


ENVIRONMENTAL SUSTAINABILITY: A STUDY ON THE INDIGENOUS COMMUNITY OF THE MERURI INDIGENOUS LAND IN GENERAL CARNEIRO - MT <https://doi.org/10.56238/sevened2025.001-041>**Isadora Marques Cibaerago¹, Silvio Moises Negri², Aires José Pereira³ and George André Silva Ribeiro⁴.****ABSTRACT**

The present work brings a reflection on sustainability, starting from the exploitation of natural resources, deals with sustainability as a goal to be sought. It brings two dimensions of environmental sustainability: it reflects the collective preservation that is linked to the area of education, as it performs an interrelationship between the social and the natural; and sustainability and its economic dimension, deals with the finiteness of natural resources, associated with conditions for the survival of future generations. Issues related to sustainability are something of concern, due to the threat of natural resources as a result of human action. The work analyzes, through the case study, how natural resources can be maintained, not being easily depleted, if man is careful with actions that take care of the environment. It talks about the rationing of water, electricity and the irrational and excessive use that people practice. From then on, the research is directed to the Boe indigenous community of the Meruri Village, in order to verify how the environmental issues that permeate this community are going. I used interviews, two elderly women who point out possible actions that go against the theoretical basis pointed out by the literature.

Keywords: Boe (Bororo). Sustainability. Indigenous village. Environment.

¹ Graduated in Geography from UFR

E-mail: isadoracibaerado@gmail.com

² Full Professor of the Geography course at UFR

Email: Silvio.negri@ufr.edu.br

³ Associate Professor II of the Geography course and PPGTA at UFR

E-mail: aires@ufr.edu.br

ORCID: <https://orcid.org/0000-0002-7707-1187>

⁴ Graduated in Languages from UFMT, master's student in Education from UFR, professor in the state education network of Mato Grosso

E-mail: george@georgeribeiro.com.br

INTRODUCTION

The present work tends to reflect the issue of sustainability, as a concept raised due to climate issues, and also to bring the local reality of the Meruri Indigenous Territory, interviews given regarding the climate and water issue, with *AroeEtuje*, we call the mother of souls.

The objectives of the present work is to raise the concepts of sustainability pointed out in articles, to list the dimensions of environmental sustainability. Bringing the speech of the *AroeEtuje*, mother of souls, also speaks of members of the community of Meruri, to point out a path to be followed, to achieve the sustainability of the environment, as well as from the relationship of the Boe people of Meruri with nature. As a hypothesis we have reciprocity, which is a crucial value of the Boe culture, which is closely linked to the environment, since from the worldview, both share the same kinship plane. The problem comes through the relationship between the surrounding society and the Boe society, since it brings with it an immaterial baggage, but also material such as garbage, which from integration becomes a very difficult obstacle to solve, such as destination or recycling. Another is the issue of the BR 070 Highway, which cuts the Meruri Indigenous Territory practically in half, and leaves traces of the white man in the course of its asphalt, such as the garbage discarded in nature and also the fires caused by the highway.

CHARACTERIZATION OF THE STUDY AREA

As Gallois (2005, p.40) says, "also to elaborate territorial strategies", this brings us to the process that occurred when our ancestors settled in the region of General Carneiro and met with the Salesian Missionaries in 1902. In 1927, due to the scarcity of natural resources, Meruri (Morro das Arraias) arrived, a place with abundant waters because it is bathed by the Barreiro River. The village of ToriPo (Tachos) was transferred to Meruri, where they are to this day.

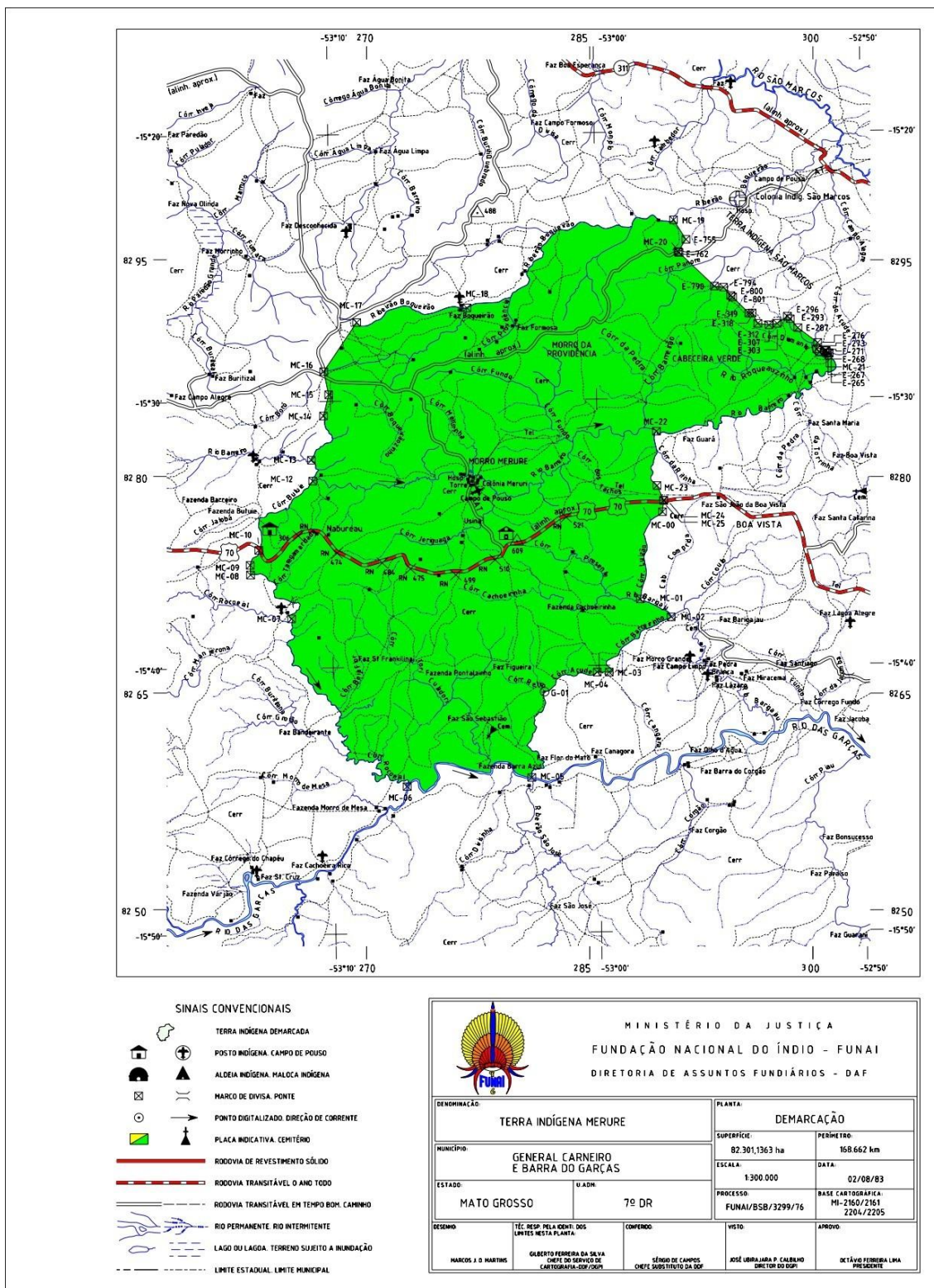
The "appropriation of space as a sociopolitical organization" cited by Gallois (2005, p.38), applies to the Bororo social organization, dictated by the mythical heroes Itubore and Bakororo, who upon death founded a sociopolitical structure according to the orientation of the geographical space, according to sunrise and sunset, with Itubore being sunrise (East) and Bakororo sunset (West). They divided it into two exogamous halves, Ecerae on the (North) side and Tugarege on the (South) side, each half has four clans, these clans have the totems, animals or spirits of the primacy of each clan, forming the cosmology of the villages. The half of the Ecerae is made up of the Baadojeba (clan of house builders), Kie (clan of tapirs), Bokodori (clan of giant armadillos) and Bakoro (clan of the Bakoro Spirit).



The Tugarege half is composed of the Paiwoe (howler monkey clan), Apiborege (palm clan), Iwagudu (jackdaw clan) and Aroroe (larval clan).

The social projects developed by the Boe people rarely have incentives from the municipal powers, because the Meruri Territory is divided by the Barreiro River (Kujibo in the Boe language), on the north side belongs to the district of Barra do Garças, on the south side of the river bank belongs to the district of General Carneiro. However, the support does not come from either of the two municipalities, there is a lack of public policies to help the people work, develop ways of subsistence, from the resources of the Ecological ICMS, which the municipalities have long received to support societies that have preservation forests within the Indigenous Land.

Figure 01 – Location of the Meruri Indigenous Land in General Carneiro - MT



Source: FUNAI, 2023.

The development takes place from its own organizations, such as the Commission of Leaders and Chiefs, which through the state level, the Civil House, the Indigenous Affairs Department and its superintendent raises, together with the SEAF - Secretariat of Family

Agriculture, support for the development of the indigenous communities of the Meruri Indigenous Land (Figure 01).

DIMENSIONS OF ENVIRONMENTAL SUSTAINABILITY

There are several dimensions of sustainability in order to better study and understand it in various areas. In his research, Lanquito (2018) addresses ten dimensions of sustainability, two of which will be briefly presented in this topic.

In the environmental dimension, sustainability seeks to preserve the environment collectively, through measures to preserve natural resources, limit consumption or are environmentally harmful. Jacobi (2003) emphasizes engagement in the area of education on the interrelationship between the natural and social environments, increasing the power of alternative actions that contemplate a means of development focused on socio-environmental sustainability.

Some authors emphasize the creation of rules and policies to ensure commitment to them, creating environmental protection with a reduction in the amount of waste, conservation, energy recycling and the use of clean technologies (SACHS, 1993; MENDES, 2017).

Other authors such as Freitas (2012) and Schramm et al (2015), address the issue of the need to see the right of the current generation, without prejudice to future generations. And Boff (2012, p.47) adds that the "existence of the human species depends on the care and preservation of the environment".

The economic dimension also studies the finiteness of natural resources, and seeks to preserve the environment, thus ensuring the conditions for the survival of current and future generations. Some authors argue that this dimension seeks balance in the means of production of goods and services with the distribution of wealth, which fosters a new mode of economy that has long-term planning, with a competent system of efficient and guiding incentives. In this way, the economy can go hand in hand with sustainability.

Sustainability and economy can go together, as long as there is political, social, cultural and environmental commitment on the part of the State, as well as society as a whole. Science must be working its research in this direction.

THE IMPORTANCE OF ENVIRONMENTAL SUSTAINABILITY

The term sustainable development was introduced at the 1972 World Environment Conference in Stockholm (FIORILLO, 2013). In 1987, the concept of sustainable development was presented to us by the World Commission on Environment and

Development, where the Brundtland Report appeared, also called "Our Common Future" (SCHRAMM; CORBETTA, 2015).

In Ianquito's (2018) research, he demonstrates that the terminologies "sustainable development" and "sustainability" are not synonymous and, therefore, are not discussed in the same sense because sustainable development is the goal to be achieved and sustainability is the process. (IANQUINTO, 2018 apud SARTORI; LATRONIC; CAMPOS, 2012).

The words "development" and "sustainable" are considered antagonistic according to some authors. For BOFF (2012), the word development is linear, and should be increasing, assuming the exploitation of nature, generating deep inequalities and in the category sustainability, on the contrary, it comes from the scope of biology and ecology, whose logic is circular and inclusive.

Sustainability is a growing concern, as natural resources are increasingly threatened as a result of human action. The negative impacts that man causes in nature are increasingly evident. Pollution, habitat destruction, the accumulation of solid waste and the rapid decrease in biodiversity are just some of the examples of environmental problems generated by human action today. One of the most used words today to talk about the environment and the negative impacts caused by man is sustainability, a term that has the most varied meanings. In Biology, for example, it is related to the ability of ecosystems to recover from human aggressions and even from the environment itself. Sustainability can also be used in conjunction with the word development and, in this case, refer to ways to avoid the depletion of our natural resources and be able to meet the needs of today's population. In general, we can say that sustainability is the ability to maintain oneself. When we use natural resources in a sustainable way, for example, they can be maintained for several years, not being easily depleted. We realize, therefore, that sustainable development is one that does not cause scarcity or depletion of resources and allows them to meet the needs of future generations and ours.

It is important to discuss sustainability and sustainable development because every day more environmental problems are affecting the quality of life of man. It is common, for example, to see in newspapers and on websites the lack of water and energy rationing in various places in Brazil. This is not only a consequence of mismanagement, but also due to the irrational and excessive use of what is offered to us by nature.

Sustainable development requires planning and the participation of all spheres of the population. It is necessary to carefully analyze how much of the resources we have already spent and how much we still have left. We must also understand that natural resources can

run out and their conscious use is essential so as not to compromise the lives of future generations.

RESULTS AND DISCUSSIONS

As a result of the research carried out, I obtained information about the main environmental problems in the Meruri indigenous village, the current situation and what is being done and what has been done to improve. Important information on the issue of water supply in the village and on the control of fires and preservation of rivers and forests through interviews with *mugamage* (Mothers) of the village.

Krillireus (2022) says: "... That's what I talked about the most, about fire and the large crops around the village... We are very concerned about deforestation, about large soybean crops..." fire has an intense weight in terms of aggression with nature, because near the village there are the Xavante who have practices of hunting with fire. Usually this type of fire is not controlled, it advances everywhere arriving in the village, after burning our vegetation.

Regarding the crops, the decrease in water has been noticed, and the concern with the contagion of the water, through pesticides spilled into the rivers that pass through our village, with this we do not have control of the quality of the water.

Kurireudo (2022) says that: "... It's because of the demarcation... other places have been invaded..." here Leonida talks about the territorial situation, when it comes to the Meruri Reserve, despite delimiting the territorial space, on the other hand, there was stability due to the demarcation of the Indigenous Reserve. However, there are cases of Bororo indigenous villages, in other places they have undergone territorial invasion, with conflicts.

Kurireudo (2022) says that "in the past there were a lot of tanks, there was a lot of water, ... Now it's difficult, you have to wait for flooding..." here *muga* Leonida talks about the conditions of natural resources that were more abundant. In Meruri there was water and vegetation in abundance, however, it has decreased over time, which makes us rethink the action of man in relation to nature, including by those who do not stay in the forest. The relationship of those who live in nature is crucial, as contact is direct, small actions of environmental awareness are already extremely important to repair with nature.

Krilleudo (2022) talks about hunting "... Some animals have disappeared, such as the smaller animals, armadillo, mixila, bandeira... It is impossible for us to eat tapir, to eat capybara, because we no longer have *bari* to bless the meats, as these animals are the only ones that walk around a lot, there is no more game that is part of our traditional diet,

we don't eat". Leonida deals in this statement, with the scarcity of hunting nowadays, the disappearance of small animals is felt by everyone in our community, because, in the culture of the Boe society, when it comes to food, not all animals are edible, these animals that are not edible, belong to the class of those who are from *the BOPE* (bad spiritual being), because of this these are in greater quantity, because you don't eat in the absence of Bari

Urugureudo (2022) talks about the seriousness of water-related problems "... water? There is a lack of water, there is a lack of water in the river, the river is drying up, the headwaters are drying up, there is a lack of water in the village... is drying up the water", with this it is understood that there is a huge difference in the amount of water in the Indigenous Reserve to the present day, it is perceived that it has decreased a lot, because from the river to the headwaters that are water springs this decrease has been noticed. In this sense, it is necessary to understand that there must be an action, because he ends with a strong and serious expression: "the water is drying up".

Urugureudo (2022) says: "think well people! Now almost at the end of October, when it started to rain, then now you will know when it will stop, the weather itself, it is also changing" it is noted with this speech, that the rainy weather is changing, because in the Bororo society there are two times one called *JoruButu* (dry time) and *ButaoButu* (rainy time). In the speech of the muga, this time that used to follow the periods to the letter, today is changing, due to the general climate, the general climate influences these two times, due to man's actions. Urugureudo (2022) says that "nature itself is tired of being mistreated, of the lack of respect for it, of being threatened, of being attacked, so nature itself is going around us" here she makes a reflection on nature, because nature is weak, because there is no respect, because all garbage is thrown into nature, Directly or indirectly, it feels threatened, with species that are threatened with extinction, with this it gives an unpleasant return, it is the natural catastrophes that occur on account of man himself.

Urugureudo (2022) comments that nature "wants respect from us human beings, it's not just us Boe Bororo, but from the whole world, so it starts to do all this for us." In this other part of muga Pedrosa's reflection, he talks about the need for respect for nature, not only for us here who do not exclude ourselves from nature, but for all people who attack it directly or indirectly, because all garbage is thrown into nature, it is necessary to rethink the relationship with nature.

Figure 02- Panoramic Photo of the Meruri Indigenous Land in General Carneiro - MT



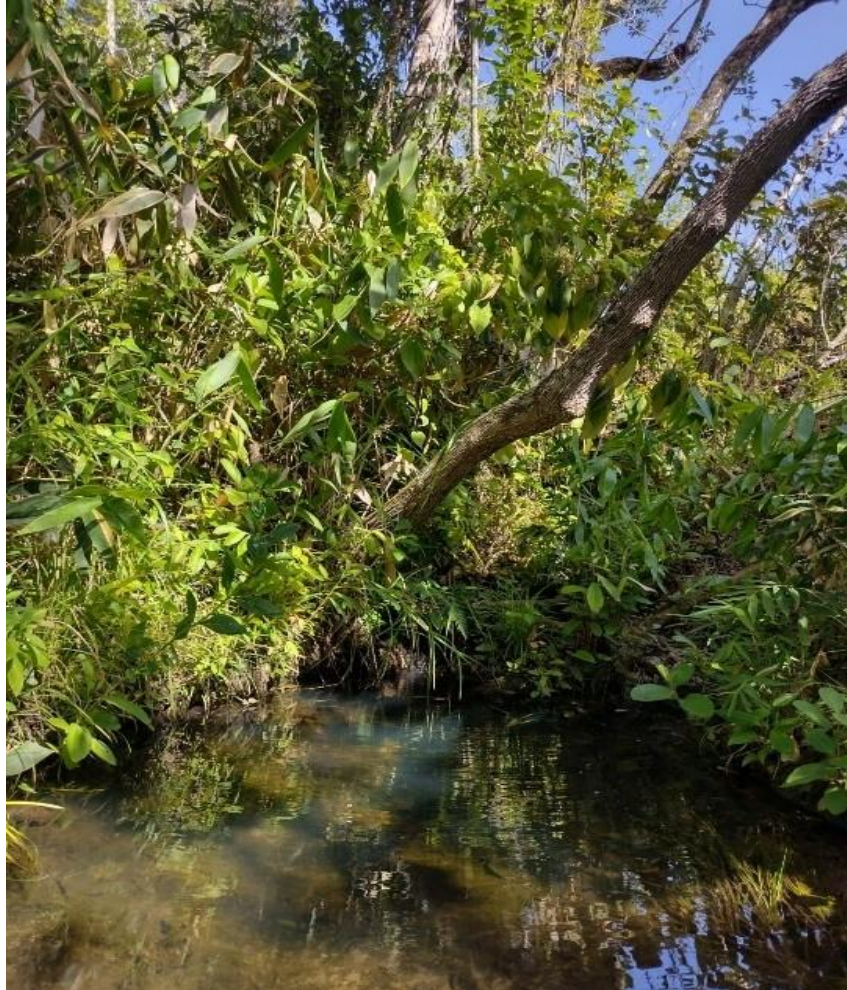
Source: OLIVEIRA, Arthur Ângelo Bispo de. (30/09/2023).

The Meruri Village had its water supply network built through the Salesians and the Boe Bororo people, the network serves the rectangular shape (Figure 02).

The results were evident in the speeches of our elders so that we could certify the need for improvements for the sustainable development of our territory.

Urugureudo (2022) said that "here there was a river with a lot of water, there were a lot of fish, the bush here had a lot of animals, at that time we lived more on fish, ... today there is nothing left." It is necessary to build public policies for the preservation and reinvigoration of springs and to plant trees where the rivers were silted up before reaching our T.I., so that we have our water back.

Figure 03 – Spring Area of the Meruri Indigenous Land in General Carneiro - MT.

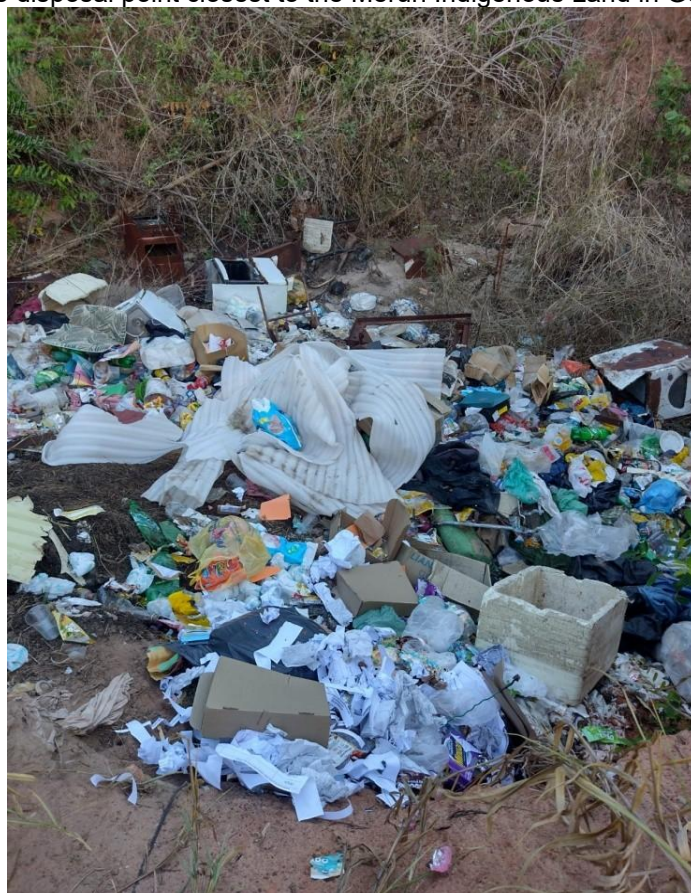


Source: Field Research conducted in 2023.

Urugureudo (2022) claims the conservation of the indigenous way of life, saying that "we learned to live like this and that's how we're going to live, because it's not us who want it that way. Our village was polluted; today we need a bathroom; From mosquitoes come diseases."

Kurireudo (2022) spoke of the need to "start planting buriti to make a well you have to look very deep so that the waters of the rivers, headwaters, springs and lakes. The places where there are buriti are the places that today have water. Thus, we believe that where there are buritis trees there is water, where we plant buriti we will have water.

Figure 04 - Garbage disposal point closest to the Meruri Indigenous Land in General Carneiro - MT.



Source: Field Research conducted in 2023.

Water is a source of life not only in the natural environment but also in the social environment, because the existence of a society of the Boe people is associated with the existence of this finite good, because water tends to cease to exist if human action is not aware, because it does not depend on a society that lives in a territory like Meruri, because the Meruri Village is cut in half by the BR 070, which is the entrance of human action as fire, which weakens the headwaters, however the care of the Boe people does not leave anything to be desired as figure 03 shows a preserved headwater.

Kurireudo (2022) advises: "we will have to be careful not to deforest, not to lose the headwaters, the things, because we are not decreasing, we are increasing... Then we have to preserve it." Muga Pedrosa's concern is the same as that of our community, that is, not to deforest, so as not to lose the natural and water resources that we have within our reach, because looking at the future we will be more demographically, this is a responsibility of those who are here in the present. We need to look for natural and water resources that go far beyond the planting of buriti.

Figure 05 – Second garbage disposal point closest to the I.T. Meruri in General Carneiro - MT



Source: Field Research conducted in 2023.

It is also necessary to raise collective awareness for all the issues mentioned. With the preservation of nature we will only have a positive return from nature, because we will have a healthier life, fresh air to breathe, also the increase in hunting and fishing and so many other things.

Kurireudo (2022) also says that "it is an advantage for you to learn, and then pass it on to your children. So it passes from generation to generation... if we don't help, don't teach, then the culture of Boe Bororo will end" Muga Pedrosa makes an important reflection here about the needs of man for the preservation of the environment, because only then will our planet have a future.

There is a garbage disposal point closer to the village, about five hundred meters away. In the village there is no sanitation and garbage collection, so it is up to each one to collect and dispose of garbage at the points that are close to the village. Often there is community garbage collection, where a joint effort is made to clean the village, which usually happens after a party or tournament in the village that ends up leaving a lot of garbage scattered, so the collective effort is made with the young people, offering lunch for everyone involved. When garbage collection is communal, the place of disposal of this garbage is in another place (Figure 04), a place a little further from the village, but when it is a joint effort, the community's tractor is used to help take the garbage a little further away from the village.

Continuing, garbage is an element that affects the landscape of the environment, because in the past the Boe people of Meruri had only their natural garbage, which even served as fertilizer for crops and vegetables common to the cerrado biome. However, with the contact with the *baraedo* (white man) which is direct and indirect, the habit of bringing garbage from outside was created, through packaging, household appliances, furniture, among others. The problematic issue was the destination of this material that we call *braegigudu* (remains of a white man). There is no support from the Municipality of General Carneiro for an adequate destination for disposal. Or even create a recycling process so that you don't waste these materials. This garbage will pollute the environment over time, not to mention that it causes numerous diseases, as we have seen in figure 05.

FINAL CONSIDERATIONS

We concluded after the research with the elders of our Boe Bororo community of the Meruri Village, that we have an action to be developed in order to perpetuate the natural resources for future generations. Following the line of reasoning of the elders, the preservation of nature, no deforestation, no fire in nature, the planting of buriti trees in the springs, are resources that cost little and that can be done by raising awareness of current problems related to the climate and the sustainable development of communities today and ensuring the existence of future generations.

Sustainability has become a major focus of discussion in recent years due to climate problems that are becoming increasingly common. This is because of the constant exploitation of finite environmental resources of paramount importance for the survival of humanity, which can cause environmental crises (IAQUINTO, 2018).

Here we bring you the book released by Ailton Krenak "Ideas to Postpone the End of the World" (2020), in which reciprocity is pointed out as a way to postpone the end of the world, as it is a call to the worldview of native peoples, who had their narratives and resistances erased and silenced by historical time, and who currently, they are relevant views in the face of environmental issues and the threat to the survival of humanity and its diversity on Earth.

When dealing with the word development and sustainable as antagonistic, I resorted to the video of a conversation between Ailton Krenak and Eduardo Viveiro de Castros (2023), in a footage called *Conversa na Rede*, because there Eduardo Viveiro de Castros says that the capitalist system will not end, what will end is humanity, because the system looks at the environment and already studies what can be monetized, transformed into capital, the gaze is monetary, unlike the original peoples, who when looking at nature

see as a mother as the expression Mother Earth, in our case of the Boe Bororo people, we call it *boeetuiedagamage*, the one who bears the name, another interpretation of a relative. Who are they? They are the fish with their traces, the birds with their feathers, the animals with their scratches, entering the spiritual world, bearing the names of spirits. Nature gives us our name, so it is our relative. Being a relative, we will not wish her any harm, so this special affection for nature and this feeling of defense.

We present some dimensions, one of them the Environmental Dimension, which dealt with the preservation of the environment in a collective way, where it is perceived in the interview with the members of the community the concern to raise resources to develop training, training to combat fires, but there is also the concern with the economic issue of women, since the source of income is through handicrafts, look at other angles that offer economic alternatives in nature itself, in our case, in the Cerrado biome. Another is the Economic Dimension through nature itself being able to generate income, without harming nature, here we bring the point of view of the interviewee. Regarding this dimension, it is important to mention that historically the Boe Bororo people of Meruri were contemplated via Funai in the 1980s, with agricultural projects, at the time in the village there was a machine for beating rice and even bagging, there was a tractor, harvester, however, there was a time of decline in this project, so it was not possible to proceed. But in the field of cattle breeding, it lasted longer, until after the 2000s, because men already had contact with this type of breeding, but over time the administration of this type of culture was lost.

By concluding these reflections, which start from the theoretical field, go to the theoretical-practical through the interviews, we note that this relationship between the academy and the community is essential, these encounters of scientific knowledge with the traditional knowledge of the Boe Bororo people of Meruri, tends to sensitize the Boe Bororo society as well as the other societies of the surroundings, to commit to nature. It is noticeable through environmental policies this concern for current and future generations, in the same way that the Boe Bororo people of Meruri, always point to reciprocity, here I put it as the word *mori*, a traditional value, which reminds the Boe Bororo people that it is crucial to take care to preserve nature, and also look for ways to train themselves to help with this care, including the technical part. Awareness using the two languages of knowledge is essential to maintain not only the Boe Bororo people, but also the nature that is part of their family, their people and their society.

The Boe Bororo people have as their essence the socio-ancestral organization, what it comes to be, an organization that comes from the ancestors, which consists of the



two exogamic halves, and has as a strong relationship reciprocity, which is called *the mori*, and this relationship goes beyond the social environment, to the natural environment, in the main case nature, and this is a relative of his, as a relative the Boe Bororo people have enormous affection and care. Aligning this traditional wisdom with this worrying environmentalist action, which has been going on since recent times, is crucial this relationship that the Boe Bororo society has, it starts to have with the academy, so that both can learn from each other, thus achieving a future of concrete and conscious sustainability.

REFERENCES

1. Albisetti, C., & Venturelli, A. J. (1962, 1969, 1976, 2003). Enciclopédia Bororo (Vols. I–IV). Editora UCDB.
2. Boff, L. (2012). Sustentabilidade: O que é – o que não é. Vozes.
3. Brasil. (1973). Lei n.º 6.001, de 19 de dezembro de 1973: Estatuto dos Povos Indígenas. Presidência da República. https://www.planalto.gov.br/ccivil_03/leis/l6001.htm
4. Fiorillo, C. A. P. (2013). Curso de direito ambiental brasileiro (14ª ed.). Saraiva.
5. Gallois, D. T. (2005). Cultura “indígena” e sustentabilidade: Alguns desafios. Revista Tellus, 5(8/9), 29–36.
6. Iaquinto, B. O. (2018). A sustentabilidade e suas dimensões. Revista da ESMESC, 25(31), 157–178.
7. InfoEscola. (2023). Economia do Mato Grosso. <https://www.infoescola.com/mato-grosso/economia-do-mato-grosso/>
8. Jacobi, P. (2003). Educação ambiental, cidadania e sustentabilidade. Cadernos de Pesquisa, 118.
9. Krenak, A. (2020). Ideias para adiar o fim do mundo. Companhia das Letras.
10. Mendes, J. M. G. (2009). Dimensões da sustentabilidade. Revista das Faculdades Integradas Santa Cruz de Curitiba – Inove, 7(2), 49–59.
11. Ricardo, F. (Org.). (2004). Terras indígenas & unidades de conservação da natureza: O desafio das sobreposições: Povos indígenas e “desenvolvimento sustentável”. Instituto Socioambiental.
12. Sachs, I. (1993). Estratégias de transição para o século XXI: Desenvolvimento e meio ambiente. Studio Nobel; Fundação do Desenvolvimento Administrativo.
13. Sartori, S., Latrônico, F., & Campos, L. M. S. (2012). Sustentabilidade e desenvolvimento sustentável: Uma taxonomia no campo da literatura.
14. Schramm, A. M., & Corbetta, J. M. (2015). Desenvolvimento sustentável e sustentabilidade: Conceitos antagônicos ou compatíveis? In M. C. S. A. de Souza & C. A. Armada (Orgs.), Sustentabilidade, meio ambiente e sociedade: Reflexões e perspectivas (pp. XX–XX). Universidade Paranaense – UNIPAR.