations. Even though projects for mitigating drought effects, mentioned by Celso Furtado (2003), have brought important gains, they effectively lack greater expressiveness in the daily lives of residents. "[...] Droughts mistreat northeasterners a lot. And the hope of this year is to have a good winter so Ceará can be wealthy again. Business is very bad" (Amadeu, FGP4).

To be dependent on a natural phenomenon is to live in unpredictability and permanent expectation, where rain is understood as a guarantee of better living conditions for all: "Everyone is going to be fine if we have a good winter" (Valdomiro, FGP1). At a certain time, when the issue of the consequences of drought for the community was being debated in FGP2, the following conversation took place, which contributes to the understanding that there is a socially shared thought that the dignity of the community residents is under the control of weather conditions, whose variables themselves are uncontrollable and unpredictable:

Ernesto: I am a farmer. I've lost everything, I've lost [...]

João: It's all connected. The water is gone, everything is gone.

Paulo: Without water, there's no life. Everything is dry. [...] The work stopped. It's stopped.

---

One of the strategies to deal with the adversities is the formulation of magical explanations about the origin of the effects of climate change. In other words, fatalism can be considered as a strategy to survive the scenario of climate change and intensification of rural poverty. Martín-Baró (1998) points out that the reproduction of an unequal structure of society can develop fatalistic attitudes due to the lack of existing opportunities for change. These are contents that refer to the idea of drought as a phenomenon that is in the domain of faith in a deity. It will show itself to be kind and welcoming, guaranteeing some intervention to benefit the population through the rains. In the words of Juvenal (FGP2), whose content was similarly presented by other residents: "Here there is drought and lack of water, right? So, we have to wait for God's will [...]". Edna (FGP2) also explains her belief in God's will: "But we have faith that this will still come back here, right? It depends on the good winter. If God wills, the school will have its vegetable garden again". It is not a question, however, of affirming that the inhabitants of rural areas who experience drought are apathetic and satisfied with the situations of instability with which they live, but rather that they are urgent "(...) the subjective risks and the harmful psychosocial effects that underlie the daily life of deprivation in rural contexts marked by drought" (Camurça et al., 2016). Among these deprivations, it is worth remembering, is the issue of precarious access to water as a basic need not only for agricultural production, but mainly for human consumption.

However, precarious access to water was a recurrent content in the qualitative account of the Pentecoste residents, and it was not considered in the focus groups as an issue lived in Cascavel. In Leticia's (FGP1) speech, the difficulties in access to water put in question the evaluation of the quality of life in the community. She says: "[...] in Providence, housing is good, water is difficult to get". Even when there is piped water, one characteristic is that its supply is episodic and discontinuous, leading residents to acquire it by other means of concession than the supply by the public agency: "[...] water, here, every other day. Sometimes people have to pay for water, you see?" (Joana, FGP1).

In Pentecoste, the residents live with the issue of water within a polarized system. At one end, there is no rainfall and at the other, there is abundance. When there is no rain, the low water supply ends up contributing to the indebtedness of the population, who needs to buy it for basic actions like drinking, cooking and personal hygiene. Carmem (FGP4) talks about the difficulties in maintaining the basic care necessary for her home and her two young children:

Here, the situation is so serious that, at least in my case, in my household, I have to buy water...there is this boy who has a well, he sells water. A one-thousand-liter water tank costs R\$ 20 [\$ 4,00 dollars]. I have to buy it so that I can do the laundry, the dishes, and I don't have water. I have to buy it, R\$ 20 [\$ 4,00 dollars] a water tank and it is far from enough.

There are situations where the purchase of water competes with the acquisition of food. Madalena (FGP4) says that "[...] many families take it out of their mouths to buy the water. You have to use the little money you have for buying food to buy the water". With the decrease in the incidence of rain, the water supplied to the region is of low quality, being, in certain cases, improper for human consumption. On the price of drinking water, Marluce (FGP3) reveals his concern: "Water is very pricy, that is the worst. I'm paying R\$ 3.50 [\$ 0.70] for a bottle of water and that is a lot of money". On the other hand, when there is rain in excess, especially in Providencia, the absence of paved roads and, therefore, of an infrastructure that connects the community to the municipal headquarters, results in the isolation of the district and the impossibility for residents to come and go. According to Joana (FGP1), "[...] it rains a lot here, we get stranded, right?".

---

The death of vegetation and the alteration of the landscape in the periods of absence of rainfall are indicators of the impacts of drought on the lives of residents. The residents of the Serrota (Pentecoste) community had the habit of planting flowers and vegetables in their homes and collective gardens, such as the local school. However, Neide (FGP2) says "Now there are no more flowers, but in the past, there was a lot. But because of the drought [...]". The residents expressed sorrow at the change in the vegetation, which seems to disfigure the meaning of life in the countryside: "I took this image because ... just ... nature, right? Green. But here in the countryside there is no place like this anymore" (André, FGP2).

The way residents of rural areas experience the impacts of climate variables reveals the set of socioeconomic vulnerabilities with which they live. Thus, the picture of the deprivation experienced in the rural context still remains and has been intensified by climate change, such as global warming. It is important to discuss the political, economic, and ideological interests of holding only the poor responsible for their context and the impacts experienced by climate change. The naturalization of drought among residents shows how much people's well-being and lack of mobilization is being affected by their lack of capabilities to the point of interfering with the recognition of the precariousness in which they live (Edwards, Reid, & Hunter, 2015). Actions of confrontation and political mobilization require, previously, that strategies of awareness be worked on the affected communities about the condition of injustice that prevents them from adapting to climate change.

#### **4. Conclusion**

Understanding the impacts of climate change on rural poverty allows for the understanding of objective and subjective conditions for the perpetuation of poverty. Thus, this psychosocial view of rural poverty is necessary to avoid the invisibility of asymmetric relations of access to income, public policies, and participation in economic and political decision-making. Thus, the social significance of poverty can be questioned as something natural, not capable of concrete transformation, intrinsic to its daily experiences and rural life. And finally, it provides society with the possibility of understanding the specificities of rural poverty and its macrosocial and microsocioal relations, while critically questioning climate change and its impacts on everyday life.

Although records have been made of the impacts of climate change in northeastern and southern Brazil, participants from the rural area have highlighted how these implications impact their daily lives more intensely. In the research, the territory with the highest expression of poverty was the most vulnerable to the effects of climate change. Community Psychology attempts to problematize the historical roots of collective suffering, playing a relevant role in denouncing social inequalities in the countryside. Moreover, it must be able to act on the development of psychosocial interventions that contribute to the disruption of the conception of the effects of climate change as something natural and immutable. In addition, it should propose local groups with emphasis on popular and political mobilization aimed at mitigating the effects of climate change and multidisciplinary intervention in order to reduce the implications of these effects on the public health of the population living in rural areas.

One of the main limitations of this study is that it did not create focus groups with people in extreme poverty. Research participants had minimal support from social movements or public policies. It is known that the reality of poverty deprivation is more intense for populations without any social support whatsoever, living in remote rural areas, and who are more vulnerable to the impact of climate change.

---

## Acknowledgement

Thanks to the National Council for Scientific and Technological Development of the Federal Government of Brazil.

## References

- Accorssi, A. (2011). *Materializações do pensamento social sobre a pobreza* (Doutorado em Psicologia Social). Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, RS, Brasil.
- Barbier, E.B., & Hochard, J.P. (2018). The impacts of climate change on the poor in disadvantaged regions. *Review of Environmental Economics and Policy*, 12(1), 26–47. <https://doi.org/10.1093/reep/rex023>
- Bardin, L. (2011). *Análise de Conteúdo*. Edições 70.
- Buainain, A.; Dedecca, C.; & Neder, H. (2012). Pobreza rural: Pontos para agenda de políticas públicas. In C. Miranda & B. Tiburcio (Eds.), *A nova cara da pobreza rural: Desafios para as políticas públicas* (pp. 505-534). IICA.
- Campos, C.S.S. (2011). *A face feminina da pobreza em meio à riqueza do agronegócio: Trabalho e pobreza das mulheres em territórios do agronegócio no Brasil – o caso de Cruz Alta/RS*. CLACSO/Expressão Popular.
- Camurça, C.E.S., Alencar, A.B., Cidade, E.C., & Ximenes, V. M. (2016). Implicações psicossociais da seca na vida de moradores de um município da zona rural do nordeste do Brasil. *Avances en Psicología Latinoamericana*, 34(1), 117-128. <https://10.12804/apl34.1.2016.08>
- Carignano, J. (2016). *Câmara de Cascavel-PR presta solidariedade ao Acampamento 1º de maio*. <http://www.mst.org.br/2016/06/22/camara-de-cascavel-pr-presta-solidariedade-ao-acampamento-1o-de-maio.html>.
- Castillo, R., Elias, D., Peixinho, D., Buhler, E. A., Pequeno, R., & Frederico, S. (2016). Regiões do agronegócio, novas relações campo-cidade e reestruturação urbana. *Revista da Anpege*, 12(18), 259-282. <https://doi.org/10.5418/RA2016.1218.0014>
- Comim, F.V., Porto JR., S., Ferreira Moura, JR., J., & Pengo Bagolin, I. (2016). Sem pobreza, mas com “fomes”: visões econômicas e psicológicas. In V. M. Ximenes, B. B. Nepomuceno, E. C. Cidade, & J. F. Moura Júnior (Eds.), *Implicações psicossociais da pobreza: Diversidades e resistências* (pp. 17-44). Expressão Gráfica e Editora.
- Crespo, A.P.A. & Gurovitz, E. (2002). A pobreza como um fenômeno multidimensional. *Rae Eletrônica*, 1(2), 1-12. <https://rae.fgv.br/rae-eletronica/vol1-num2-2002/pobreza-como-fenomeno-multidimensional>
- Dantas, C.M.B., Dimenstein, M., Leite, J.F. & Torquato, J. (2018). A pesquisa em contextos rurais: Desafios éticos e metodológicos para a psicologia. *Psicologia & Sociedade*, 30. <http://dx.doi.org/10.1590/1807-0310/2018v30165477>
- Dedecca, C.; Buainain, A.; Neder, H.; & Trovão, C. (2012). Uma abordagem multidimensional da pobreza rural segundo a perspectiva da política pública. In C. Miranda & B. Tiburcio (Eds.), *A nova cara da pobreza rural: Desafios para as políticas públicas* (pp.17-54). IICA.
- Edwards, G.A.S, Reid, L., & Hunter, C. (2016). Environmental justice, capabilities, and the theorization of well-being. *Progress in Human Geography*, 40(6), 754-769. <http://dx.doi.org/10.1177/0309132515620850>
- Favareto, A. & Seifer, P. (2012). Definir o rural brasileiro e algumas tendências recentes: implicações para políticas de desenvolvimento e combate à pobreza. In C. Miranda & B.

- 
- Tiburcio (Eds.), *A nova cara da pobreza rural: Desafios para as políticas públicas* (pp.55-106). IICA.
- Favero, E. (2012). *O impacto psicossocial das secas em agricultores familiares do Rio Grande do Sul: Um estudo na perspectiva da psicologia dos desastres* (Tese de Doutorado em Psicologia). Universidade Federal do Rio Grande do Sul - UFRGS, Porto Alegre, RS, Brasil.
- Favero, E; Sarriera, J.C., & Trindade, M.C. (2014). O desastre na perspectiva sociológica e psicológica. *Psicologia em Estudo*, 19(2), 201-209. <http://dx.doi.org/10.1590/1413-737221560003>
- Flick, U. (2009). *Introdução à Pesquisa Qualitativa*. Artmed.
- Furtado, C. (2003). *Formação econômica do Brasil*. 32. ed. Companhia Editora Nacional.
- Guerra, A., Pochmann, M., & Silva, R.A. (2014). *Atlas da exclusão social no Brasil: Dez anos depois*. Cortez.
- Helfand, S., & Pereira, V. (2012). Determinantes da pobreza rural e implicações para as políticas públicas no Brasil. In C. Miranda & B. Tiburcio (Eds.), *A nova cara da pobreza rural: desafios para as políticas públicas* (pp. 121-160). IICA.
- Heltberg, R. (2002). *The poverty elasticity of growth. Discussion Paper no. 2002/21*, United Nations University/ World Institute for Development Economics research. <https://www.wider.unu.edu/sites/default/files/dp2002-21.pdf> .
- Instituto Brasileiro de Geografia e Estatística. (2011). *Censo Demográfico 2010: Resultados Preliminares do Universo*. Ministério do Desenvolvimento Social e Combate à Fome (MDS): Brasília.
- Instituto Brasileiro de Geografia e Estatística. (2019a). *Panorama de Cidades 2019: Cascavel*. <https://cidades.ibge.gov.br/brasil/pr/cascavel/panorama>.
- Instituto Brasileiro de Geografia e Estatística. (2019b). *Panorama de Cidades 2019: Pentecoste*. <https://cidades.ibge.gov.br/brasil/ce/pentecoste/panorama>.
- Instituto de Pesquisa Econômica Aplicada (IPEA) (2015). *Políticas sociais: Acompanhamento e análise*, 23.Ipea.
- Landini, F.P. (2015). La noción de psicología rural y sus desafíos en el contexto latino-americano. In F. P. Landini (Ed.), *Hacia una psicología rural latino-americana* (pp. 21-32). CLACSO.
- Leite, J.F., Macedo, J.P.S., Dimenstein, M., & Dantas, C. (2013). A formação em Psicologia para atuação em contextos rurais. In J. F. Leite & M. Dimenstein (Eds.), *Psicologia e contextos rurais* (pp. 27-55). EDUFRN.
- Leite, J.F. (2015). Movimentos sociais e ruralidades no Brasil. In F. P. Landini (Eds.), *Hacia una psicología rural latino-americana* (pp. 97-102). CLACSO.
- Levy, B.S., & Patz, J.A. (2015). Climate change, human rights, and social justice. *Annals of Global Health*, 81(3), pp.310–322. <http://doi.org/10.1016/j.aogh.2015.08.008>
- Lustosa, M.G.O. P. (2012). *Reforma agrária à Brasileira: Política social e pobreza*. Cortez.
- Maia, A.G., & Buainain, A.M. (2015). O novo mapa da população rural brasileira. *Confins*, 25, 1-26. <https://doi.org/10.4000/confins.10548>
- Maluf, R., & Mattei, L. (2011). Elementos para construção de uma agenda de políticas públicas para o enfrentamento da pobreza rural. In C. Miranda, C. & B. Tibúcio. (Eds.), *Pobreza Rural: Concepções, determinantes e proposições para a construção de uma agenda de políticas públicas* (pp. 15-26). IICA.
- Martín-Baró, I. (1998). *Psicología de la Liberación*. Editorial Trotta.
- Mikulewicz, M. (2018). Politicizing vulnerability and adaptation: On the need to democratize local responses to climate impacts in developing countries. *Climate and Development*, 10(1), 18-34. <https://doi.org/10.1080/17565529.2017.1304887>
- Minayo, M.C.S., & Minayo-Gómez, C. (2003). Difíceis e possíveis relações entre métodos quantitativos e qualitativos nos estudos de problemas de saúde. In P. Goldenberg, R. M. G.
-

- 
- Marsiglia, & M. H. A. Gomes (Eds.), *O Clássico e o Novo: Tendências, objetos e abordagens em ciências sociais e saúde* (pp. 117-142). Editora FIOCRUZ.
- Minayo, M.C.S., Deslandes, S.F., & Gomes, R. (2010). *Pesquisa Social: Teoria, método e criatividade*. 29. ed. Vozes.
- Montaño, C. (2012). Pobreza, "questão social" e seu enfrentamento. *Serviço Social & Sociedade*, 110, 270-287. <https://doi.org/10.1590/S0101-66282012000200004>
- Moura, J.F., Almeida, D.S.A., & Barbosa, V.N.M. (2019). The stigmatization of poverty as a basis of the class prejudice and its psychological consequences. In V. Ximenes, J. Moura Jr., E. Cidade, & B. Nepomuceno (Eds.), *Psychosocial Implications of Poverty* (pp 47-57). Springer.
- Nash, N., Capstick, S., Whitmarsh, L., Chaudhary, I., & Manandhar, R. (2019). Perceptions of local environmental issues and the relevance of climate change in Nepal's Terai: Perspectives from two communities. *Frontiers in Sociology*, 4(60). <http://dx.doi.org/10.3389/fsoc.2019.00060>
- Panigassi, G., Segall-Corrêa, A.M., Marin-León, L., Pérez-Escamilla, R., Sampaio, M.F.A., & Maranhã, L.K. (2008). Insegurança alimentar como indicador de iniquidade: Análise de inquérito populacional. *Cadernos de Saúde Pública*, 24(10), 2376-2384. <https://doi.org/10.1590/S0102-311X2008001000018>
- Pizzinato, A., Hamann, C., Machado, R.O., & Strey, M.N. (2015). Relações de gênero e ruralidade nos projetos vitais e noções de si de jovens mulheres. *Fractal: Revista de Psicologia*, 27(3), 247-255. <http://dx.doi.org/10.1590/1984-0292/1484>
- PNUD, Programa das Nações Unidas para o desenvolvimento. (2013). *Atlas do Desenvolvimento Humano do Brasil*. O IDMH. [http://www.atlasbrasil.org.br/2013/pt/o\\_atlas/idhm/](http://www.atlasbrasil.org.br/2013/pt/o_atlas/idhm/)
- Otto, I., Reckien, D., Reyer, C.P., Marcus, R., Masson, V., Jones, L., Norton, A., & Serdeczny, O. (2017). Social vulnerability to climate change: A review of concepts and evidence. *Regional Environmental Change*, 17, 1651-1662. <http://dx.doi.org/10.1007/s10113-017-1105-9>
- Santos, G.R., Pales, R.C., & Rodrigues, S.G. (2014). Desigualdades Regionais no Brasil – 1991-2010. *InterScience Place*, 1(31), 145-173. <http://www.interscienceplace.org/isp/index.php/isp/article/view/304/301>
- Sawaia, B. (2009). O sofrimento ético-político como categoria de análise da dialética exclusão/inclusão. In B. Sawaia. (Ed.), *As artimanhas da exclusão: Análise psicossocial e ética da desigualdade social* (pp. 97-118). Vozes.
- Sen, A. (2011). *A ideia de justiça*. Companhia das Letras.
- Silveira, D.T., & Córdova, F. P. (2009). A pesquisa científica. In T. E. Gerhardt & D. T. Silveira (Eds.), *Métodos de pesquisa* (pp. 31-42). Editora da UFRGS.
- Souza, J. (2018). *Subcidadania brasileira: para entender o país além do jeitinho brasileiro*. LeYa.
- Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Roberts, J. T., Rockman, M., Warner, B.P., & Winthrop, R. (2019). Explicando a vulnerabilidade diferencial às mudanças climáticas: Revisão científica. *Wiley Interdisciplinary Reviews: Climate Change*, 10(2), 1-18. <https://doi.org/10.1002/wcc.565>
- Wanderley, M.N.B.; & Favareto, A.A. (2013). Singularidade do rural brasileiro: Implicações para as tipologias territoriais e a elaboração de políticas públicas. In C. Miranda, & H. Silva (Eds.). *Concepções da ruralidade contemporânea: as singularidades brasileiras* (pp. 413-473). IICA.
- Valverde, M.C. (2017). A interdependência entre vulnerabilidade climática e socioeconômica na região do ABC paulista. *Ambiente & Sociedade*, 20(3), 39-60. <https://doi.org/10.1590/1809-4422asoc66r2v2032017>

- 
- Vasquez, G.C.F.A. (2009). Psicologia na área rural: Os assentamentos da reforma agrária e as mulheres assentadas. *Psicologia Ciência e Profissão*, 29 (4), 856-867. <https://dialnet.unirioja.es/servlet/articulo?codigo=5868356>
- Vidal, F.C.B. (2003). A problemática do semi-árido nordestino à luz de Celso Furtado: Permanência da pobreza estrutural. In *Superintendência de estudos econômicos e sociais da Bahia. Pobreza e desigualdades sociais* (pp.197-217). SEI.
- Yin, R.K. (2016). *Pesquisa Qualitativa do início ao fim*. Penso.