GUARANI KA’AHE’Ê: THE LEGAL (DIS) PROTECTION OF BIODIVERSITY AND ETHNO-KNOWLEDGE OF BRAZILIAN INDIGENOUS PEOPLES

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ABSTRACT

This study aims to investigate the existing legal regulations in the Brazilian Social State regarding the biodiversity found in Brazilian indigenous lands and their ethno-knowledge, in the light of the case study of ka’ahe’ê (stevia) of the Guarani peoples and Coca-Cola. Considering the historical matrix based on the wounds of coloniality, which rejects indigenous peoples to the social margin, denying them access to their rights, the study seeks to bring a general and historical apparatus of these peoples, outlining the democratic social state of Brazilian law, the normative legal framework that protects biodiversity and its ethno-knowledge. The study has its theoretical foundation based on decoloniality. Methodologically, the research consists of a theoretical review and a case study, using bibliographical and documentary research techniques based on exploratory and qualitative analysis. Research results indicate a lack of effectiveness in enforcing international regulations and of commitment to the Brazilian constitutional text. In this regard, there is a violation of the rights to free, prior and informed consultation; benefit sharing; and territorial self-determination of

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indigenous peoples – marks of colonial power over biodiversity, that is, biocoloniality.

**Keywords:** biodiversity; Coca-Cola; coloniality; ethno-knowledge; indigenous people.

**KA’AHE’Ẽ GUARANI: A (DES)PROTEÇÃO JURÍDICA DA BIODIVERSIDADE E DOS ETNOSSABERES DOS POVOS INDÍGENAS BRASILEIROS**

**RESUMO**

O presente estudo visa averiguar a regulamentação jurídica existente no Estado Social brasileiro quanto à biodiversidade encontrada em terras indígenas brasileiras e aos seus etnossaberes, à luz do estudo de caso da ka’ahe’ẽ (stevia) dos povos Guaranis e da Coca-Cola. Considerando a matriz histórica pautada nas chagas da colonialidade, que refuga os povos indígenas à margem social, negando-lhes o acesso aos seus direitos, o estudo busca trazer um aparato geral e histórico desses povos, delineando o estado social democrático de direito brasileiro, o arcabouço jurídico normativo que protege a biodiversidade e os seus etnossaberes. O estudo tem sua fundamentação teórica baseada na descolonialidade. Metodologicamente, a pesquisa consiste em uma revisão teórica e de estudo de caso, tendo como técnica de pesquisa a bibliográfica e a documental a partir de análise exploratória e qualitativa. Como resultados da pesquisa identificam-se: falta de efetividade na aplicação da normativa internacional e de comprometimento com o texto constitucional brasileiro. Nesse aspecto, há violação dos direitos de consulta livre, prèvia e informada; repartição de benefícios; e autodeterminação territorial dos povos indígenas – marcas do poder colonial sobre a biodiversidade, ou seja, a biocolonialidade.

**Palavras-chave:** biodiversidade; Coca-Cola; colonialidade; etnossaberes; povos indígenas.
INTRODUCTION

The present investigation has as its theme the study of legal regulation in the context of the Brazilian Social State, especially regarding the biodiversity found in its indigenous lands and traditional knowledge or ethno-knowledge, in the light of the case study of ka’ahê’ê (stevia) of Guarani peoples and Coca-Cola.

Considering the historical matrix based on the wounds of colonization, which relegates indigenous peoples to the social margins, denying them access to their rights, the following question is urgent: to what extent does the Brazilian Social State guarantee indigenous peoples the effective legal protection of biodiversity of their lands and, also, to their ethno-knowledge?

Initially, the objective is to present a general apparatus and contextual history of indigenous peoples and the Brazilian Social Democratic State of Law, based on the legal framework that protects biodiversity and the ethno-knowledge of indigenous peoples and, finally, nuances of the case study of ka’ahê’ê (stevia) of the Guarani peoples and Coca-Cola.

The research is based on the decolonial theory, which has the conquest of America as its starting point, and is constituted in the space/time of a pattern of world power, configured as the first identity of Modernity. Such historical processes converged and were associated in the production of the aforementioned space/time, establishing themselves as two fundamental axes of the new pattern of power. Thereby, the codification of the differences between conquerors and conquered in the idea of race made clear a supposed and distinct biological structure that placed some in a condition of inferiority in relation to others. This idea was assumed by the conquerors as the main constitutive and foundational element of the relations of domination that the conquest demanded. Consequently, the population of America, and later, of the world, was classified in this new standard of power. On the other hand, there was also the articulation of historical forms of control of work, its resources and its products around capital and the world market, where some of the violence suffered by indigenous peoples was identified.

The methodology employed is based on exploratory studies and qualitative analysis, which aims to discuss the aforementioned objective, given that it seeks to describe the facts and concepts of current reality, as well as to identify the factors that contributed and still contribute to its
construction and later, from the exploratory method, conjecture a way to respond to the posed problem. For this purpose, the method used is the bibliographic review and case study, with bibliographical and documentary research techniques.

The study is divided into four parts, composed as follows: an initial approach to coloniality imprinted by the historical marks of colonialism on indigenous peoples; study of the Brazilian Social State and its constitutional guarantees to indigenous peoples; the normative frameworks that protect biodiversity and ethno-knowledge in Brazil; and, finally, the explanation of the case study of ka’ahe’ẽ (stevia) of the Guarani peoples and Coca-Cola.

1 THE HISTORICAL MARKS OF COLONIALISM ON NATIVE PEOPLES

In 1500, the world’s population was around 400 million, with about 80 million living in the Americas. “In the middle of the 16th century, of those 80 million, 10 remain. Or, if we restrict ourselves to Mexico: on the eve of the conquest, its population is approximately 25 million; in 1600, it is 1 million” (TODOROV, 1991, p. 73-74, free translation).

In Mexico alone, in a century of European colonization (mainly by Spaniards), the original population was reduced by 96%, leaving only 4% of the population. In the Americas as a whole, of the 80 million there was a population reduction of 87.5%, that is, only 12.5% of the original population of America survived the first century of contact with Europeans.

If the word “genocide” was ever accurately applied to a case, then this is it. It is a record, it seems to me, not only in relative terms (a destruction of the order of 90% and more), but also in absolute terms, since we are talking about a decrease in the population estimated at 70 million human beings. None of the great massacres of the 20th century can compare to this hecatomb. […] Not that the Spaniards were worse than other colonizers: it just so happened that they occupied America at the time and no other colonizer had the opportunity, before or after, to cause the death of so many people at the same time. The English and the French, at the same time, behave in the same way; but their expansion is by no means on the same scale, so neither is the damage they can cause (TODOROV, 1991, p. 74, free translation).

The Report on the State of the World’s Indigenous Peoples from the United Nations Department for Economic and Social Affairs, reveals that in 2009 there were, in all the continents of the Globe, about 370 million indigenous people. Data show that traditional peoples represented 5% of the
world’s population, and they were found in all continents – Latin America, Australia, New Zealand, United States, Canada, India, the Arctic Region (including Russia and northern Europe), East and Southeast Asia and the Pacific countries – in addition to the Forest Peoples of Africa. They add up, however, to 15% of the planet’s poor and, among the extremely poor rural people in the world, estimated at 900 million, traditional populations make up about a third (DESA, 2009).

Based on data from the Economic Commission for Latin America and the Caribbean, in Latin American countries, including Brazil, the indigenous population is estimated to total approximately 45 million people (44,791,456). Although the total population of Latin America is just over 538 million people (538,153,481), only 8.3% of this population is indigenous. The data also show that Indigenous Latin America is made up of 827 different peoples, each with their own worldviews, beliefs, languages, customs, cultural practices and different social organizations (CEPAL, 2014).

The Brazilian indigenous peoples, according to the last statistical population census of the Brazilian Institute of Geography and Statistics (IBGE), carried out in 2010, account for a population of almost 900 thousand people (896,917), speakers of 274 different languages, totaling 305 ethnic groups, which represent a total of 0.5% of the total Brazilian population (ECLAC, 2014). The Instituto Socioambiental, however, states that when Europeans arrived in Brazil, there were more than 1,000 different indigenous peoples here, which numbered between 2 and 4 million people (ECLAC, 2014). Such data reflect that:

Indigenous peoples suffer from the consequences of historic injustice, including colonization, dispossession of their lands, territories and resources, oppression and discrimination as well as lack of control over their own ways of life. Their right to development has been largely denied by colonial and modern states in the pursuit of economic growth. As a consequence, indigenous peoples often lose out to more powerful actors, becoming among the most impoverished groups in their respective countries. (DESA, 2009, p. 21).

Since October 12, 1492, the date on which Christopher Columbus landed on the American continent, the peoples and individuals who lived here began to be called “Indians”, whose situation is analyzed by Bonfil Batalla (2011, p. 110-111, free translation):

The category of Indian denotes a colonized condition and makes a necessary reference to the colonial relationship. The Indian was born when Columbus took possession of the Hispaniola Island on behalf of the Catholic Monarchs. Before the
European discovery, the American continent’s population was formed by a large number of different societies, each with its own identity, which were at different stages of evolutionary development: from the high civilizations of Mesoamerica and the Andes, to the groups of collectors from the Amazon rainforest. Although there were processes of expansion of the most advanced peoples (Incas and Mexicas, for example) and vast politically unified domains had already been consolidated, pre-Hispanic societies presented a heterogeneous mosaic of diversities, contrasts and conflicts of all kinds. There were no “Indians” or any concept that uniformly qualified the entire population of the Continent.

It was, however, from the colonial relationship that the European created the standardizing category of “Indian”, imposing on him the relationship of different and inferior, thus justifying the domination, servitude and extermination of the original peoples of America. The analysis bias of the historical contextualization of the questions of the original peoples of the American continent can be started with the colonial paradigm, in which, according to Bonfil Batalla (1981, p. 19, free translation):

The category of Indian designates the colonized sector and makes a necessary reference to the colonial relationship. The Indian appears with the establishment of the European colonial order in America; previously there were no Indians, but diverse peoples with their own identities. The Indian is created by the European, because every colonial situation requires the global definition of the colonized as different and inferior (from a global perspective: racial, cultural, intellectual, religious, etc.; based on this categorization of the Indian, the colonizer rationalizes and justifies domination and the assumption of privileges (the conquest becomes, ideologically, a redemptive and civilizing undertaking).

The colonial relationship created the category “Indian” to distinguish and hierarchize the colonizer (superior) and the colonized (inferior). Consequently, coloniality was born from the colonization of America, bringing to light a way of inferiorizing the other based on the category of race, with indigenous peoples being the inferiorized “race” in the conquest of America. According to Quijano (2005, p. 17, free translation), the constitution of present-day Latin America and the current pattern of world power were established by coloniality, because,

[…] the new system of social domination had the idea of race as its founding element. This is the first social category of modernity. Since it did not previously exist – there are no efficient traces of its existence – it did not have then, as it does not have now, anything in common with the materiality of the known universe. It was a specific mental and social product of that process of destruction of a historical world and establishment of a new order, of a new pattern of power, and it emerged as a way of naturalizing the new power relations imposed on the survivors of this world in
destruction: the idea that the dominated are what they are, not as victims of a power conflict, but rather as inferior in their material nature and, therefore, in their capacity for historical-cultural production. This idea of race was so deeply and continuously imposed in the following centuries and on the whole of the species that, for many, […] it became associated not only with the materiality of social relations, but with the materiality of people themselves.

It should be noted that the concept of colonality discussed here was created in the context of the Latin American Research and Investigation Group “Modernidade/Colonialidade” (ESCOBAR, 2003). The author reveals that in this group, colonality, beyond the facet of power and race, has three central axes, namely: i) *coloniality of power* – consisting of a model of hegemonic global power since the conquest of America, and articulates race and work, spaces and peoples for the benefit of European peoples; ii) *coloniality of knowledge* – based on the colonial difference, and refers to the knowledge and dimensions of a single perspective of Eurocentric knowledge, discarding the existence and viability of other epistemic rationalities and knowledge that are not those of European or Europeanized white men; iii) *coloniality of being* – process of inferiorization, subordination and dehumanization resulting from the project of modernity, urged in colonality (ESCOBAR, 2003).

It is important to point out that colonality refers to a pattern of power that emerged as a result of Modern Colonialism, not limited to a formal power relationship between two peoples or nations in terms of how work, knowledge, authority and intersubjective relations articulate with each other in the world capitalist market and the idea of race. Thus, although colonialism precedes colonality, colonality survives colonialism and remains alive in didactic texts, in the criteria for good academic work, in culture, in the common sense, in the self-image of peoples, in the aspirations of subjects and in many other aspects of the modern experience (MALDONADO-DO-TORRES, 2007).

Such categorizations were of paramount importance in the foundation of what Wallerstein (2011) called the “modern world-system”. The universalization of the different worlds, according to Dussel (1993), is the characterization of Eurocentrism, universalizing the practices, knowledge and wishes of Europe for the entire Planet, starting for Latin America, with the concealment of the other, whether by power, being or knowledge (ESCOBAR, 2003).

By adopting the paradigm of decoloniality, the decolonial theoretical
matrix presents counter-hegemonic means of thinking about the application of human rights in the protection of indigenous peoples. It is possible to think of a reality beyond that which was part of the genesis of the liberal individualist discourse, and which excludes any subject who does not fit into the process of “building” this list of rights. It is therefore necessary to disengage from such constructions, since the colonial matrix of power is a totality that denies, excludes and hides the difference and the possibility of other totalities.

It is observed that the founding matrices of coloniality, based on a model of social hierarchy, echo from the past to the present, when coloniality left its historical wounds on indigenous peoples, whether in Brazil or in Latin America. Indigenous peoples are among the poorest populations on the Planet, and the many faces of the axes of coloniality over native peoples can be found in the most different social scenarios.

In this vein, as the theme now developed permeates and concerns indigenus peoples, clarifying, historicizing and resuming the matrices of their (de)civilizing process constitutes a fundamental analysis for the researched problem. Even though more than 500 years have passed since Christopher Columbus landed on what is now the American continent, the reflections of the brutality of that contact still remain and have repercussions on the biodiversity belonging to indigenous peoples and their ethno-knowledge.

2 THE BRAZILIAN SOCIAL STATE AND ITS CONSTITUTIONAL GUARANTEES TO INDIGENOUS PEOPLES

Considering the historical marks of colonialism on native peoples, this topic aims to outline the context of the Brazilian Social State and the guarantees and constitutional rights guaranteed to indigenous peoples.

The Social State is the result of the exhaustion of the Liberal State that occurred in Europe in the 20th century, guided by the guarantee of the protection of rights. Teixeira (2019, p. 13, free translation), mentions in this sense that,

The exhaustion of the liberal model on European soil caused a transition, which took place in the early 20th century, to the Social State of Law. However, the idea of the supremacy of the law in resolving social conflicts has always remained, which implies its use as an instrument for protecting rights against arbitrariness.
In this sense, Morais and Brum (2016, p. 109, free translation) state that:

The political-legal arrangement that was conventionally called the “Social State” or “Welfare State”, which emerged in the course of the first half of the 20th century and was promoted after World War II, is the result of the recognition and affirmation of human rights relating to production relations and their consequences. It is that State in which people, regardless of their social situation, have rights that must be protected through public benefits (health, social security, housing, that is, the so-called social rights, benefits par excellence).

It is in this Social State that the incorporation of the transforming agent takes place, which, through the constitutional text, starts to act in the surrounding reality “[…] towards a less unequal society with greater social justice” (MORAIS; BRUM, 2016, p. 110, free translation). The authors also point out that

The big question that arises, given this contemporary profile of the Social State, is what would be the most appropriate locus for promoting this change, this transformation of the status quo. Naturally, in the face of prima facie promises not fulfilled by the Government and the consecration of social rights in the constitutional text (becoming, therefore, judicializable), the Judiciary branch becomes a more frequent participant in the implementation of the principles and rules that convey fundamental legal positions […] (MORAIS; BRUM, 2016, p. 110, free translation).

It is noted that the Federal Constitution becomes a major protagonist and transforming agent that dictates the beacons, objectives and guidelines that the entire legal system, the branches of power and society need to follow. From this perspective, Teixeira (2019, p. 13, free translation) teaches:

However, the greatest contribution to the Constitutional Theory of the 20th century made by the Social State of Law itself and, consequently, by Social Constitutionalism, seems to be the redefinition of the normative function of the constitution within a State of Law: from more of a political document than a properly legal one, it then becomes, especially with the post-World War II constitutions, a legal document endowed with normativity like any other law, but with the prerogative of being the highest law of a legal system. With this, the supremacy of the law is overcome and we arrive at the sovereignty of the constitution.

In this intimate relationship between the Social State and Social Constitutionalism, made perfect by the Constitutional Text, there is the construction of a fairer and less unequal society, which faces the barriers left by coloniality. In this sense, as noted by Copelli (2018), this Social State is an agreement for a new way of life, which admits the existence of
inequalities and situations of need. According to the author, by proposing a new way of life, the Social State establishes solidarity in society, also demonstrating a unity of this State.

The fact is that this coming closer together of the constitutional text’s *duty* to the factual reality, in terms of social rights, remains a primary task of the Executive and Legislative Powers via public policies, and it is through these that the path towards a less unequal society must be traversed. The connection between public policies and the Social State is, in this sense, umbilical. However, without disregarding this feature of the current state model, the modern literature that makes up the field of study of the theory of the State has been questioning the “transformative possibility” of the welfare state more and more frequently (MORAIS; BRUM, 2016, p. 110, free translation).

In order to provide social justice to indigenous peoples, victims of secular oppression of colonial matrices, the “Citizen Constitution” (MENDES; BRANCO, 2020), enacted on October 5, 1988, brings a specific chapter on their rights and guarantees. Such provisions are the result of the political struggle of indigenous organizations and peoples, represented in the speech and historic protest of the indigenous leader and environmentalist, Ailton Krenak, during the Constituent Assembly, in the Plenary of the Chamber of Deputies, on September 4, 1987. On the occasion, Krenak spoke with his face painted in black, with genipap, demonstrating the oppression suffered by indigenous communities in Brazil (ÍNDIO CIDADÃO?, 2014).

The constitutional text intended for indigenous peoples has two important provisions: articles 231 and 232, which highlight the recognition of their rights and guarantees in the social organization, customs, language, beliefs and traditional practices, as well as the original rights over the lands that they traditionally occupy, which must be demarcated, protected and respected by the Federal Government (BRASIL, 1988).

It is also worth highlighting other constitutional provisions that guarantee rights and guarantees to indigenous peoples, which are: prohibition of discriminatory treatment (art. 3, item III); the principle of self-determination (art. 4, item IV); the right of equality for indigenous peoples, with the guarantee of the right to life, freedom, equality, security and property (art. 5, *caput*); and the right to education that respects their traditions and customs, with learning their mother/traditional tongue (art. 210, § 2). It is added, in articles 215, § 1, and 216, the recognition of the constitutional right to culture, which reflects in the ethnic and cultural pluralism of Brazil (BRASIL, 1988).
The Magna Carta also establishes the competence of the Federal Justice, through federal judges, to process and adjudicate legal disputes that deal with indigenous rights (art. 109, item XI). To the Public Ministry is ascribed, as an institutional function, the judicial defense of the rights and interests of the Brazilian indigenous peoples (art. 129, item V) (BRASIL, 1988).

The Constitutional Text, therefore, represents a paradigm shift from the assimilationism present in previous Constitutions, recognizing that indigenous peoples have the right to differ in identity, culture, language, custom and way of living their tradition. It is a different cosmovision of existing, being and relating to the world and the land they inhabit, present in each of the 305 Brazilian indigenous ethnic groups.

It is also noteworthy that the Federal Constitution of 1988 is one of the most important milestones in the defense of the indigenous peoples’ guarantees and rights, as the right to difference, self-determination and their territory and lands, among others, was undoubtedly recognized. In a plural society versed under the colonialist, genocidal and unequal aegis, the fruit of a human and historical massacre, the constitutional recognition of the rights of indigenous peoples is fundamental to the promotion of their rights and guarantees, constituting a primordial role in the defense of the Brazilian indigenous peoples’ Human Rights.

3 THE LEGAL PROTECTION OF BIODIVERSITY AND ETHNO-KNOWLEDGE IN BRAZIL

Once observed that there are other human cultural expressions, essential to the construction of plural societies, an attempt is made to break with the paradigm of civilizing or modernizing action. As regards the preservation and protection of biodiversity, tackling climate change is key for the continuity of life on Earth, in a scenario where only 3% of the oceans are free of human impacts and only 18% of the world’s forests are legally protected (FAO; UNEP, 2020).

With regard to indigenous peoples, their extreme importance is understood in the agenda for protecting the Planet’s biodiversity, considering that 80% of the preserved areas of biodiversity on the earth’s surface are in indigenous lands (WRI et al., 2005), while about one million species of animals and plants are at risk of extinction within a few decades (IPBES, 2019). Furthermore, almost half (45%) of the intact forests in the Amazon...
Basin are found in indigenous territories (FAO; FILAC, 2021), proving that indigenous peoples are the best guardians of the forest in the fight against climate change (FAO; FILAC, 2021).

Despite the normative construction of the Brazilian State, the National Environmental Policy was timid in regulating some issues. It is observed, with this, especially, that in chapter VI, art. 225, *caput*, of the Federal Constitution of 1988, which deals with the right to the Environment in a specific way, there is a constitutional guarantee of:

Everyone has the right to an ecologically balanced environment, an asset for common use by the people and essential to a healthy quality of life, imposing on the Government and the community the duty to defend and preserve it for present and future generations (BRAZIL, 1988, free translation).

As a mandatory norm, imposing on the Government the duty to act, paragraph 1, item II, of article 225, of the Magna Carta determines that to ensure the effectiveness of this right, it is incumbent upon the Government: “to preserve the diversity and integrity of the country’s genetic heritage and to supervise entities dedicated to research and manipulation of genetic material” (BRASIL, 1988). Next, paragraph 4 of the same article determines that:

The Brazilian Amazon Forest, the Atlantic Forest, the Serra do Mar, the Pantanal Mato Grosso and the Coastal Zone are national heritage, and their use will be made, in accordance with the law, under conditions that ensure environmental preservation, including the use of natural resources (BRASIL, 1998, free translation).

This mention makes clear the legislator’s concern with the main Brazilian biomes and the right to biodiversity. In the international arena, there is the regulation of this right, primarily in the Convention on Biological Diversity (CBD), from 1992, internalized in 1998, through Decree no. 2,519, of March 16, 1998 (BRASIL, 1998).

In the protective framework of the CBD and its legal repercussions in Brazil, the following stand out: art. 1; item “j” of art. 8; item “c” of art. 10, art. 15 and paragraphs 3 and 4 of art. 16.

The Convention has as its main objective the conservation of biological diversity, indicating the need for the sustainable use of its components and the fair and equitable sharing of benefits derived from the use of genetic resources, through adequate access to genetic resources and adequate transfer of relevant technologies, taking into account all rights to such resources and technologies, and subject to adequate funding. The
The aforementioned Convention observes that the national legislation of the States must respect, preserve and maintain the knowledge, innovations and practices of local communities and indigenous populations with traditional lifestyles relevant to the conservation and sustainable use of biological diversity and encourage their widest application with approval and participation of the holders of this knowledge, innovations and practices, in addition to encouraging the equitable sharing of benefits arising from the use of this knowledge, innovations and practices. Furthermore, it aims to protect and encourage the customary use of biological resources in accordance with traditional cultural practices compatible with the requirements of conservation or sustainable use (BRASIL, 1998).

The aforementioned Convention also asserts that genetic resources must prevail over natural resources, and that the authority to determine access to genetic resources belongs to national governments, that is, they are subject to national legislation, which is responsible for creating conditions of access to genetic resources for environmentally sound use by other States. Such actions, however, must not impose restrictions contrary to the objectives of this Convention, considering that they are only those provided by Contracting Parties, that is, countries of origin of these resources, or by Parties that have acquired them in accordance with this Convention. As for access, when granted, it must be by mutual agreement and subject to the prior informed consent of the Contracting Party providing the resources. Accordingly, each Contracting Party must seek to design and carry out scientific research based on genetic resources provided by other Contracting Parties, with their full participation and, as far as possible, in their territory. Furthermore, it must adopt legislative, administrative or political measures, when necessary, through the financial mechanism, in order to share, in a fair and equitable manner, the results of research and development of genetic resources and the benefits derived from their commercial use with the Party Contractor, provider of these resources (BRASIL, 1998).

In particular, with regard to developing countries that provide genetic resources, the Convention on Biological Diversity determines that they have guaranteed access to technology, so that they can use these resources and transfer them, by mutual agreement and when necessary, including the technology protected by patents and other intellectual property rights. Consequently, the private sector must be allowed access to technology, its joint development and its transfer to the benefit of government institutions and the private sector itself, subject to compliance with legal obligations.
All this in accordance with International Law, adopting legislative, administrative or political measures (BRASIL, 1998).

The CBD is the main international norm in force in Brazil on the protection and preservation of biodiversity which, together with the provisions of the Federal Constitution, gives rise to the Biodiversity Law – Law no. 13,123, of May 20, 2015 (BRASIL, 2015). The following legislation dealing with biodiversity is also in force in Brazil: the International Treaty on Phytogenetic Resources for Food and Agriculture (Decree no. 6,746/2008); Convention no. 169 on Indigenous and Tribal Peoples of the International Labor Organization (ILO) (Decree no. 5.051/2004); United Nations Declaration on the Rights of Indigenous Peoples, 2007; 2010 Nagoya Protocol; American Declaration on the Rights of Indigenous Peoples of 2016 (DOURADO, 2017).

Law no. 13.123/2015 (Biodiversity Law) provides for access to genetic heritage, protection and access to associated traditional knowledge, and benefit sharing for conservation and sustainable use of biodiversity (BRASIL, 2015). Its enactment, in addition to regulating the constitutional right to biodiversity and the provisions of the Convention on Biological Diversity, revoked Provisional Measure no. 2186-16, of August 23, 2001, which previously regulated the matter. Later, still in 2016, the Biodiversity Law started to be regulated by Decree no. 8,772, of May 11, 2016 (BRASIL, 2016).

In this legal context, therefore, there is the protection of indigenous peoples’ traditional knowledge or ethno-knowledge. Art. 2, items II and III of Law no. 13.123/2015, contains the legal definition used by Brazilian law, namely:

Besides the concepts and definitions contained in the Convention on Biological Diversity – CBD, enacted by Decree no. 2,519, of March 16, 1998, the following are considered for the purposes of this Law:

[…]  

3 Item II of paragraph 1 and paragraph 4 of article 225 of the Federal Constitution, article 1, item “j” of article 8, item “c” of article 10, article 15 and paragraphs 3 and 4 of article 16 of the CBD, are regulated by the Biodiversity Law – Law no. 13,123, of May 20, 2015 (BRASIL, 2015).

4 Despite the legislation treating indigenous peoples’ ethno-knowledge with the terminology “traditional knowledge”, throughout the writing there is no use of the legal terminology commonly found in the doctrine, which refers to the Indigenous Peoples’ ethno-knowledge as “traditional knowledge”. It is understood that such terminology is permeated with the historical marks of colonialism and colonality, and does not allude to the ancient and ancestral wisdom developed by Indigenous Peoples. Since, according to Antonio Carlos Diegues, the original peoples and societies have “in-depth knowledge of nature and its cycles, which is reflected in the making of strategies for the use and management of natural resources. This knowledge is transferred from generation to generation orally” (DIEGUES, 1998, p. 87, free translation).
II – associated traditional knowledge – information or practice of the indigenous population, traditional community or traditional farmer on the properties or direct or indirect uses associated with the genetic heritage;
III – associated traditional knowledge of unidentifiable origin – associated traditional knowledge in which there is no possibility of linking its origin to at least one indigenous population, traditional community or traditional farmer; (BRASIL, 2015, free translation).

There are, however, serious misalignments between the provisions of the Biodiversity Law and the aforementioned international standards. We highlight the disrespect to Law no. 13.123/2015 and Decree no. 8.772/2016 regarding the rights of Prior Consultation, Free, Prior and Informed Consent, which is only mandatory when the associated traditional knowledge has an identifiable origin (art. 9), allowing interpretations regarding the unidentifiable associated traditional knowledge (DOURADO, 2017).

According to Nardon Martins, Sartori Júnior and Thewes (2022), indigenous peoples have the right to participation and consultation, being guaranteed the right to free, prior and informed consent, as a consequence of the right to self-determination. Free outlines exemption from “coercion, intimidation or manipulation”; Prior means that consent must be sought prior to the commencement of any activity; Informed refers to clarity of information, including with adequate and appropriate language and translation; and Consent is the right holders’ collective decision, which must be taken with respect to their usual decision-making processes (NARDON MARTINS; SARTORI JUNIOR; THEWES, 2022).

Another point to highlight refers to Benefit Sharing, which will only occur when there is economic exploitation of the finished product or reproductive material resulting from access to the genetic heritage and/or associated traditional knowledge. That is, as long as the benefits resulting from the economic exploitation of the finished product or reproductive material from access to the genetic heritage of species are found in in situ conditions or associated traditional knowledge (DOURADO, 2017). Furthermore, Law no. 13,123/2015 provides for a percentage of 1% for the monetary allocation of the finished product or material (art. 20), but which can be reduced to 0.1% by sectoral agreement (art. 21) (BRASIL, 2015). This demonstrates a violation of international predictions of fair and equitable sharing of benefits with the affected peoples, in addition to opening up to potential biopiracy practice.

Dourado (2017, p. 86) emphasizes that “it is clear that Law no.
13.123/2015, thus defined, cannot possibly be fair or equitable”. Furthermore, the Biodiversity Law erroneously uses the term “indigenous populations”, and in Convention no. 169, of the ILO, the use of the terminology “indigenous peoples” is already enshrined (MOREIRA, 2017).

Thus, there is evidence of violation of the rights of Free, Prior and Informed Consultation and the rights of Benefit Sharing contained in Law no. 13.123/2015 and Decree no. 8772/2016, with the consequent violation of the rights of self-determination, in addition to the rights over the territories of indigenous peoples, quilombolas and territories of traditional communities and traditional farmers who are closely related to such rights. The insufficient legal protection of biodiversity, explained above, reflects the coloniality of power over biodiversity, biocoloniality (CAJIGAS-ROTUNDO, 2007). This shows that even within the Social State, there is great difficulty in the effective application of fundamental guarantees and human rights with a view to the legal protection of affected peoples and communities, especially regarding the biodiversity found in their lands and their ethno-knowledge.

Once the relevant legislation was identified, the case involving *ka’ahe’ẽ* (stevia) of the Guarani peoples and the transnational Coca-Cola is exposed.

4 THE GUARANI KA’AHE’Ẽ (STEVIA) CASE

Despite the vast normative apparatus capable of protecting biodiversity and the ethno-knowledge of indigenous peoples, transnational companies still have the facility to exploit and, consequently, access biodiversity and its ethno-knowledge. There is, therefore, appropriation of heritage/genetic resources and ancestral and millenary knowledge of indigenous peoples, in view of the lack of consultation and financial compensation. One such example is the case of the stevia plant which, among the Guarani, is called *ka’ahe’ẽ* – a plant native to Brazil (Central) and Paraguay – which constitutes a resource of the genetic heritage of ancestral and millenary ethno-knowledge. The millennial knowledge of *ka’ahe’ẽ* belongs to the Guarani people, specifically to the Guarani-Kaiowá groups, from Brazil, and the Pai Tavytera, from Paraguay, marked by violent disputes over their territories and who find themselves on the margins of many guarantees and rights humans (JIMÉNEZ, 2016).

In 2015, the complaint emerged through the Report “The bitter taste
of stevia: commercialization of stevia-derived sweeteners by violating the rights of indigenous peoples, misleading marketing and controversial Syn-Bio production”, published by a group of institutions led by the Swiss organization Berne Declaration (BD) (which later changed its name to Public Eye)\(^5\). The Report denounces the biopiracy network that hides behind the commercialization of this sweetener and demands that a portion of the income generated from the sale of this plant be shared equitably and fairly with the Guarani people, as provided for in the Convention on Biological Diversity and the Nagoya Protocol (BERNE DECLARATION et al., 2015).

According to the Report, the stevia plant was taken to Switzerland for the first time in the 19th century, a time when there were no international or national mechanisms that would allow the characterization of this process as biopiracy, such as the classic example of the rubber tree, which occurred in a previous period. Later, in 1970, Japanese scientific expeditions went to the place of origin of stevia and extracted 500,000 wild plants, which were taken to Japan (JIMÉNEZ, 2016). Currently, the overwhelming majority of stevia production is carried out in Chinese monocultures (about 80%) and on a small production scale in Brazil and Paraguay, not to mention that the plant is practically extinct in its wild state (BERNE DECLARATION et al., 2015). In Paraguay, the stevia plant is cultivated mainly by small farmers, since its production is labor-intensive and also because it can be cultivated in diversified systems (JIMÉNEZ, 2016).

Also according to the BD Report, large companies are involved in the manufacture of products, such as beverages and food, from the use of the stevia plant, with synthetic biology methods for the marketable production of steviol glycosides, such as, among others, Coca-Cola (BERNE DECLARATION et al., 2015).

In 2013, Coca-Cola released the Coca-Cola Life product on the market, which is a low-calorie drink sweetened with sugar cane and steviol glycosides. The drink was launched in a green can, suggesting a healthy and environmentally friendly lifestyle (BERNE DECLARATION et al., 2015).

Jiménez (2016) points out that the commercial success of stevia is

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5 In addition to the Berne Declaration (currently Public Eye), the other institutions that signed the document were: the Centro de Estudios y Investigaciones de Derecho Rural y Reforma Agraria of the Universidad Católica “NuestraSeñora de la Asunción” (from Paraguay); the German organization of Catholic Bishops for International Cooperation Misereor; the Paraguayan organization SUNU Intercultural Action Group; the German University of Hohenhiem; and the independent platform “Pro Stevia Switzerland”.

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based not only on a great social and environmental injustice, but also on a confusion that, sometimes, can be described as a farce. Between the stevia leaves that the Guaranis wisely cultivate, and the steviol glycosides that the industry produces, there is an abyss of laboratories and genetic manipulations. Furthermore, the resulting additive usually makes up no more than 1% of the product, and what is sold as stevia is mixed with other sweeteners. Furthermore, industry and large corporations (transnationals) exert strong international pressure for small growers to disappear from the production scale, which translates into social and environmental injustice.

Almeida (2020) reinforces the DB Report data, bringing elements that allow the analysis of the unequal processes of appropriation of indigenous knowledge by non-indigenous people, in disrespect for a range of rights, but which are not effectively able to break with the historical marks of colonialism on indigenous peoples.

In 2016, the Guarani Indians filed a dispute against Coca-Cola, claiming the intellectual property of ka’ahe’ẽ, as well as fair and equitable participation in the distribution of benefits derived from the use of genetic material (COMO…, 2016). The dispute is unequal and disproportionate for the Guaranis against the transnational Coca-Cola. Not to mention that, in 2014, the Coca-Cola Life soft drink had its sale barred in Brazil because Decree no. 6,871/2009, which regulates Law no. 8.918/1994 and, in its art. 14, § 1, prohibits the combination of sugar and sweeteners in non-alcoholic beverages, with the exception of solid preparations for juices (EMPRESA…, 2015).

It is, therefore, an open question and little discussed in the Brazilian journalistic and legal scenario. Considering the possible data published so far on the case of the ka’ahe’ẽ – Guarani people and Coca-Cola – it appears that while the Indigenous peoples’ right to self-determination, consultation, participation, and free, prior and informed consent are not respected and duly observed, as mentioned in international legislation, it will be difficult to protect biodiversity and ethno-knowledge, perpetuating and intensifying human rights violations.

CONCLUSION

Throughout this investigation, it was possible to verify the existence of misalignments in international regulations that protect indigenous peoples and biodiversity. There were also indications of violation of the rights
of Free, Prior and Informed Consultation and the rights of Benefit Sharing, contained in Law no. 13.123/2015 and Decree no. 8772/2016, with the consequent violation of the rights of self-determination, in addition to the rights over the territories of indigenous peoples, quilombolas and traditional communities and farmers, all of whom closely related with such rights.

The insufficient legal protection of biodiversity reflects the coloniality of power over biodiversity, configured in biocoloniality (CAJIGAS-ROTUNDO, 2007). This shows that even in the context of the Welfare State, there is great difficulty in applying fundamental guarantees and human rights to the legal protection of peoples and communities affected in the biodiversity of their lands and their ethno-knowledge.

In the dispute between the Guaranis and Coca-Cola, the indigenous people claim the intellectual property of ka’ahe’ẽ, in addition to fair and equitable participation in the distribution of benefits derived from the use of genetic material. Based on what has been ascertained, verified and made available so far, there are sufficient elements that allow analyzing the unequal processes of appropriation of indigenous knowledge by non-indigenous people, in disrespect for the range of rights. However, this people is still not able to break with the historical marks of coloniality of power over indigenous peoples and over biodiversity – biocoloniality.

It is therefore essential to analyze Law no. 13.123/2015 and Decree no. 8772/2016, which regulates it, in the light of the Federal Constitution of 1988 and international regulations, to ensure the protection of the indigenous peoples’ ethno-knowledge, in order to guarantee and protect indigenous peoples’ rights and the specific regulations on biodiversity and genetic heritage.

The strengthening of the self-determination of indigenous peoples, the guarantee of the right to consultation and good faith based on free, prior and informed consultation, and the guarantee of the establishment and effectiveness of the Benefit Sharing term, in a fair and equitable manner, are rights that must be ensured, as provided for in international regulations. While, however, the effectiveness and the overcoming of the violations committed against indigenous peoples is not proven, human rights will still remain a fable, as they do not protect biodiversity nor the constant violations suffered by indigenous peoples. That is, as long as there is no social justice in Brazil, based on the true implementation of all goals, such as guidelines, guarantees and rights present in the Federal Constitution, the survival of indigenous peoples is threatened, which may reverberate in their historical genocide.
The “touchstone” in question is the protection of biodiversity, as a guarantee and social justice to be promoted by the Brazilian Social State, which must be extended to the very protection, preservation and survival of indigenous peoples and their ethno-knowledge, of millenary origins and ancestors, makers of their cultures, knowledge and cosmovisions. Their lives, their past, present and right to the future of the next generations are under discussion.

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