

Rural-urban migration caused by educational needs in the Middle Solimões, Amazonas

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ABSTRACT

This paper aims to analyze the relationship between rural-urban migration and education in the context of a traditional riverside population of the Amanã Sustainable Development Reserve (*Reserva de Desenvolvimento Sustentável Amanã*), in the State of Amazonas, Brazil. This paper is also aimed at identifying how the context of migration in the conservation unit differs from other studies related to educational inequalities. Quantitative data Demographic and Economic Monitoring System the Mamirauá Sustainable Development Institute (*Sistema de Monitoramento Demográfico e Econômico do Instituto de Desenvolvimento Sustentável Mamirauá*) were used to compare the changes in the migratory and educational context of 69 rural locations in the Amanã Sustainable Development Reserve, 568 households in 2011 and 676 in 2018. The results showed an increase of 71% in rural-urban migration due to educational factors, and a change in the educational profile of residents, highlighting a new demand for education in the area. The unmet educational need has influenced the migratory decisions of the residents, a consequence of the distance between educational policies and the reality of the rural Amazon region.

KEYWORDS

rural education; educational policies; rural-urban displacement; conservation unit.

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MIGRAÇÃO RURAL-URBANA POR DEMANDA EDUCACIONAL NO MÉDIO SOLIMÕES, AMAZONAS

RESUMO

Este artigo aborda a relação entre migração rural-urbana e educação no contexto das populações tradicionais ribeirinhas moradoras da Reserva de Desenvolvimento Sustentável Amanã, no estado do Amazonas. Objetiva identificar como o contexto das migrações por fatores educacionais nessa unidade de conservação difere dos estudos que discutem a relação entre migração e educação. Foram usados dados quantitativos Sistema de Monitoramento Demográfico e Econômico do Instituto de Desenvolvimento Sustentável Mamirauá que comparam as mudanças no contexto migratório e educacional de 69 localidades rurais da Reserva de Desenvolvimento Sustentável Amanã, 568 unidades domésticas em 2011 e 676 em 2018. Os resultados demonstraram aumento de 71% nas migrações rurais-urbanas por fatores educacionais e mudança no perfil educacional dos moradores, que revela novas demandas por educação na área. A demanda educacional não atendida tem influenciado nas decisões migratórias dos moradores, consequência do distanciamento entre as políticas educacionais e a realidade presente no rural amazônico.

PALAVRAS-CHAVE

educação no rural; políticas educacionais; deslocamento rural-urbano; unidade de conservação.

MIGRACIÓN RURAL-URBANA POR DEMANDA EDUCATIVA EN EL MEDIO SOLIMÕES, AMAZONAS

RESUMEN

Este artículo tuvo el objetivo de analizar la relación entre la migración rural-urbana y la educación en el contexto de las poblaciones tradicionales ribereñas que habitan en la Reserva de Desarrollo Sostenible Amanã (*Reserva de Desenvolvimento Sustentável Amanã*), en el estado de Amazonas. Tiene como objetivo identificar cómo el contexto de la migración por factores educativos en esta unidad de conservación difiere de los estudios que discuten la relación entre migración y educación. Se utilizaron datos cuantitativos (*Sistema de Monitoramento Demográfico e Econômico do Instituto de Desenvolvimento Sustentável Mamirauá*) para comparar los cambios en el contexto migratorio y educativo de 69 localidades rurales en el Reserva de Desarrollo Sostenible Amanã, 568 unidades domésticas en 2011 y 676 en 2018. Los resultados muestran un aumento del 71% en las zonas rurales-urbanas, migraciones por factores educativos, y un cambio en el perfil educativo de los residentes, señalando nuevas demandas de educación en dicha zona. Asimismo, la demanda educativa insatisfecha ha influido en las decisiones migratorias de los residentes, consecuencia del distanciamiento entre las políticas educativas y la realidad presente en la Amazonía rural.

PALABRAS CLAVE

educación no rural; políticas educativas; desplazamiento rural-urbano; unidad de conservación.

INTRODUCTION

Migration studies show a diversity of concepts and theoretical approaches related to specific areas interested in discussing this topic (Cunha, 2011; Ojima *et al.*, 2014). In addition to the theoretical diversity, analyzing migration movements involves different motivations, which vary among individuals, as well as among flows, associated with different aspects, such as migration motivated by marriage, work, and educational factors.

Study-motivated migration is characterized as a type of population movement that has been growing in recent years due to reasons that include social and economic changes that have influenced young people's migration from rural areas (Silvestro *et al.*, 2001; Zago, 2016), study-motivated international migration (Ojima *et al.*, 2014), and even access policies to education by immigrants (Bartlett, Rodríguez and Oliveira, 2015).

This paper discusses the relationship between migration and education based on rural-urban displacement. We will present a case study conducted with traditional riverside populations of the Middle Solimões¹ region, residents of the Amanã Sustainable Development Reserve (Amanã RDS — in Portuguese, *Reserva de Desenvolvimento Sustentável — RDS Amanã*)², a Sustainable Use Conservation Unit located in the State of Amazonas, Brazil. We aim to identify how the migration context caused by educational factors in this area differs from other investigations dealing with this research topic (Silvestro *et al.*, 2001; Zago, 2016). We start from the hypothesis that regional differences, in terms of educational policies designed for these populations, do not meet their educational demands within RDS localities, motivating displacements caused by educational factors.

Migration based on these factors has stood out as one of the conditions for rural-urban migration of Amanã RDS residents. Studies by Martins, Nascimento and Corrêa (2017) and Martins (2017) show that 47.4% of the migrations occurring in this area were educationally motivated. However, research to understand the context of these migrations remains scarce, mainly due to the issue of the local/regional scale of that information and limited official data gathered by the government. Therefore, we have used the Demographic Census carried out by the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística* — IBGE, 2000), which has some limitations in grasping the motivational aspects of migrant individuals.

1 Middle Solimões is a state of Amazonas administrative division, formed by the Municipalities of Tefé, Coari, Tonantins, Fonte Boa, Alvarães, Uarini (Alencar and Sousa, 2016).

2 Based on art. 2º, item II of law no. 9.985, of July 18, 2000, which established the Brazilian System of Conservation Units (*Sistema Nacional de Unidades de Conservação* — SNUC), conservation units are “territorial space and their environmental resources, including jurisdictional waters, with relevant natural resources, legally established by Government, with specific conservation objectives and limits, under a special administration regime, to which adequate protection guarantees apply” (Brasil, 2000).

This type of study is important to guide the educational policies directed to the rural Amazonian populations and, in the context of the conservation units, to provide tools to devise social development strategies for the communities living in these areas.

The article is divided into three levels of discussion: the first one will address the correlation between migration and education, discussing how this theme is being addressed and how it differs from the context of Amanã RDS localities; the second one discusses the main data of the research in the light of the context of educational policies; and the third one shows the results, highlighting the challenges for education in the State of Amazonas rural areas.

MIGRATION FOR EDUCATION IN THE RURAL-URBAN DYNAMIC CONTEXT

Migration is one of the most complex demographic variables in terms of definition and measurement. The definition covers such broad terms that they could comprise a wide range of very different phenomena (De Oliveira and De Oliveira, 2011), not restricted to people who move across certain boundaries to establish a new permanent residence elsewhere (Domenach and Picouet, 1990). Measurement is limited as to how data can be obtained, given the complexity of defining the concept (Cunha, 2005).

Studies on migration movements have advanced to increasingly look towards the migrant as an individual who decides to migrate on their own, as opposed to the view of a class movement (Singer, 1980). In this respect, Courgeau (1990) considers that migration cannot be merely treated as a mathematical model, defining dependent and independent variables that act on the behavior of individuals. It should be treated as a process that involves other dimensions of the personal, family, and professional lives of migrants. This implies gathering data that include such dimensions, thereby making migration studies increasingly complex, especially when measuring data, which require information not covered by the demographic census.

In the Brazilian demographic census, the variables related to migratory movements allow us to identify the volume, flows, intensity, and characteristics of migrants, which permit us to cross-reference them with socioeconomic variables. However, the survey has limitations in terms of periodicity and does not have a very flexible spatial delimitation, compromising comparative reflections. Moreover, it does not allow us to capture certain facets of migration movements, such as the migrants' individual motivations, migration trajectories, and family strategies for migration (Cunha, 2015).

In the 1950s and 1960s, migration studies focused on understanding rural-urban movements (Cunha, 2015), therefore, migration³ issues were addressed to understand the specificities of these movements. Economic, social, and political transformations, at national and international levels, have highlighted other distinct movements, such as interregional, intraregional, and international migrations, and

3 The questions about migration “aim to study the movements and main migratory flows within the country, the characteristics of the people who migrate and those who do not migrate, and to provide subsidies for the carrying out of population projections” (IBGE, 2000, p. 103).

pendular and seasonal mobility (Cunha, 2005; De Oliveira and De Oliveira, 2011; Baeninger, 2012), requiring new methodological efforts.

The characteristics of contemporaneous migrations make commonly used analytical categories lose their breadth (Nascimento and Ojima, 2014). Therefore, studies on rural-urban migration have become increasingly reduced, with scientific literature that is little explored in contemporary times. Theoretical and methodological challenges are progressively more common in population displacement analyses.

When we address the relationship between migration and education, the literature focuses mainly on international migration, which has gained “strength in recent years, especially due to the existence of agreements that favor the exchange of students in the country” (Ojima *et al.* 2014, p. 166). Discussions on rural-urban migration motivated by educational factors have received little attention, and when explored, result in secondary analyses.

Based on a literature survey, we observe that there is vast literature discussing the Brazilian rural educational context, such as studies by Carmo and Prazeres (2015) and Borges (2017), which deal with educational policies in the Amazonian context; Teruya *et al.* (2013) and Parente (2014), on the challenges of multigrade schools in rural Brazil; and Favareto (2014, p. 1.138), who contributed greatly to breaking with the “agrarian paradigm that has sustained the scientific and normative views of the rural world throughout the 20th century”. Nonetheless, studies addressing rural-urban migration due to educational factors are rare.

About this approach, we have highlighted research conducted by Zago (2016), which looks more specifically at the context of youth migration for higher education purposes in southern Brazil. In her study, the author focuses mainly on an analysis of the youth’s educational demands and perspectives between migrating and staying on the farm. According to the author, youth migration is a reflection of the impacts of agricultural production on producers, caused by the difficult economic and labor conditions of this activity. She emphasizes that “the migration of children and the investment in college education are not isolated from the social conditions of peasant reproduction, from the strong social appeal for expanding formal education, and from the new urban labor market demands” (Zago, 2016, p. 13).

Studies by Silvestro *et al.* (2001), although focused more specifically on the social setbacks related to hereditary succession in family farming, outline a scenario that precedes that of Zago (2016), when he discusses the departure of young people from rural areas, especially women, due to educational factors. The research by Silvestro *et al.* (2001) results from the demographic changes that have occurred in rural areas. They present an older and more male-oriented profile compared to the past, a result not only of land succession factors, but also of young people’s and families’ own personal aspirations.

Despite offering significant contributions to the rural educational context, the aforementioned studies deal with a different reality from those of the traditional riverside populations. They list several specificities of rural education; however, when considered in the context of mobility motivated by education, they converge on the same set of factors, related to regional inequalities of educational policies in rural areas.

In Amanã RDS rural communities, the existing inequalities in terms of public policies and access to education have influenced migratory decisions, which should be contemplated by educational indicators. To some extent, the absence of studies that contemplate this scale of investigation is justified because there are no variables to measure the dynamics in focus. This scenario is closely related to the theoretical complexity associated with migratory movements, which have become increasingly diversified, and to changes that have occurred in terms of migration since the year 2000 Brazilian demographic census. This Census included information about the municipality of the previous residence, which influenced studies about rural-urban migration on an intra-municipal scale.

THE SCHOOL CONTEXT IN RURAL AMAZONAS

Moving into a discussion about the educational context of the Amanã RDS localities initially requires a review of the educational policies in force in the municipalities of the Amazonas State. Over the years, the state has implemented a series of programs in an effort to meet the educational demands of the countryside of the state.

Education in rural areas forces educational policies to address specific elements, such as multigrade education, the existence of nucleated schools, the time and distances traveled by students, how teachers and staff will reach the school, and the use of teaching materials, which are usually alien to the culture and way of life of the population in the Amazon rural areas (Arroyo, 1999). When this scenario is superimposed on the Amazonian reality, these issues gain new depth and new contours, mainly because there are different rural areas in the Brazilian Amazon (FAS and UNICEF, 2017).

The geographic characteristics of the Amazon region impose constraints to the population associated with the environmental dynamics of the area itself (FAS and UNICEF, 2017). Natural phenomena, such as river floods and droughts, compromise the transportation logistics between communities, which, associated with the great distances, constitute some of the challenges to be overcome by students and school professionals. Therefore, educational policies should consider the environmental, organizational, and livelihood dynamics of these populations.

In addition to the region's natural aspects, political decisions also play an important role. Governmental decisions affect the dynamics of life in rural communities. In this regard, the problems of scale and the capillarity of public actions stand out, especially in the State of Amazonas, where there are numerous conflicts between federal guidelines and the practices occurring in the municipalities (FAS and UNICEF, 2017).

Jardim and Oliveira (2017), in a paper on education policies in the rural areas of Amazonas, highlight the role of the state's Municipal Secretariats of Education in translating and adapting the Brazilian National Education Law (*Lei de Diretrizes e Bases da Educação Nacional* — LDB) (Brasil, 1996), which emphasizes everyone's right to education regardless of age and location. As for the countryside, the most significant measure to adjust to the new guidelines was the adoption of the nu-

cleated schools model, or pole schools, in rural schools of the State of Amazonas (Carmo and Prazeres, 2015).

A multigrade class is a class consisting of two or more different grade levels inside a single classroom handled by one teacher teaching different subjects. Souza and Gonçalves (2018) address the concept of a single-teacher school in their study of multigrade schools in the Amazon region, which “refers to the work regime where one teacher provides their students with all the domains of the different curricular areas” (Souza and Gonçalves, 2018, p. 217).

Although the phenomenon of single teacher and multigrade schools also occur in urban areas, it is more prevalent in rural areas. In the Amazonian context, the well-known difficulties faced by teachers who have to teach different subjects at different school grades have their own nuances. As an example, most of these teachers working by themselves are not specialized and need to adjust curriculum guidelines according to the expectations and way of life of the local population (Souza and Gonçalves, 2018). Despite their precariousness, multigrade classes are legally supported through the so-called Active School Program (*Programa Escola Ativa* — PEA). This program, which began in 1997, aims to improve the school performance of enrolled students through specific pedagogical resources, such as teacher training and the delivery of a technology kit, composed of computers and printers (INEP, 2007).

Nucleation, on the other hand, consists of gathering, in a single school, students from small schools, with fewer than 21 students. To do so, smaller schools are closed and students are transferred to the so-called nucleated schools. As indicated by Jardim and Oliveira (2017), this practice was first adopted by Municipal Education Secretariats in the year following the enactment of the LDB/96. According to the authors, the higher concentration of students in a single school is intended to influence how funds from the Fund for Development and Maintenance of Basic Education and the Valorization of Teaching (*Fundo de Desenvolvimento e Manutenção do Ensino Fundamental e Valorização do Magistério* — FUNDEF) are transferred, where the resources allocated to each school are determined by the number of students enrolled in the unit.

The nucleation design was inspired by the Northeast Project (Jardim and Oliveira, 2017) and aimed to identify the major problems of public schools in that region. Theoretically, studies and surveys should be conducted before opting for nucleation, taking into account the sociodemographic characteristics of each location where a small school would be closed and nucleated schools would be created. According to research by Jardim and Oliveira (2017), these studies and surveys have not been conducted in the State of Amazonas.

Although controversial, the Municipal Secretariats support nucleation because they claim that nucleated schools offer better infrastructure and single-classroom teaching, therefore, improving the quality of learning. On the other hand, there are fewer teachers and fewer school professionals per student, and no evidence of improvement in the infrastructure of school facilities. Meanwhile, the multigrade classes remain active and are supported by the Active School Program (Jardim and Oliveira, 2017).

Furthermore, the school nuclei themselves were defined by the public administration without hearing the communities involved. This practice violates participatory management as set forth by the LDB (law n. 9.394/1996), whereby students, parents, teachers, and others persons involved with school life should have a voice in decisions about the course and destiny of their schools. Therefore, we consider schools to be the community's reference, not limited to a teaching and learning space, as observed by Jardim and Oliveira (2017, p. 7): "both community members and the Church resist the removal of the school from their community because any removal of this social integration point causes a loss of its socio-cultural value compared to other communities".

The implementation of LDB/96, which provides for a nationwide homogenization of education, had a direct impact on the daily lives of students living in these areas. The public administration of the State of Amazonas did not consider the specific characteristics of the Amazonian space and time, such as differences in commuting time and mode, which are subject to the time of the year and force students to a long journey from their homes to school (Jardim and Oliveira, 2017). The exit of students from their home communities has an impact on both individual school trajectories and the community's daily life (Arroyo, 1999; Borges, 2017). As for the individuals and students, the distance from their own culture and the necessity to migrate to another area in order to study, above all, create adaptation problems; sometimes, the insertion into the new location is precarious (Borges, 2017). It is also noteworthy that a child or young person's migration or displacement is not an individual project. It is a change that necessarily interferes with family life organization strategies and, even more so, with life in society. In other words, ensuring access to schools close to home, not only enforces the right to education, but also aims at the maintenance of local characteristics and traditions.

The enactment of LDB/96 also contributed to the development of other strategies to guarantee access to basic education in the countryside. In the context of this research, the organization and strengthening of educational provision for young people and adults who did not have access to school at the expected ages are worth mentioning. The Youth and Adult Education modality (*Educação de Jovens e Adultos* — EJA), also provided for in article 205 of the 1988 Federal Constitution, should be guaranteed by the Government as long as there is a demand for it (Ireland, 2012). In rural areas, where illiteracy and incomplete basic education are more prevalent, offering this type of education is absolutely necessary. However, according to a report by the Amazonas Sustainable Foundation (FAS and UNICEF, 2017, 2017), only 9% of rural schools in the State of Amazonas offer EJA.

Another relevant public policy to be discussed in this paper is the literacy programs implemented in rural areas. In the State of Amazonas, the Amazonas Literacy Program has been in effect since 2013, and it was created based on the now extinct literacy program *Rewriting the Future* (*Rescrevendo o Futuro*). Based on Paulo Freire's methodology, teaching literacy, Mathematics, environmental concepts, and sustainable development should take into account the student's time and daily life (Amazonas/SEDUC, 2013). This program, in conjunction with EJA and the Education Media Center, aims to settle an educational deficit with those

who were unable to access school during their childhood and youth (Amazonas/ SEDUC/Centro de Mídias de Educação do Amazonas, 2014).

This scenario of policies and programs corroborates the effort to guarantee the strategies adopted by LDB/96 to improve the quality of education in the countryside. Based on the situation of the Amanã RDS localities, we can identify that part of these programs has indeed reached the region. The multigrade education modality is predominant in all locations surveyed, while EJA and televised technological education are less widespread. In 2017, EJA was offered to 17 locations, and Pole Schools, which concentrate on televised technological education, were offered in just eight locations, a situation far from ideal.

In 2017, the educational scenario shows that, from the 69 localities analyzed, students attended classes in only 50 of them. Of these, 46 have their own school building, and, in the other 4, the classes are held at a resident's home, in the church, or the community center. This set of data shows that 19 localities had no schooling that same year, and that local children had to commute to nearby communities that did offer schooling.

Apparently, there is a large gap between what is intended in terms of educational policies designed to reach the rural areas and what really reaches the populations in these areas. We identified, in this review, that there is an educational offer in rural areas; however, it does not meet the existing demands. Moura *et al.* (2016) indicated, in their studies carried out at the Mamirauá Sustainable Development Reserve, contiguous to the Amanã RDS, a high discrepancy between school grade and age in the population of the municipalities surrounding this conservation unit, when compared to data on the Brazilian population. This is an important indicator because it measures the situation of these children and young people against the expected standards in their education process (Moura *et al.*, 2016).

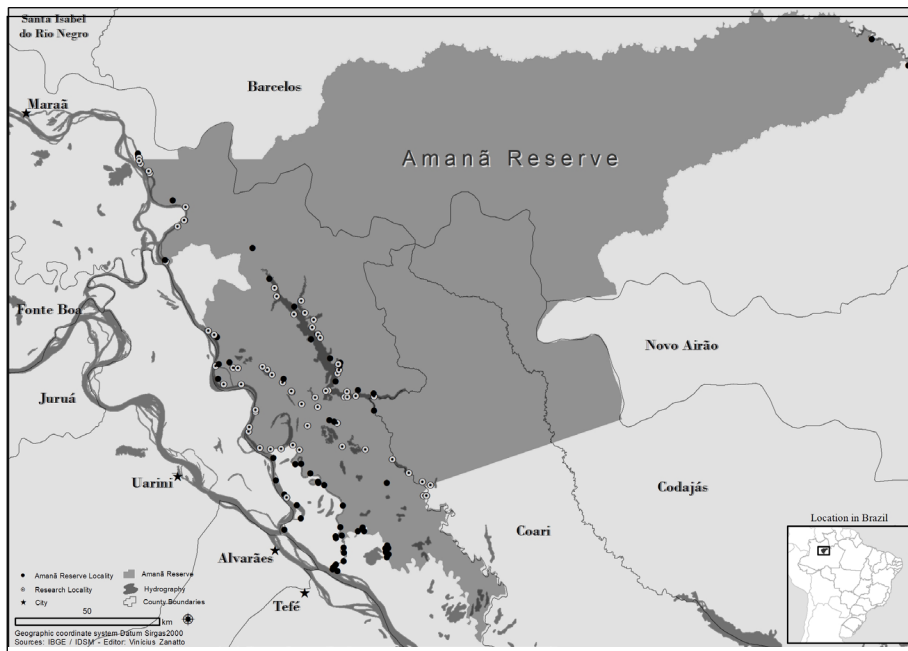
The policies also diverge on the necessary social infrastructure for their implementation. Access to electricity service is essential to the operation of technology-mediated education. However, data from the study show a lack of this service in most communities, as well as poor access in other locations, leading to intermittent school days. In order to reduce the number of school day interruptions caused by power shortages, some communities have agreed to pay for the costs of mini-thermoelectric plants, but such agreements only happen when families need electric power for other things, such as in their households. The nucleated school model also has some drawbacks in its application: lack of adequate transportation and fuel irregularities to move students between communities jeopardize school attendance. It is common to hear from parents who have taken on additional responsibility.

METHODOLOGICAL ASPECTS

STUDY AREA

The study area comprises rural localities located in the Amanã RDS, a sustainable use conservation unit under the management of the State of

Amazonas. Amanã RDS was created in 1998, with an area of 2,350,000.00 ha, covering part of the municipalities of Marã, Coari, Codajás, and Barcelos (Figure 1). It is located approximately 680 km away from Manaus by river in the middle course of the Solimões River. It integrates the territorial design of the Central Amazon conservation units, declared as a Natural World Heritage Site by United Nations Educational, Scientific, and Cultural Organization (UNESCO) (Member of the Complex of Protected Areas of the Central Amazon). The population in the area consists of 5,458 inhabitants, divided into 1,068 families in 133 localities, including the population of the buffer zone, the area surrounding the Amanã RDS (SIMDE, 2018). Its territory contains traditional populations whose existence is based on sustainable systems of exploitation of natural resources, with agriculture and extractivism as the main activities. The origins of these populations are primarily related to the different economic cycles in the Amazon and the migratory flows that have characterized the region's history (Santos, 1980; Santos, Machado and Seráfico, 2015).



RDS Amanã: *Reserva de Desenvolvimento Sustentável Amanã.*

Source: Instituto de Desenvolvimento Sustentável Mamirauá (2019).

Figure 1 – Location of Amanã Sustainable Development Reserve by municipal administrative political situation.

METHODOLOGICAL PROCEDURES

We used, as a research method, a case study carried out at Amanã RDS. We chose this methodological procedure to help understand the various dimensions of rural-urban migration and the educational context in question.

The analysis was centered on secondary data from a historical series of socio-demographic surveys conducted by the Mamirauá Sustainable Development Institute at the Amanã RDS, which form the database of the Demographic and Economic Monitoring System (*Sistema de Monitoramento Demográfico e Econômico* — SIMDE).

SIMDE offers records on the socio-demographic dynamics of the local population living in the Amanã RDS, which were collected using a methodology that differs from official population surveys. This is due to its scope of social analysis, its methodology in the construction of the object of investigation, and the proximity of researchers to the research subjects (Moura *et al.* 2016).

The data correspond to the following surveys: in 2011, during the months of February and April, when 86 locations with 648 households were visited; and in 2018, during the months of January, March, April, and July, with visits to 133 locations and 1,068 households. At the time, a questionnaire with 100 semi-structured questions was applied, grouped into the following themes: household characteristics; resident's characteristics; education; migration; births and deaths; socio-economic indicators; and access to social benefits.

For this study, the sample included only 69 rural localities, corresponding to 568 households⁴ in 2011 and 676 in 2018⁵. This cut-off allowed us to compare migration and educational context changes in a localized way, in the same rural localities surveyed in 2011 and 2018, providing better adherence to the analysis for the observed sample values.

The data were analyzed using descriptive statistics, selecting a set of variables relating to:

- migration of individuals, as people who migrated from their household during the interval corresponding to the intercensal period of data collection (2006–2010 for 2011 data; 2011–2017 for 2018 data);
- students living in the city, the criterion being those who were financially dependent on the household and were studying there during the year before the data collection; and
- teaching modalities attended by the residents of Amanã RDS and by those who were living and studying in the city in the year before the field survey.

In addition to these variables, we also present information relating to rural school infrastructure, highlighting the building, teaching modality, and school operations during the two periods investigated.

4 The domestic unit is a concept used by the IBGE in reference to the following private household aspects: a) the person who lived alone; or b) the group of people linked by kinship ties, domestic dependency or cohabitation norms (IBGE, 2011 p. 20).

5 We took, as units of analysis, the surveyed communities in both periods. Growth in the number of households that participated in the interviews corresponds to the increase in the number of families occurred between 2011 and 2018. A family was considered to be the group of people related by kinship ties in the domestic unit (IBGE, 2011).

THE CONTEXT OF MIGRATION DUE TO EDUCATIONAL NEEDS IN THE AMANÃ RDS

The migration context in the Amanã RDS exposes the complexity of migration movements, which vary according to the social context and socioeconomic situation occurring in the localities of the Reserve. These characteristics may be understood from Hazeu's (2015, p. 38) perspective when considering migration movements as part of a "set of unequal power relations; of people in motion or immobilized, connecting various spaces through social networks and flows."

The data show that, in recent years, changes have occurred in the migratory dynamics of the Amanã RDS which, despite having a small dynamic, has revealed spatial contexts that need to be considered, because they reveal flows that were not captured by the Brazilian demographic census conducted by the IBGE. These contexts are fundamental for directing actions aimed at the management of conservation units, especially those related to the dependence of these communities on the regional cities. As an example, we have the demand for health care services, access to education, the sale of agricultural and fishing production, the acquisition of consumer goods, among others.

The Comparative data for the years 2011 and 2018 show a 37% increase in the rural-urban Migration Balance (MB)⁶. In 2011, the MB corresponded to -16 migrants, becoming expressed by -41 migrants in 2018. This shows that the migrant population more than doubled from one period to another.

Concerning the profile of these migrants, most of them are young, with a predominance in the 15–19 and 20–24 age brackets. In 2011, male migration predominated, accounting for 57% (n=40) of emigrants. In 2018, this scenario changes, and women's migration became predominant, with 57% (n=63) of all emigrations.

The migrants' age composition shows that the rural-urban migration in Amanã RDS is characterized by selective migration, reflecting a young population at school age and economically active⁷. Now, women are the majority, corroborating the analysis of Camarano and Abramovay (1998) that, in Brazil, the migratory movements from the countryside towards the city are represented by populations much younger than in the past, and to a greater extent, by women. Up until the 1980s, the population leaving the rural areas was much more homogeneous; subsequently, a process of masculinization and aging of the rural population has been observed (Camarano and Abramovay, 1998; Silvestro *et al.*, 2001), in line with a reduction in fertility levels and an increase in life expectancy at birth, observed in recent years in Brazil.

The factors that justify these movements are complementary to those already presented by Pereira (2017) and Martins (2017) on the profile of migrant

6 The migratory balance (BS) represents the balance between entry (Immigration) and exit (Emigration during a certain period (BS=I-E).

7 The working-age population is the one concentrated in the 15 to 59 age group and capable of engaging in economic activity. In the case of the Amanã RDS, it is observed a considerable number of migrant population between 15 and 25 years of age.

individuals in Amanã RDS. The major motivators attributed to migration in the area are: marriage, work, and education. Of the highlighted aspects, those related to education have stood out in recent years, showing percentages of 31% in 2011 and 44% in 2018, an increase of 55% between the two periods (Table 1).

Table 1 – Reasons for rural-urban displacements in Amanã Sustainable Development Reserve, 2018.

Reason	2011 Absolute Frequency	%	2018 Absolute Frequency	%
Educational Factors	22	31	49	44
Work	17	24	13	12
Marriage	11	16	19	17
Family matters	8	11	12	11
Health	5	7	5	5
Dispute	2	3	–	–
Generic	2	3	4	4
Inability to adapt	–	–	2	2
Military Service	–	–	1	1
Undeclared	3	4	6	5
Total	70	100	111	100

Source: SIMDE (2018).

Note: N equals the number of people who migrated to urban areas in each period analyzed.

The majority of this migrant population has moved to municipalities surrounding the Amanã RDS. The city of Tefé stands out as their main destination (62% n=69), considered a municipality of migratory turnover (Pereira, 2017), with a Migratory Efficiency Index (MEI) (Baeninger, 2008) of -0.02. This indicator close to zero means an intense inflow and outflow of the migrant population, i.e., migrants enter and leave (Pereira, 2017). Within the Regions of City Influence (*Regiões de Influência das Cidades* — REGIC) project, the municipality of Tefé is considered a center of subregion B, in the urban network of Manaus, representing a development pole in the Middle Solimões region, with a potential for attracting populations (IBGE, 2008).

The city of Tefé plays an important role in the regional migratory dynamics because it concentrates the largest variety of services and opportunities compared to other regional urban centers (stores, slaughterhouses, transportation, universities, etc.). Residents who commute to the city every month were identified in 30% (n=284) of Amanã RDS households, with 82% of these residents having Tefé as their main destination (SIMDE, 2018). The town functions as a commercial reference center for the inhabitants of Amanã RDS localities and the Middle Solimões region, as it is the largest migration destination and the location where other activities take place, such as buying and selling products and access to the city's diverse services, such as bank, hospital, and lottery houses.

The justifications for rural-urban displacements reinforce Tefé as the most attractive place for the migrant population, especially those motivations associated with “educational factors”. In 2018, of the 69 people who migrated to Tefé, 71% (n=35) did so for educational reasons. Besides the aforementioned factors, among the Mid-Solimões municipalities, Tefé is the one that has the widest range of educational opportunities, mainly due to the expansion of educational services in both public and private networks occurred in recent years, including access to university.

Based on these data, we consider that rural-urban migration in Amanã RDS has contributed to the unmet educational needs in the communities. This means that migration in the area is increasingly justified by educational factors. Along with this growing trend, some dynamics do not necessarily imply permanent migration, but rather temporary displacement in search of access to education that is not available in their place of origin. Given these changes, we must consider the statement of Zago (2016) on the existence of a strong social call to expand formal education. This is especially true considering the new market demands, although not reflected in the educational policies designed with the context of the traditional riverside populations in mind.

In addition to the reasons for migrating because of education, other motivational aspects influence this decision, such as: the lack of teachers in the locality; lack of adequate transportation for students; insufficient school infrastructure; and, even a low number of students to form a class. Such issues, combined with the lack of social infrastructure conditions in the area, show that the school context is not the only barrier blocking access to appropriate public policies in these rural areas. A context that could be premeditated, if the states and municipalities followed the guidelines foreseen in LDB/96, articulating the local demand with the application of educational policies to the real situation.

In regards to the lack of social infrastructure, sanitation and water infrastructure stood out in the localities of the Amanã RDS. Only 26% of the localities had some type of water catchment system, whether coming from the river or a well, but without any type of treatment. Concerning human waste disposal and treatment, only 37% of the households reported having a toilet at home. Among those, a sewer pit was identified as the major destination of sewage (63.6%), a type of treatment considered rudimentary for human health safety. In terms of electricity, 40% of the localities had mini diesel-fueled thermoelectric plants, with operation limited to four hours a day and with intermittenencies during the month, meeting the demand for household lighting and a few household appliances (such as a freezer, television, and a stereo). As for education, 42% of schools were inoperative during part of the 2017 school year due to the lack of local teachers caused by different reasons, and lack of electricity, especially during evening classes.

The reality observed in these locations, regarding aspects of sanitation, access to water, and electricity is reflected in the local school context. Research conducted by the Amazonas Sustainable Foundation (FAS and UNICEF, 2017) outlines an overview of education in the rural Amazonas State, identifying that the available school facilities do not offer adequate quality to students. It is evident that there is an inequality in water supply, sanitation, and solid waste disposal policies in the region, a reflection of the lack of projects to implement public policies.

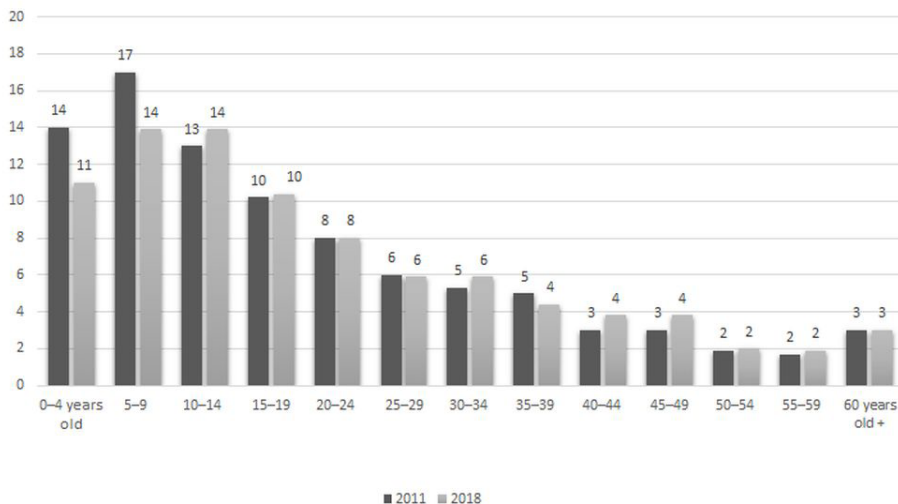
Among the various reasons observed for migration from the Amanã RDS, education is the most important one. They reflect how poorly educational policies serve the

populations in these areas. This corroborates the studies conducted by FAS and UNICEF (2017), which show a disturbing scenario when it comes to the educational context in rural Amazonas. To understand this scenario, it is necessary to look at the rural-urban dynamic, not only through the viewpoint of the motivations that justify them, but also through factors that justify these motivations. If the causes for migration are focused on aspects of unmet educational needs in the local communities, then, what is the level of outreach of the education policies in these areas? The answer to this question offers us more evidence about the factors that, as we will discuss below, actually help us to understand these dynamics.

THE EDUCATIONAL CONTEXT AT THE AMANÃ SUSTAINABLE DEVELOPMENT RESERVE

The educational context is an integral part of the population dynamics, influenced mainly by the population’s age structure. Once observed by governments, this structure serves as a parameter for educational indicators, directing policies to meet the population’s specific demands.

We draw attention to the population’s age composition. The Amanã RDS is formed by a young population, concentrated in the 5 to 9 years age group. Figure 2 shows the cohorts⁸ in the education modalities over the years, the predominant age groups in 2011 began to occupy the subsequent age groups in 2018, indicating changes in supply and demand per grade attended in the localities. This phenomenon indicates that five years from now there will be an increasing demand for the high school age groups. This scenario offers governments an indicator for future investments in education in this region.



Source: SIMDE (2011, 2018).

Figure 2 – Population percentage distribution in the Amanã Sustainable Development Reserve by age groups – 2011, 2018.

8 Cohorts are formed by a set of individuals who participate in the same specific demographic event during a specific time interval (Preston, Heuveline and Guillot, 2000).

Since the 1980s, the population under 15 years of age has been systematically decreasing in the Brazilian population due to a decline in fertility and a reduction in the number of children (Cunha, 2000). This has impacted the way governments have approached educational policies in the country.

The existence of multigrade schools in rural areas of the country, especially in the North and Northeast regions, is more deeply associated with the demographic aspect of the communities' population organization than with a mere option to create these classes (Carmo and Prazeres, 2015).

Based on this understanding, we can direct the discussion to the school reality in the Amanã RDS. At the moment, the school-age population amount to 1,569 people, equivalent to 43% of the population identified by this study; from this total, 30% attended school in their own locality (n=1,079) and 6% (n=221) studied outside their locality in 2017. The majority of this population, 64%, went to school in their own place of residence and attended the first years of elementary school.

In terms of the educational modalities and stages available in the locations with grades offered, primary education concentrates the largest number of students, followed by Early Childhood Education and high school. During the periods analyzed, we observed an increase in the number of students attending school in their own communities, especially high school. In 2011, there were 1,469 people attending school and, from this total, 55% attended elementary school, while only 7% attended high school. In 2018, the same data show that 1,273 people were attending school in 2017, and from this total, 64% were in elementary school and 13% in high school (Table 2).

Table 2 – Distribution of the Amanã Sustainable Development Reserve population studying in 2011 and 2017.

Modality of Education	2010	%	2017	%
Early Childhood Education	344	23.4	183	14.4
Elementary Education	809	55.1	816	64.1
Middle School	101	6.9	170	13.4
Education for the Young and Adults	89	6.1	33	2.6
Rewriting the future	66	4.5	–	0.1
Technological Vocational Center *	–	–	2	0.2
Specialization	4	0.3	–	–
Teacher Training	19	1.3	–	–
Higher Education	23	1.6	57	4.5
School of the Land	–	–	1	0.1
Technical School	–	–	2	0.2
Undeclared	14	1	8	0.6
Total	1,469	100	1,273	100

*Technical Vocational Center is an education and professionalization unit under the Ministry of Science, Technology and Innovations (*Ministério da Ciência, Tecnologia e Inovações – MCTI*), focused on the dissemination of scientific and technological knowledge.
Source: SIMDE (2011, 2018).

Table 2 shows an increase in the number of people attending higher education. It is important to note that this type of education is not offered in the localities, and that this educational demand is met by the National Plan for Training of Basic Education Teachers (*Plano Nacional de Formação de Professores da Educação Básica* — PARFOR), the classes are offered through a Modular Educational System in the urban centers of the region. Higher education ranks higher among the other modalities studied in the Amanã RDS, with an increase of 17% in the number of people, representing a change in the educational profile of the residents. Moreover, these data indicate a continuity of the studies, whether by offering education in the locality or by seeking this access in the city.

The aforementioned context can be better understood when we observe the population that had been studying in the city but did not live in the locality.⁹ There was a rather low number of people who needed to live in the city to study but were economically dependent on the family unit located in the Amanã RDS. In 2010, 90 people were studying in the city, and in 2017, this figure increased to 100 people. Therefore, our attention is drawn to the type of education those people attend in the city and, above all, how this scenario has changed in 2018. In 2011, 57% of the students were in elementary school; in 2018, high school is the most attended modality, with 41%. Higher Education emerges as one of the modalities attended in 2018, a fact not observed in 2010 (Table 3).

Table 3 – Educational modalities attended by people who did not live in the domestic unit and who were studying in the city in 2010 and 2017 – Amanã Sustainable Development Reserve, 2011, 2018.

Educational Modality	2010	%	2017	%
Early Childhood Education	3	3	1	1
Elementary Education	51	57	30	30
Middle School	29	32	41	41
Education for the Young and Adults	4	4	2	2
Higher Education	–	–	17	17
Technological Vocational Center	–	–	2	2
Technical School	–	–	3	3
Undeclared	3	3	4	4
Total	90	100	100	100

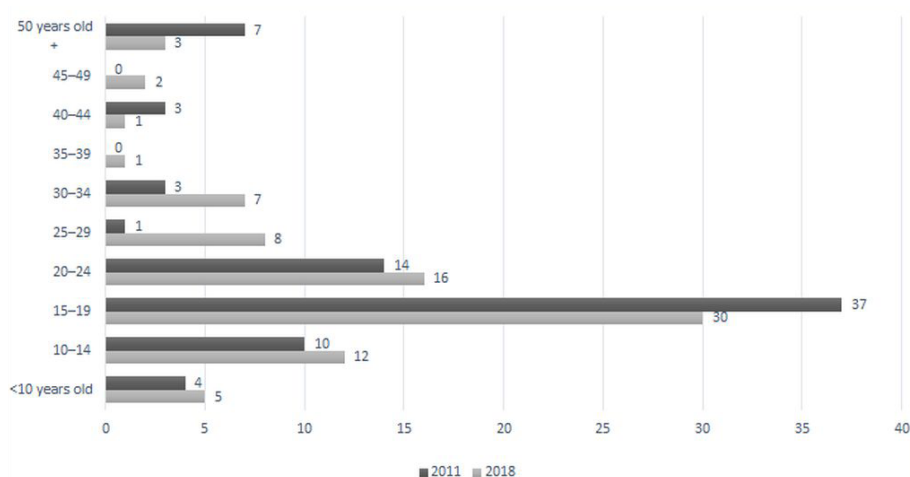
Source: SIMDE (2011, 2018).

Starting in 2018, higher education emerges as one of the most important educational modalities in the educational context of the Amanã RDS. This situation

⁹ This variable has as a criterion to identify people connected to the household group who depend economically on the heads of the household and needed to live outside the domestic unit, to study in the city. It uses as reference, the year prior to the collection; for 2011 data, the information refers to 2010 and, for 2018 data, to 2017.

corroborates the data referring to the types of education attended by the residents. When we analyze the school grades attended by them, including those who were studying locally and those who were studying elsewhere, we observe that there has been a change in the modalities, reinforcing the transformation of the population's educational profile.

It is not possible to attribute an educational profile to the migrant population. However, based on the characteristics of this group, we can see that they are school-age and economically active people, as observed before. It refers to a young population, whose age composition changed between 2011 and 2018. Migration predominates in the 15–19 age groups; nevertheless, there has been an increase in the number of people in the 20–24 age group who are migrating and a decrease in the 15–19 age group (Figure 3).



Source: SIMDE (2018).

Figure 3 – Percentage distribution of the migrant population by age groups – Amanã Sustainable Development Reserve, 2011, 2018.

We can attribute this shift in the migrants' age pattern to the implementation of technological high school in the localities of the Amanã RDS. Pereira (2017) showed, in his study conducted in rural localities of the Extractive Reserve (*Reserva Extrativista* — RESEX) Auati-Paraná, in the State of Amazonas, that there was a difference in the young migrants' age brackets after the implementation of the technological high school in the RESEX localities. The introduction of this modality allows these young people to remain for longer periods of time in their localities. According to the author, the age groups of the migrants fit within the profile of the appropriate grades for Elementary School (10–15 years). Starting in 2010, this pattern changed: the age groups fell into the grades suitable for entry into higher education (18–24 years), meaning that these young people were leaving to pursue higher education in urban centers.

The insertion of the higher level modality in 2018 reflects a set of structural factors that have been provoking changes since the 2000s. The offering of new modalities such as high school, through The Education Poles in the communities, has allowed students to continue their studies. The regionalization of the *Universidade do Estado do Amazonas* (UEA), with several branches throughout the state, also corroborated these changes, as it was responsible for the implementation of many educational policies in the state's countryside. The university celebrated its 18th anniversary in the region in 2019.

Noteworthy is the National Program for Education in Agrarian Reform (*Programa Nacional de Educação na Reforma Agrária* — PRONERA), carried out in partnership with UEA, the *Universidade Federal do Amazonas* (UFAM), and the National Institute of Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária do Amazonas* — INCRA/AM), segmented in the areas of Youth and Adult Education and teacher training (Vasconcelos, 2017). There is also the Education Professionals Training and Valorization Program (*Programa de Formação e Valorização dos Profissionais da Educação* — PROFORMAR), another public educational policy considered a landmark in these transformations, created by the Amazonas State Secretariat of Education to train working teachers. Its emergency character was in response to article 87, III of the LDB, which set a 2007 deadline for teachers without a college degree, but working in the public basic education network, early childhood education, and elementary education, considered lay teachers, to have access to higher education (Silva *et al.*, 2015; Silva and Zogahib, 2015).

In 2009, the Federal Government, working in partnership with the states and municipalities, implemented the PARFOR, aimed at training educators working in public networks. In the State of Amazonas, the program was run by UEA, UFAM, and the Federal Institute of Amazonas (*Instituto Federal do Amazonas* — IFAM). In the municipalities adjacent to the Amanã RDS, the main areas covered were Pedagogy, History, Mathematics, Physical Education, Biology, and Literature. The classes were held in the cities' public schools during the school holidays.

All programs had a positive impact on the school context of the Amanã RDS localities, directly influencing the educational profile of the population. These programs show that there is an effort made by the government to guarantee educational policies for rural areas. However, the reality of the Amanã RDS residents reinforces the need to include, in educational policymaking, the population's demographic aspects and to guarantee that the investments are consistent with the local demands. Furthermore, the school year should be designed in a contextualized way, respecting the seasonality of the riverside populations, especially those living in floodplain regions, because it directly affects population commuting and school attendance. In addition, it is evident that there is an investment, but it does not meet the current regional demands. There appears to be a large gap between what is intended in terms of the scope of educational policies designed for rural areas and the results that actually reach the populations in these areas.

CONCLUSION

This study explored the context of rural-urban migration, motivated by educational factors, of local residents from the rural riverside areas of the Amanã RDS. The investigation identified that the characteristics of this movement result from a mismatch between the population composition and the implementation of educational policies, combined with the lack of adequate infrastructure in the school environment in the Amazon context. Therefore, the study brings a new approach to the topic of education, as it differs from what has been discussed in the scientific literature about the relationship between migration and education.

Understanding these issues represented a theoretical and methodological challenge, mainly due to the limitations in terms of theoretical references. The relationship between migration and education, when addressed in the literature, tends to have different lines of discussion from those we propose in this article. These contexts are conventionally more deeply focused on analyzing international migration, rural aging due to young people's migration and, when explored, bring reflections beyond the reality of traditional riverside populations, not only in terms of migration, but in the population's own spatial context.

The educational policies implemented for the rural population in the State of Amazonas have proven to be inadequate; they reflect a distance between such policies and the existing socio-demographic and environmental characteristics of rural areas. By disregarding the characteristics of the Amazon space and time, the State of Amazonas government makes an indirect contribution to the population to choose to study outside their localities, indicated here in the rural-urban migration.

The Amanã RDS school context shows a reality that is consistent with the scope of educational policies: once not solved, they have negative effects on the provision of education, on the teachers' pedagogical profile, and on the infrastructure required for the school environment. We observe that the schools were not built to meet this rural reality and many of them end up being a copy of urban centers' schools. The departure of this migrant population combined with other factors, such as the lack of local teachers, transportation to move the students, poor school infrastructure, and the insufficient number of children to form a class, plays an important role in the decision to migrate. This leads to an increase in migration rates justified by educational factors.

The adoption of the multigrade school model as a strategy for the rural area has deficiencies in its implementation. The data indicate that, in 2017, multigrade schools were able to provide the first years of elementary school, because this competence is assigned to the Municipal public administrations. However, the age composition data, in 2018 (10–14 and 15–19 years), show a significant part of the population demanding the final years of elementary school and secondary school.

The educational modalities attended by urban dwellers showed a change in the population's educational profile. If demand for elementary school had been greater before, there are new demands now, with higher education representing an increase in the population's expectations. These demands must be complemented

by educational programs to allow this population to have access to the new educational modalities.

The educational migration context highlights the inequalities in regional educational policies. It also indicates changes in the educational demands and school practices of the populations of this conservation unit. It also supports our initial hypothesis, when we consider that rural-urban migration in the Amanã RDS is mainly justified by educational factors, supported by the unmet local educational demand.

The population dynamics of the Amanã RDS are influenced by both the internal and external dimensions of the conservation unit. The internal ones are connected to the residents' own sociocultural context, while the external ones to public policy access by the populations living in these areas. The differentiating factor between the context presented here and in other studies correlating migration and education is the emphasis placed on the need to learn more about the socio-demographic and environmental aspects when devising educational public policies. In other words, the local demographic and organizational aspects need to be considered when formulating regional public policies.

The results outlined herein offer important indicators on the social context of the riverside populations in the State of Amazonas. The educational public policies addressed in this paper contribute to the rural population's expectations of better living conditions. In a survey conducted in the communities of the Mamirauá Sustainable Development Reserve, Corrêa (2010) found that young people put themselves in the position of people with knowledge to defend the rights of the population, and that their parents want them to pursue professions such as teacher, engineer, doctor, and biologist. This reality is also perceived in the Amanã RDS. However, these policies show inadequacies meaning that one should consider it necessary to conduct further studies to monitor and evaluate the implementation of policies and programs, creating good governance practices for public investments and promoting their adjustments to the Amazon riverside context.

There are many challenges to overcome in the formulation of educational policies directed to rural areas, with plenty of space for reflection on the subject. The contributions of this study show how important regional differences are when designing educational public policies. The government needs to take into consideration the specificities of the Amazon region when designing educational programs because its geographic dynamics require a different approach.

REFERENCES

- ALENCAR, E. F.; SOUSA, I. S. Tradição e mudanças no modo de habitar a várzea do Médio Solimões, AM. *Illuminuras*, Porto Alegre, v. 17, n. 41, p. 203-232, jan./jun. 2016. <https://doi.org/10.22456/1984-1191.64567>
- AMAZONAS. SECRETARIA DE ESTADO DE EDUCAÇÃO. CENTRO DE MÍDIAS DE EDUCAÇÃO DO AMAZONAS. Centro de Mídias de Educação do Amazonas. Manaus, 2014. **Programas e Projetos**. Available at: <http://www.educacao.am.gov.br/centro-de-midias-de-educacao-do-amazonas/>. Accessed on: Nov. 28, 2019.

AMAZONAS. SECRETARIA DE ESTADO DE EDUCAÇÃO. **Manual de orientação do Programa Amazonas Alfabetizado**: formação inicial e formação continuada. Manaus: Editora Travessia, 2013.

ARROYO, M. G. A educação básica e o movimento social no campo. *In*: ARROYO, M. G.; FERNANDES, B. M. **Por uma educação básica do campo**. Brasília, DF: Articulação Nacional por uma Educação Básica do Campo, 1999. p. 12-42.

BAENINGER, R. Rotatividade migratória: um novo olhar para as migrações no século XXI. *In*: ENCONTRO NACIONAL DE ESTUDOS POPULACIONAIS, 16., 2008, Caxambu. **Anais [...]**. Caxambu: ABEP, set./out. 2008. p. 1-21.

BAENINGER, R. Rotatividade migratória: um novo olhar para as migrações internas no Brasil. **REMHU: Revista Interdisciplinar da Mobilidade Humana**, Brasília, v. 20, n. 39, p. 77-100, dez. 2012. Available at: <https://doi.org/10.1590/S1980-85852012000200005>. Accessed on: Mar. 30, 2020.

BARTLETT, L.; RODRÍGUEZ, D.; OLIVEIRA, G. Migração e educação: perspectivas socioculturais. **Educação e Pesquisa**, São Paulo, v. 41, n. spe, p. 1.153-1.171, dez. 2015. Available at: <https://doi.org/10.1590/S1517-9702201508144891>. Accessed on: Oct. 30, 2019.

BORGES, H. S. Educação do campo e os planos de educação. **Revista do Programa de Pós-Graduação em Educação da Universidade Federal do Amazonas**, Manaus, v. 1, n. 1, 2017. Available at: [//periodicos.ufam.edu.br/index.php/amazonida/article/view/3547](http://periodicos.ufam.edu.br/index.php/amazonida/article/view/3547). Accessed on: Oct. 16, 2019.

BRASIL. Lei n. 9.394, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da educação nacional. **Diário Oficial da União**: seção 1, Brasília, DF, ano 131, n. 248, p. 27.833, 23 dez. 1996.

BRASIL. Lei n. 9.985, de 18 de julho de 2000. Institui o Sistema Nacional de Unidades de Conservação da Natureza e dá outras providências. **Diário Oficial da União**: sessão 1, Brasília, DF, ano 138, n. 138, p. 1, 19 dez. 2000.

CAMARANO, A.; ABRAMOVAY, R. A. Êxodo rural, envelhecimento e masculinização no Brasil: panorama dos últimos cinquenta anos **Revista Brasileira de Estudos de População**, Rio de Janeiro, v. 15, n. 2, p. 45-65, 1998. Available at: <https://www.rebep.org.br/revista/article/view/404>. Accessed on: Oct. 30, 2019.

CARMO, E. S.; PRAZERES, M. S. C. Políticas educacionais para a Amazônia: teorias, práticas e contradições. **Revista Brasileira de Política e Administração da Educação**, v. 31, n. 3, p. 532-543, set./dez. 2015. Available at: <https://doi.org/10.21573/vol31n32015.60010>. Accessed on: Oct. 15, 2019.

CORRÊA, D. S. S. **Modo de vida na várzea**: políticas sociais e nova ruralidade – estudo em uma localidade da Reserva de Desenvolvimento Sustentável Mamirauá. 2010. 149 f. Dissertation (Master's Degree) – Universidade Federal do Pará, Instituto de Filosofia e Ciências Humanas, Belém, 2010.

COURGÉAU, D. Nuevos enfoques para medir la movilidad interna de la población. **Notas de Población**, Santiago de Chile, n. 50, p. 55-74, 1990. Available at: <https://repositorio.cepal.org/handle/11362/12927>. Accessed on: Oct. 20, 2019.

CUNHA, J. M. P. Dinâmica demográfica e seus impactos na trajetória da população em idade escolar. In: CUNHA, J. M. P.; DE OLIVEIRA, M. C.; AIDAR, T.; ASCAMA, M. O. O. **Demografia e educação: incursões preliminares**. Campinas: UNICAMP, 2000. . p. 6-28.

CUNHA, J. M. P. Migração e urbanização no Brasil: alguns desafios metodológicos para análise. **São Paulo em Perspectiva**, São Paulo, v. 19, n. 4, p. 3-20, out./dez. 2005. Available at: <https://doi.org/10.1590/S0102-88392005000400001>. Accessed on: Oct. 15, 2019.

CUNHA, J. M. P. Mobilidade espacial da população: desafios teóricos e metodológicos para o seu estudo. In: CUNHA, J. M. P. (org.). **Mobilidade espacial da população: desafios teóricos para o seu estudo**. Campinas: Núcleo de Estudo de População-NEPO/ UNICAMP, 2011. p. 7-15.

CUNHA, J. M. P. A migração interna no Brasil nos últimos cinquenta anos:(des) continuidades e rupturas. In: ARRETCHE, M. **Trajетórias das desigualdades: como o Brasil mudou nos últimos cinquenta anos**. Centro de Estudos da Metrópole – CEM. São Paulo: Editora UNESP, 2015. p. 279-307.

DE OLIVEIRA, L. A. P.; DE OLIVEIRA, A. T. R. (ed.). **Reflexões sobre os deslocamentos populacionais no Brasil**. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 2011.

DOMENACH, H.; PICOUET, M. El carácter de reversibilidad en el estudio de la migración. **Notas de Población**, Santiago de Chile, v. 18, n. 49, p. 49-69, 1990.

FAVARETO, A. A educação nos marcos das transformações do rural contemporâneo. **Educação & Sociedade**, Campinas, v. 35, n. 129, p. 1.137-1.163, out./ dez. 2014. Available at: <https://doi.org/10.1590/ES0101-73302014144331>. Accessed on: Oct. 15, 2019.

FAS — Fundação Amazonas Sustentável; UNICEF — Fundo Das Nações Unidas Para A Infância. **Recortes e cenários educacionais em localidades rurais ribeirinhas do Amazonas**. Manaus: Fundação Amazonas Sustentável, 2017. p. 84.

HAZEU, M. T. **O não-lugar do outro: sistemas migratórios e transformações sociais em Barcarena**. 2015. 336 f. Thesis (Doctorate in Sustainable Development of the Humid Tropic of the Center for Higher Amazon Studies) – Universidade Federal do Pará, Belém, 2015.

IBGE — Instituto Brasileiro de Geografia e Estatística. **Censo demográfico 2000: manual do recenseador**. Rio de Janeiro: IBGE, 2000.

IBGE — Instituto Brasileiro de Geografia e Estatística. **Regiões de influência das cidades (REGIC) 2007**. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 2008.

IBGE — Instituto Brasileiro de Geografia e Estatística. **Indicadores sociais municipais: uma análise dos resultados do universo do Censo Demográfico 2010**. Rio de Janeiro, **Estudos & Pesquisas: Informações Demográfica e Socioeconômica**, n. 28, 2011.

INSTITUTO DE DESENVOLVIMENTO SUSTENTÁVEL MAMIRAUÁ. Sistema de informação geográfica. Localização da Reserva de Desenvolvimento Sustentável Amanã, 2019.

INEP — Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. **Panorama da educação no campo**. Brasília, DF: INEP, 2007.

IRELAND, T. D. Educação de Jovens e Adultos como política pública no Brasil (2004-2010): os desafios da desigualdade e diversidade. **Rizoma Freireano**, v. 13, p. 93-110, 2012.

JARDIM, C. M.; OLIVEIRA, J. A. As políticas públicas educacionais e as especificidades regionais nas zonas rurais do Amazonas. *In: VIII JORNADA INTERNACIONAL POLÍTICAS PÚBLICAS DA UNIVERSIDADE FEDERAL DO MARANHÃO*, 8., 2017, São Luiz do Maranhão. **Anais [...]**. São Luiz do Maranhão: UFMA, 22-25 ago. 2017. p. 1-13.

MARTINS, M. I. S. **Distribuição e mobilidade da população da Reserva Amanã (2002–2011)**. Relatório de pesquisa. Tefé: Instituto de Desenvolvimento Sustentável Mamirauá, 2017.

MARTINS, M. I. S.; NASCIMENTO, A. C. S.; CORRÊA, D. S. S. Deslocamentos populacionais em Unidades de Conservação: registros cartográficos das suas dinâmicas na Reserva de Desenvolvimento Sustentável Amanã. *In: SIMPÓSIO SOBRE CONSERVAÇÃO E MANEJO PARTICIPATIVO NA AMAZÔNIA*, 14., 2017, Tefé. **Anais [...]**. Tefé: SIMCON, 3-7 jul. 2017. p. 25-26.

MOURA, E. A. F. *et al.* **Sociodemografia da Reserva de Desenvolvimento Sustentável Mamirauá: 2001–2011**. Tefé: Belém: Instituto de Desenvolvimento Sustentável Mamirauá; IDSM; NAEA; 2016.

NASCIMENTO, T. C. L.; OJIMA, R. Migrações internas no Brasil: um panorama analítico e alguns percursos teóricos. **Revista brasileira de Estudos Populacionais**, Rio de Janeiro, v. 31, n. 1, p. 239-242, jan./jun. 2014. Available at: <http://dx.doi.org/10.1590/S0102-30982014000100015>. Accessed on: Dec. 2, 2019.

OJIMA, R. *et al.* Migrações internacionais motivadas por estudo: uma análise sociodemográfica dos estudantes estrangeiros radicados no Brasil. **PerCursos**, Florianópolis, v. 15, n. 28, p. 166-189, jan./jun. 2014. <https://doi.org/10.5965/1984724215282014166>

PARENTE, C. M. D. Escolas multisseriadas: a experiência internacional e reflexões para o caso brasileiro. **Ensaio: Avaliação e Políticas Públicas em Educação**, Rio de Janeiro, v. 22, n. 82, p. 57-88, jan./mar. 2014. <https://doi.org/10.1590/S0104-40362014000100004>

PEREIRA, H. C. **Distribuição e mobilidade espacial da população em unidades de conservação de uso sustentável na Amazônia brasileira: o caso da reserva extrativista Auati-Paraná**. 2017. 180 f. Thesis (Doctorate in Demography) – Universidade de Campinas, Campinas, 2017.

PRESTON, S.; HEUVELINE, P.; GUILLOT, M. **Demography: measuring and modeling population processes**. Malden: Blackwell Publishers, 2000.

SANTOS, A. B.; MACHADO, J. A. C.; SERÁFICO, M. Formação socioeconômica do estado do Amazonas. *In: CASTRO, E. R.; CAMPOS, I. (org.). Formação Socioeconômica da Amazônia*. Belém: NAEA, 2015. Cap. 5.

SANTOS, R. **História econômica da Amazônia (1800–1920)**. São Paulo: T. A. Queiroz, 1980.

SILVA, C. H. F.; ZOGAHIB, A. L. N. PROFORMAR: uma experiência amazônica em política pública educacional. **Revista Intersaberes**, S. L., v. 10, n. 20, p. 110-125, jan./abr. 2015.

SILVA, M. R. S. *et al.* PROFORMAR: Os dilemas dos professores da rede pública de ensino em formação universitária. In: CONGRESSO NACIONAL DE EDUCAÇÃO, 7., 2015. **Anais** [...]. Curitiba: EDUCERE, 26-29 out. 2015. p. 14.736- 14.751.

SILVESTRO, M. L. *et al.* **Os impasses sociais da Sucessão Hereditária na Agricultura familiar**. Florianópolis: Brasília, DF: EPAGRI; NEAD; Ministério do Desenvolvimento Agrário, 2001.

SINGER, P. Migrações internas: considerações teóricas sobre o seu estudo. In: BNB – Banco do Nordeste do Brasil; ETENE – Escritório Técnico de Estudos Econômicos do Nordeste. **Migração interna: textos selecionados**. Fortaleza, 1980. p. 217-242. (Estudos Econômicos e Sociais, 4).

SIMDE — Sistema de Monitoramento Demográfico e Econômico. **Dados sociodemográficos da Reserva de Desenvolvimento Sustentável Amanã**, 2011.

SIMDE — Sistema de Monitoramento Demográfico e Econômico. **Dados sociodemográficos da Reserva de Desenvolvimento Sustentável Amanã**, 2018.

SOUZA, J. V. F.; GONÇALVES, R. M. Escolas multisseriadas no contexto da Amazônia. **Revista Periferia**, Duque de Caxias, v. 10, n. 237, p. 244-260, maio/ago. 2018. <https://doi.org/10.12957/periferia.2018.28262>

TERUYA, T. K. *et al.* Classes multisseriadas no Acre. **Revista Brasileira de Estudos Pedagógicos**, Brasília, v. 94, n. 237, p. 564-584, ago. 2013. Available at: <http://dx.doi.org/10.1590/S2176-66812013000200011>. Accessed on: Dec. 2, 2019.

VASCONCELOS, M. E. O. **Educação do campo no Amazonas: história e diálogos com as territorialidades das águas, das terras e das florestas**. 2017. 297 f. Tese (Doutorado em Educação) – Universidade Federal do Pará, Belém, 2017.

ZAGO, N. Migração rural-urbana, juventude e ensino superior. **Revista Brasileira de Educação**, Rio de Janeiro, v. 21, n. 64, p. 61-78, jan./mar. 2016. <https://doi.org/10.1590/S1413-24782016216404>

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