

The Ecological Disaster of the COVID-19 Pandemic: the Care for our Common Home from the Perspective of the UN and Indigenous Peoples

*El desastre ecológico de la pandemia COVID-19:
el cuidado de nuestra casa común desde la perspectiva
de la ONU y los pueblos indígenas*

*La catastrophe écologique de la pandémie de COVID-19:
le soin de notre maison commune du point de vue de l'ONU
et des peuples autochtones*

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Artículo recibido el 13 de julio de 2022
Aprobado para publicación el 10 de agosto de 2022

Anuario Mexicano de Derecho Internacional, vol. XXIII, 2023, pp. 495-532
Ciudad de México, ISSN 1870-4654

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ABSTRACT: This paper aims to reflect on indigenous peoples' knowledge of nature and the way it may contribute to sustainability in the context of the ecological disaster of the COVID-19 pandemic. This study is justified given the current situation in which humanity finds itself, as the UN's assessment regarding the need to take care of nature, our "common home", and the ancestral knowledge of indigenous peoples stands out. It is realized that the values preserved by the native peoples of the Americas, by contributing to the sustainability of the planet, could also help to improve the living conditions of present and future generations.

Key words: sustainability, disaster law, ecological disaster, COVID-19 pandemic, indigenous peoples.

RESUMEN: Este artículo tiene por objetivo reflexionar sobre cómo el conocimiento de los pueblos indígenas con respecto a la naturaleza puede contribuir a la sostenibilidad en el contexto del desastre ecológico de la pandemia COVID-19. Este estudio se justifica dada la situación actual en la que se encuentra la humanidad, pues se destaca la valoración de la ONU respecto a la necesidad de cuidar la naturaleza, nuestra "casa común", y los saberes ancestrales de los pueblos indígenas. Se comprende que los valores preservados por los pueblos originarios de las Américas, al contribuir a la sustentabilidad del planeta, también podrían ayudar a mejorar las condiciones de vida de las presentes y futuras generaciones.

Palabras clave: sostenibilidad, Ley de Desastres, desastre ecológico, pandemia de COVID-19, gente indígena.

RESUMÉ: Cet article vise à réfléchir sur les connaissances des peuples autochtones sur la nature et sur la manière dont elles peuvent contribuer à la durabilité dans le contexte de la catastrophe écologique de la pandémie de COVID-19. Cette étude est justifiée compte tenu de la situation actuelle dans laquelle se trouve l'humanité, car l'évaluation de l'ONU concernant la nécessité de prendre soin de la nature, notre "maison commune", et des savoirs ancestraux des peuples autochtones se démarque. On se rend compte que les valeurs préservées par les peuples autochtones des Amériques, en contribuant à la pérennité de la planète, pourraient aussi contribuer à améliorer les conditions de vie des générations présentes et futures.

Mots-clés: Durabilité, Loi sur les catastrophes, Désastre écologique, Pandémie de COVID-19, Populations indigènes.

I. INTRODUCTION

The COVID-19 Pandemic is a global reality that has ravaged the Brazilian population since the beginning of 2020. When analyzed from the perspective of different conceptual legal conceptions, it is classified as an environmental disaster. The seriousness of this disaster is directly related to the degree of vulnerability of the affected society and the capacity of the community to quickly return to its original state.

By affecting the most vulnerable largely, disasters worsen physical, social and informational vulnerabilities in a context of inequalities. Disaster Law lies within this context and has the function of activating the attention of other areas of law in order to reduce vulnerabilities.

When considering that individuals and society are in the cyclical processes of nature — in the web of life — anthropocentric reductionism reduces and dehumanizes the human being. At the same time, indigenous peoples value the balance and connection between men and nature, by proposing *Teko Porã*. These peoples consider that the meaning of life is in the balance between men and nature, as if it were a web, to which all living organisms are connected. This paper is about the values and ancestral knowledge preserved over centuries by the original peoples, the way in which these peoples live in harmony with nature and constitute sustainable human communities and the attention of the United Nations (UN) to the care for the “common home”.

Once the theme is presented, there is the problem that permeates this paper, namely: whether the knowledge of nature accumulated by indigenous peoples may contribute to the sustainability of the planet, and, consequently, prevent new pandemics from arising.

The study hypothesizes that to be “ecoliterate”, that is, to be a person who tries to live life ecologically and sustainably, through observation and learning from natural systems, one needs to have the wisdom of nature. Therefore, it is necessary to understand the principles that govern the organization of ecosystems, knowledge acquired by native peoples over the centuries, in an intimate relationship with nature.

As for the methodology of this study, theoretical-bibliographic research was utilized. The author made use of books, texts, and scientific articles, in addition to laws that have a direct or indirect relationship with the theme of

sustainability, environmental disasters and indigenous peoples' knowledge of nature.

With regard to the methodological procedure, the deductive method was chosen, as it starts from a macro conception to a micro analytical conception, allowing, therefore, the delimitation of the theoretical problem.

Finally, in the technical procedure, interpretive, comparative, thematic and historical data analyzes were adopted, to enable a discussion based on the point of view of scientific criticism.

Structurally, this study is divided into three thematic sections, in addition to this introduction and conclusion. In the first section, entitled '*The Covid-19 Biological Disaster: A Risk to Human Life*', there is the analysis of the perspective of three concepts of disaster, classifying the Covid-19 Pandemic as a biological disaster of a physical nature, whose consequences were announced by the World Health Organization - WHO, as well as the risks and liabilities related to the environmental disaster.

In the following section, '*Indigenous peoples' ancestral knowledge of the care for nature*', indigenous knowledge of biodiversity — located on the other side of the abyssal line — is emphasized, among which the *Teko Porã* stands out. It is an ancient educational system for well living in harmony with nature for the common good. In addition, in this section, the lessons of the Yanomami people about the Amazon Forest are stressed.

In the last thematic section, entitled '*Uncertainties about the environment in which humanity lives*', there is the proposal for a change from the anthropocentric paradigm to environmental rationality based on the UN's concerns about the care for the "common home" in the search for fraternity and social friendship.

With regard to approaching the problem, the research is qualitative, aimed at deepening the understanding of the object of the study. The overall objective is to highlight indigenous peoples' knowledge of biodiversity and the contribution these peoples have as to a sustainable future. In turn, the specific objectives are to study the impacts of nature degradation and the responsibilities inherent to it; to analyze the uncertainties about the environment and how the care for the "common home" contributes to a fraternal life and social friendship. Thus, the research deals with Disaster Law, Human Rights, Indigenous Peoples and, above all, Sustainability.

II. THE COVID-19 BIOLOGICAL DISASTER: A RISK TO HUMAN LIFE

In December 2019, the new Sars-Cov-2 virus was identified in China. It is responsible for COVID-19, which on March 11, 2020, was declared a Pandemic by the World Health Organization — WHO. During the writing of this paper, COVID-19 has infected more than 175 million people and killed 3,780,000 people worldwide. The first case diagnosed in Brazil was on February 26, 2020, and currently, Brazil has more than 17.2 million infected and 482,000 deaths.¹

Delton Winter de Carvalho² clarifies the legal nature of the COVID-19 pandemic well, when analyzing it from the perspective of three main conceptual legal conceptions of what a disaster is.

When analyzing the legal nature of a disaster from the causes, disasters are classified as natural, mixed or anthropogenic. Natural ones can be called physical, as they have human contribution and social factors that favor the occurrence and worsening of the magnitude of the phenomenon. These disasters result from natural phenomena, and are classified as geophysical, meteorological, hydrological, climatological, and biological.

Thus, the COVID-19 pandemic is conceptualized as a biological disaster of a physical nature — a real disaster to the world public health system — because, as the WHO assures, coronaviruses are zoonotic, transmitted from animals to humans.

The second analysis that is carried out concerns the second constitutive dimension of the sense of disaster — from the consequences. Emphasis is placed on the concept of disaster based on seriousness, that is, disaster is analyzed in a social sense, as it is described as an event that causes loss of human life. In this context, the Center for Research on the Epidemiology of Disasters — CRED, defines a disaster as “a situation or event that exceeds

¹ Consórcio de Veículos de Imprensa, “Brasil chega a 331,5 mil mortes por Covid e se aproxima de 13 milhões de casos. 2021”, *G1 Coronavírus*, 4 de abril de 2021, disponível em: <https://g1.globo.com/bemestar/coronavirus/noticia/2021/04/04/brasil-chega-a-3315-mortes-por-covid-e-se-aproxima-de-13-milhoes-de-casos.ghtml>.

² Carvalho, Délton Winter de “A natureza jurídica da COVID-19 como um desastre biológico: Um ponto de partida necessário para o Direito”, *Consultor Jurídico*, 13 de abril de 2020, disponível em: <https://www.conjur.com.br/2020-abr-13/delton-winter-natureza-juridica-covid-19-desastre-biologico2>.

local capacity, requiring a request for external assistance at a national or international level, as well as an unforeseen and often sudden event that causes great damage, destruction and human suffering".³ According to the aforementioned research center, the criteria for an event to be classified as a disaster are "ten or more human deaths; at least one hundred people affected; a state of emergency declared; request for international help".⁴ For the World Report Disaster 2010: Urban Risk Disaster is an "event capable of seriously damaging people and property, reaching a certain number of deaths or injuries, usually in excess of ten thousand deaths or one million injuries".⁵

COVID-19, in Brazil alone, caused more than 460,000 deaths, which proves that this Pandemic also largely surpasses the conceptual scenarios presented and it is as a true disaster.

Finally, when analyzing the concept of disaster by the third conception, which describes a phenomenon as a disaster from the loss of social stability, a criterion commonly used internationally, Carvalho⁶ considers that the formation of the meaning of disaster is directly related to causes and consequences of such magnitude that they jeopardize social stability.

The COVID-19 pandemic was declared a constitutional state of exceptionality, by acts such as the Constitutional State of Defense, by the Union. In addition, states and municipalities declared an Emergency Situation or State of Public Calamity. Therefore, the generalized loss of social stability is attested, and, in this conception, the new Coronavirus Pandemic remains confirmed as a disaster.

Thus, regardless of the scenario chosen from any of the three conceptual scenarios, this Pandemic is classified as a disaster for legal purposes.

Disaster Law provides a congruence for the other areas of Law to act in the stabilization of chaos and activates the other legal areas to regain a new normality, based on structuring concepts such as risk and vulnerability management.

³ Carvalho, Carvalho, Délton Winter de and Damacena, Fernanda Dalla Libera, *Direito dos Desastres*, Porto Alegre, Livraria do Advogado, 2013, p. 28.

⁴ Carvalho, Délton Winter de. "A natureza jurídica da COVID-19...", cit.

⁵ Cities Alliance, "The World Disasters Report 2010: Focus on Urban Risk", 2010, available at: <https://www.citiesalliance.org/resources/publications/cities-alliance-knowledge/world-disasters-report-2010-focus-urban-risk>.

⁶ Carvalho, Délton Winter de, "A natureza jurídica da COVID-19...", cit.

As stated in the 2016 United Nations Environment Program, the presence of plastic in the aquatic environment is growing, which leads the scientific community to seek “to understand the level of exposure and physiological impacts of micro plastic contaminants on various organisms, as well as the risk to human health from the consumption of contaminated food”.⁷

In 2016, the United Nations Environment Program, warned about emerging global environmental problems, considering the worldwide increase in the emergence of diseases and epidemics, especially zoonoses. It is estimated that 60% of infectious diseases in humans are zoonotic in origin. The program report analyzes how the emergence and re-emergence of these diseases, such as AIDS, Ebola, avian flu, MERS, SARS and Zika viruses are directly related to the health of ecosystems.

Délton Winter de Carvalho⁸ asserts that zoonotic diseases are constantly associated with ecological disturbances, and bring about social consequences for all people, especially for those from the most vulnerable social groups.

1. The Social Consequences of the COVID-19 Disaster According to WHO

Disasters lie within the context of a contemporary society that causes risks and confronts side effects arising from the transposition of the industrial paradigm to the post-industrial paradigm. Thus, Carvalho⁹ emphasizes that in the post-industrial paradigm, risks take on new features, they are not always predictable by science, and they can cross borders and become catastrophic.¹⁰

To the author, the severity of a disaster depends on two factors: the degree of vulnerability of the society impacted by the disaster and the community's ability to quickly return to its original state. By vulnerability, the International Strategy for Disaster Reduction (UM/ISDR) understands it

⁷ UNEP. *Emerging Issues of Environmental Concern*, Frontiers Report, Nairobi, 2016, p. 4, available at: <https://www.unep.org/resources/frontiers-2016-emerging-issues-environmental-concern>.

⁸ Carvalho, Délton Winter de, “Desastres ambientais e sua Regulação Jurídica”, *Revista dos Tribunais*, São Paulo, vol. 2, núm. 2, 2020.

⁹ Carvalho, Délton Winter de and Damacena, Fernanda Dalla Libera, *op. cit.*

¹⁰ *Idem.*

is a number of conditions established through physical, social, economic or environmental factors that increase the fragility of a community to the impact of risks.

In the face of the COVID-19 pandemic disaster, Carvalho¹¹ (2021) considers that everyone is at risk, however, some are more exposed to risk than others, as vulnerabilities are noted. One kind of vulnerability that stands out, in the case of COVID-19, is physical vulnerability, which refers to people over 60 years of age or those with comorbidities such as obesity and heart disease.

Another kind of vulnerability that stands out is social vulnerability. In the conception of disaster as a social phenomenon, characteristics such as social class, income, race, and ethnicity influence the degree of exposure to risk a community suffers. Social factors can also occur through the omissions of certain agents that can produce vulnerabilities. Structural inequalities, accumulated over time, demonstrate that Coronavirus is more lethal in people in situations of greater social vulnerability, argues Carvalho.¹²

Finally, the third type of vulnerability is the technological or informational vulnerability, as the lower the level of information and adequate circulation of information, the more vulnerable communities and entities are. The lack of information regarding the best available techniques in science is what produces informational vulnerability. Thus, presidential pronouncements against social distancing, as well as against science, encouraging inappropriate behavior in the fight against the pandemic, in total disagreement with the recommendations of the WHO and the Ministry of Health, are demonstrations of the informational vulnerability to which Brazilians in general are exposed. These attitudes cause total confusion in the Brazilian population, who do not have a clear idea of the measures to be adopted to fight the pandemic, creating a false sense of safety, which has led to a greater spread of the virus. This posture is considered by Carvalho¹³ as the cause of the dangerous disarticulation of the emergency response to COVID-19 in Brazil. Brazil, with great social and physical vulnerabilities of a large portion of the population, combined with the informational vulnerability formed by the lack of clarity in the information transmitted to the Brazilian

¹¹ Carvalho, Délton Winter de, “Desastres ambientais...”, *cit.*

¹² *Idem.*

¹³ *Idem.*

population, the denial of science and the lack of testing of the population that does not allow for social control of the pandemic, occupies a prominent place. There is also a real blindness regarding the identification of the most vulnerable people to implement emergency aid policies.

Furthermore, Daniel A. Farber¹⁴ points out that the relationship between disasters and social disadvantages deserves special attention, as sparse current research clearly indicates that factors such as race and poverty, in addition to age and gender, make a significant difference when it comes to the social consequences of a disaster. Thus, the author asserts that: "Those who already suffer from societal disadvantage are more likely to be in harm's way, and they are less likely to be able to take defensive action or to reconstruct their lives after a disaster".¹⁵ Law must manage and mitigate risks, in order to contain the worsening of the situation, in addition to reducing vulnerabilities by guaranteeing fundamental rights and providing answers when provoked in court.

In this sense, the World Health Organization - WHO considers that: Social processes that result in greater or lesser vulnerability to disasters in societies or communities involve driving forces and pressures that are related to prevailing economic and social development models.¹⁶

Driving forces are the factors that, on a large scale, influence environmental processes that can affect human health, such as economic development. This development results in increased pressures related to the most diverse human activities done in a given area. Examples of these are population growth, and forms of land use and occupation, which when not adequate for sustainable development, directly contribute to the increase in environmental damage.

The UN highlights the "increasing disparities" in the way Covid-19 has affected racial and ethnic minorities, including indigenous peoples. Brazil's economic and social inequalities, overcrowded housing, unavailability of access to health care for all are factors that contribute to the greater vulnerability of Brazilians. Santos¹⁷ considers that when a pandemic breaks out,

¹⁴ Farber, Daniel, "Disaster Law and Inequality", *Law & Inequality*, Minnesota, vol. 25, n.º 2, 2007, pp. 297-322, available at: <https://scholarship.law.umn.edu/lawineq/vol25/iss2/1/>.

¹⁵ *Ibidem*, p. 302.

¹⁶ PAHO, *Desastres naturais e saúde no Brasil*, Brasília, 2014, p. 13, available at: <https://iris.paho.org/handle/10665.2/7678>.

¹⁷ Santos, Boaventura de Sousa, *A cruel pedagogia do Vírus*, Coimbra, Almedina, 2020.

vulnerability increases, as individuals are more exposed to the virus and far from health care, in slums and the outskirts or in remote villages, in the case of indigenous peoples.

UN High Commissioner for Human Rights Michelle Bachelet said Sars-cov-2 exposes long-ignored endemic inequalities. When referring to Brazil, Bachelet highlighted that much is said about the impact of COVID-19 on racial and ethnic minorities, including indigenous communities, which, due to their particularities, are more vulnerable to the risks arising from the pandemic, but the proposals and actions to solve the problem are not yet clear. COVID-19 exposes the obvious — that inequality in the protection of health and life makes our societies unstable, insecure and vulnerable.¹⁸

In this context of inequalities, Delton Winter de Carvalho¹⁹ understands that Disaster Law has the function of activating, in the other areas of Law, special attention in order to reduce the identified vulnerabilities. These vulnerabilities and the responsibilities inherent to them may predate the COVID-19 Pandemic disaster, and are factors that worsen the pandemic, whose impacts tend to affect the most vulnerable largely.

2. COVID-19: Risks and Liabilities Related to the Biological Disaster

When analyzing the risk of biological disaster, the first issue that one analyzes is to assess the measure of knowledge related to the ability to quantify the probability of risk. The high degree of uncertainty about the risks of the COVID-19 Pandemic is one of the problems related to risk management, as there is a lack of scientific knowledge and an inability to predict the global impact to be caused by the new Coronavirus.

Some of the factors cited by Carvalho²⁰ depend on the implementation of planned government policies, in addition to legal measures prohibiting the movement of people and guiding collective behavior through scientific information to the entire population. These factors will be fundamental for the control of the pandemic, many of which will not depend on individual

¹⁸ Fiocruz, “ONU: Covid-19 escancarou discriminação racial ‘endêmica’ no Brasil e nos EUA”, *Informe Fiocruz*, 2020, disponível em: <http://informe.enp.fiocruz.br/noticias/49105>.

¹⁹ Carvalho, Délton Winter de, “Desastres ambientais...”, *cit.*

²⁰ *Idem.*

behavior, but on extraordinary norms that lead the whole society to effective and precautionary behavior against the virus. However, exposure to risk depends, to a greater extent, on the behavior of each person.

Within this context, Carvalho and Damacena²¹ consider that Disaster Law has the principles: “‘being green’, ‘being fair’, and ‘maintaining safety’, which is possible from the efficiency of the risk management circle and the concrete applicability of the notions of prevention, participation, and division of responsibilities”. They also stress that the protection of people and ecosystems from disasters requires public and private commitment to preserve the environment, in addition to “efforts toward reducing levels of vulnerability and human and ecosystem exposure and, finally, the acceptance that the Law must take a preventive and systemic precautionary approach to risk management”.²²

On March 23, 2021, the Brazilian Medical Association — BMA released the Bulletin 02/2021 of CEM COVID_AMB, in which the current reality remains evident, when it is verified that there is a lack of beds in Intensive Care Units — ICU, medicines to intubate patients and there is no effective vaccination schedule. To make matters worse, patients and other Brazilians are bewildered by the fake news that disorients everyone. Doctors, nurses and other health professionals are exhausted and insufficient in number.

In the face of such seriousness and in the midst of so many other challenges, such as the new strains of Coronavirus, BMA guides all Brazilians on prevention measures, such as social distancing, how to wear masks correctly, keeping ventilated and sanitized environments, among others measures as important weapons against the virus.

As for the responsibilities of the State, the BMA points out that political efforts and the use of exceptional normative measures are urgent, in order to solve the lack of medicines, beds, Personal Protective Equipment — PPE’s, hospitals and qualified doctors. The BMA considers that “an Intensive Care Unit — ICU is composed of physical space, equipment, medicines, materials and human resources. The lack of any of these elements renders the execution of the procedures unfeasible”.²³

²¹ Carvalho, Délton Winter de. e Fernanda Dalla Libera Damacena, *op. cit.*

²² *Ibidem.*, p. 144.

²³ Associação Médica Brasileira, Boletim 02/2021, Comitê Extraordinário de Monitoramento Covid-19 (CEM COVID_AMB), 23 de abril de 2021, disponível em: <https://amb.org>.

In view of the drama experienced in Brazil, it is also the responsibility of the Judiciary to exercise its power to guard constitutionally guaranteed rights, among which are the rights to life and health. To this end, the courts should also speak out, so that the norms of social isolation are faithfully followed.

Carvalho²⁴ highlights a recent study published by science, carried out in China, which shows that, without social distancing, the growth of contagion is represented by an exponential curve. On the other hand, it was only by adopting more restrictive measures of social distancing that there was a considerable reduction in the spread of the virus.

In March 2021, more severe distancing measures were adopted, such as the suspension of non-essential activities and the “curfew” decreed by Brazilian cities and states. People were legally prevented from leaving their homes after a certain established time, being able to leave only to carry out certain previously established activities classified as essential, under penalty of administrative or criminal sanctions. However, even in the most restrictive cases of social isolation, essential public services must continue to be guaranteed through government actions adopted by the Contingency Plans.

In this sense, if the vulnerability of certain individuals or groups is accentuated by certain factors, there may be the accountability of public and private actors, in view of the anticipated knowledge of risk, competence, the duty to act and the omission of the Public Administration, because one of its functions is to protect citizens. The lack of guarantee of social rights, such as well-being, housing, education and public health, results in a greater vulnerability of a given community. Lack of balance and environmental health also increases social, physical, and informational vulnerabilities. Factors related to employment and its conditions also directly affect vulnerability. Thus, Constitutional, Environmental and Labor Law may be activated in order to reduce vulnerabilities.

With regard to the vulnerabilities exposed during the pandemic, it was evident that indigenous communities experienced many challenges. From the monitoring platform of the indigenous situation in the COVID-19 pandemic in Brazil, it can be seen that the “evolution of the new coronavirus among indigenous populations represents a great challenge. Although the

[br/noticias/boletim-02-2021-comite-extraordinario-de-monitoramento-covid-19-cem-covid_amb/.](http://br/noticias/boletim-02-2021-comite-extraordinario-de-monitoramento-covid-19-cem-covid_amb/>.)

²⁴ Carvalho, Délton Winter de, “Desastres ambientais...”, *cit.*

official numbers inform about the dynamics of notification, they do not necessarily reflect the extent of the pandemic".²⁵ There are factors that make it difficult to recognize and disclose which communities and indigenous peoples are most affected, such as the lack of data about indigenous people whose lands have not yet been demarcated. The Articulation of the Indigenous Peoples of Brazil (Apib) and the "Brasil.io" initiative have been releasing more real data about the pandemic, through which the omission of the Brazilian government in the indigenous tragedy can be seen, since the authorities have not only failed to act to protect the indigenous communities, but have also been agents of contamination.

According to the National Committee for Indigenous Life and Memory, as of August 07, 2022, there are 72,367 confirmed cases of COVID-19 in indigenous people, distributed among 162 peoples, and the number of deaths is 1,315.

Given this context, the fight against the virus will not be won if government officials deny the flagrant inequalities that the virus is only exposing to everyone, especially in relation to the most vulnerable. The rights to life and health need to be protected, without discrimination. Additionally, the environment needs to be cared for and valued, as all humanity depends on it, which is why the knowledge of indigenous peoples related to the care for nature deserves to be highlighted.

In Ailton Krenak's understanding, with the arrival of technology and modernity, science and knowledge have been placed in "secret places" and this knowledge has become the exclusive preserve of scientists. In this way, all the knowledge accumulated by the indigenous peoples over thousands of years regarding the environment and the care of "Mother Earth" was placed on the fringes of science. It is clear that indigenous communities manage the environment more wisely, and with a different look at nature. Hence, what can be noticed is that this forgotten knowledge may contribute so that ecological disasters such as the Covid-19 Pandemic may be avoided.

²⁵ Oviedo, Antonio *et al.*, "Plataforma de monitoramento da situação indígena na pandemia do novo coronavírus (Covid-19) no Brasil", *Covid-19 e os Povos Indígenas*, disponível em: <https://covid19.socioambiental.org/>.

III. INDIGENOUS PEOPLES' ANCESTRAL KNOWLEDGE OF THE CARE FOR NATURE

Boaventura de Sousa Santos²⁶ alerts us to the system of visible and invisible distinctions created by the abyssal interdependent and global lines of modernity. For the author, the invisible distinctions, foundations of the visible ones, are established through “radical lines that divide social reality into two distinct universes: the ‘on this side of the line’ and the ‘on the other side of the line’”.²⁷ Therefore, the other end of the line is a non-existent reality and was made to be that way: non-existent, irrelevant, and excluded. Modern Western thought uses abyssal lines that separate the human world from the subhuman world. The abyssal thought proposed by Santos²⁸ is characterized by not admitting the coexistence of both sides of the line. Thus, the author understands that: “beyond the line there is only non-existence, invisibility and non-dialectical absence.... The intensely visible distinctions that structure social reality on this side of the line are based on the invisibility of the distinctions between this and the other side of the line”.²⁹

Hence, for the author, modern knowledge and law are representatives of the most specific manifestations of abyssal thought. The tensions between science, philosophy and theology are examples of manifestations of the abyssal thought, which gradually became visible, but only exist on this side of the line. The visibility of these tensions is based on the invisibility of other forms of knowledge that do not fit into the modalities proposed on this side of the line, such as: popular, lay, peasant and indigenous knowledge that exist on the other side of the line, and that have disappeared as relevant knowledge. In this understanding, on the other side of the line there is no knowledge, what exists — for those on this side of the line — are beliefs, opinions, magic, idolatry, which are known, at best, to be possible objects of scientific investigation. Thus, there is a visible line separating science from philosophy and theology; and there is an invisible abyssal line that separates science, philosophy, and theology on one side, and on the

²⁶ Santos, Boaventura de Sousa, “Para além do pensamento abissal: das linhas globais a uma ecologia de saberes”, *Novos Estudos*, num. 79, 2007, p. 71.

²⁷ *Idem*.

²⁸ *Ibidem*, pp. 71 y 72.

²⁹ *Idem*.

other, incomprehensible knowledge that does not obey scientific criteria, nor philosophical or theological criteria.

In this context, on the other side of the abyssal line, the ancestral knowledge and wisdom of indigenous peoples are inserted, which are conceived as “beliefs, opinions, magic, idolatry, intuitive or subjective understandings, which at best may become the object or raw material of scientific investigations.³⁰

Therefore, the other side of the line reaches wasted experiences, considered invisible, as well as the authors who are there. These wasted experiences do not have a fixed territorial location, which originally existed as a colonial territory. For Santos³¹, what happens in the colonial zone is what cannot be thought of, nor categorized as true or false, nor legal or illegal.

In this regard, in Western modernity civil society and the state of nature coexist, separated by an abyssal line that allows civil society to have a hegemonic look that does not see and declares the state of nature to be non-existent, denying everything that derives from it. All constructions that exist on the other side of the line then become invisible and seen as the past with no possibility of return on this side of the line. The colonial zone is the space of incomprehensible beliefs and behavior, not considered as knowledge, and which do not fit the conception of true or false, as they are beyond the acceptable conception of this side of the line.

In this area, the humanists of the 15th and 16th centuries, based on conceptions of humanity and human dignity, concluded that savages were sub-human and even questioned whether the Indians had a soul. The occupation and invasion of indigenous territories was justified through the concept of a legal vacuum. Santos³² understands that, in view of these abysmal conceptions, the existing tension between regulation and emancipation — used on this side of the line — does not contradict the existing tension between appropriation and violence — experienced on the other side of the line.

Indigenous knowledge of biodiversity, as it is located on the other side of the line, is of no importance to those on this side of the line. Indigenous peoples are ignored by neoliberal society, which acts with violence against these peoples, by prohibiting the use of their own languages in public spaces.

³⁰ *Ibidem*, p. 73.

³¹ *Idem*.

³² *Ibidem*, pp. 71 y 72.

es, in addition to destroying symbols and places of worship, discriminating them culturally and racially.

Nonetheless, little by little, Western civilization is becoming aware of the fact that assumptions that underpin society are causing an unsustainable situation regarding issues related to the survival of the human species, especially those concerning environmental conditions.

In this context, it is possible to highlight the indigenous peoples' knowledge of biodiversity - in particular, the Guarani peoples - and of their way of conceiving the relationship between man and nature, by building a differentiated connection between humanity and the rest of the cosmos. Indigenous peoples live in harmony with nature and, therefore, are not concerned with accumulating goods. Therefore, they live sustainably and do not jeopardize opportunities for future generations.

This way, considering all the knowledge accumulated by indigenous communities over time, as well as the concern of these peoples in caring for and preserving nature, the contribution they bring to the sustainability of the planet can be seen, which provides a greater balance of biodiversity, environmental control and, consequently, a reduction of ecological disasters, diseases and epidemics, mainly zoonoses. This different way of living in harmony with nature, they named *Teko Porã*. It is upon this "beautiful path" and this way of "living well" that we should reflect.

1. *Teko Porã: an Instructive Ancient System in Harmony with Nature*

A new worldview or ecological view is announced by Capra³³ in "A teia da vida" [The web of life], which emphasizes the interdependence of all phenomena, by highlighting the fact that individuals and society are all embedded in nature's cyclical processes. Francisco (2015) also believes that everything is interconnected, that all living species form an incomprehensible web. When talking about the environment, reference is also made to the relationship between nature and the society that inhabits it. In this understanding, Hans Jonas (2006) prescribes that human beings were generated by nature and they owe loyalty to it through creation. For the author,

³³ Capra, Fritjof, *A teia da vida: Uma nova compreensão científica dos sistemas vivos*, 11 ed., São Paulo, Cultrix, 1996.

“anthropocentric reductionism, which sets us apart and differentiates us from all the rest of nature, only means reducing and dehumanizing man”.³⁴

Indigenous peoples consider that the meaning of life is directly related to nature; they value the balance between men and nature, as if it were a web, to which all living organisms are connected. Likewise, Capra³⁵ points to a new way of perceiving living systems, which despite being in an unbalanced situation are capable of self-organization.

From the increase in diversity and richness of human relationships, the humanity of human beings also developed through their capacity for cooperation. Over time, due to the increase in the diversity of human relationships, humanity has developed into thinking. As the inner world became more and more diversified, the human being began to lose connection and contact with nature and, from then on, man became an increasingly fragmented being.

In this perspective, the changes caused by man in nature, little by little, may lead to what Capra³⁶ calls the butterfly effect, which in chaos theory would be the minimum changes in the initial state of the system, which, with the passage of time, will have unpredictable consequences on a large scale and may lead to chaotic situations.

The natural environment is regarded as the web of life. This abstract way of thinking of man makes him treat the natural environment as if it had separate parts, to be exploited economically, for his own benefit, by different interest groups, which made human beings diminish and lose their humanity. The author also considers that man extended this fragmented vision to society, which he divided into nations, races, political and religious groups. This belief in fragmentation alienated man from nature and from his fellow human beings, and, with that, diminished everyone. To recover humanity, one must recover the previously existing connection with the web of life. This reconnection is the essence of the spiritual foundation of deep ecology, as reconnecting means: “building, nurturing and educating sustainable communities, in which we can satisfy our aspirations and our needs without

³⁴ Jonas, Hans, *O princípio responsabilidade*, Rio de Janeiro, PUC-Rio, 2006, p. 229.

³⁵ Capra, Fritjof, *op. cit.*

³⁶ *Idem.*

diminishing the chances of future generations. To accomplish this task, we can learn valuable lessons from the study of ecosystems...”.³⁷

In order to be “ecoliterate” it is necessary to have the wisdom of nature. Therefore, it is essential to understand the principles that govern the organization of ecosystems and through them constitute sustainable human communities. Interdependence, cyclical flow of resources, cooperation and partnership are ecological principles governed by the same standard, aiming at sustainability. In the construction of new sustainable human communities, Capra³⁸ considers that it is required to give new vigor to the current educational, commercial, and political communities so that the principles that govern ecology may be expressed in human communities as principles of education, administration and politics.

It is true that there are many differences between ecosystems and human beings. In ecosystems, there is no language, conscience, culture, democracy, or justice; however, there is neither greed nor dishonesty. The lesson that needs to be learned from ecosystems is how humanity can live sustainably, without jeopardizing the future of next generations.

In this perspective, the original peoples of the Americas, known as indigenous peoples, have a philosophy, based on principles such as spirituality, which allows them to live and act in relation to nature, quite differently from most men.

Thus, if the thoughts and actions of most men, with regard to nature, were in the same sense of the philosophy of life of the indigenous peoples, and if this knowledge were, in fact, culturally and politically valued, the sustainability of the planet would be a real possibility, and, consequently, ecological disasters, the emergence of new zoonotic diseases, and epidemics like COVID-19 would be avoided.

In this perspective, it is understood that ecological disasters could be avoided if the indigenous communities’ culture were in fact valued, because, for indigenous peoples, the singing of birds, the sounds of nature, the shapes of clouds, the wind, are signs of nature, which with wisdom and delicacy guide and teach all human beings how to live well. Well living, translated from the Guarani language, is *Teko Porã*. In the words of Acosta:

³⁷ Capra, Fritjof, *op. cit.*, p. 218.

³⁸ *Idem.*

Buen Vivir [Well living], in fact, presents itself as an opportunity to collectively build new ways of life. Buen Vivir is neither an originality nor a novelty in the political processes of the beginning of the 21st century in the Andean countries. Nor is it some kind of superstition or magic potion for all the ills of the world. Buen Vivir is part of a great search for life alternatives forged in the heat of humanity's struggles for emancipation and for life.³⁹

For indigenous peoples, the idea of land ownership is inconceivable, as for them, it is the land that holds all things, including man himself. It is, therefore, a philosophical, political, spiritual, and social concept through which the Guarani peoples live in nature, with nature and off nature, and pass on everything they know, from generation to generation, without any hierarchy. The indigenous science of healing through nature and its medicine is an example of an ancient elaboration built on the indigenous knowledge of the land and its fruits, through which the values preserved by the Guarani peoples may contribute to the improvement of living conditions of a conflictive society such as the Western one.

Thus, in a study of the Achuar people in the Ecuadorian Amazon Forest, Philippe Descola⁴⁰ confirmed that their “well living” is a way of relating to nature, a practice of living and cultivating nature, upon which “domestic peace” depends:

[E]l vivir bien es una suerte de horizonte normativo de la vida doméstica... uno de los criterios del bien vivir es lograr asegurar el equilibrio de la reproducción doméstica explotando sólo una escasa fracción de los factores de la producción disponibles... y reservando un amplio margen de seguridad en su subexplotación del potencial productivo.⁴¹

Descola understands that well living reflects the projection of the practices of a social norm of coexistence and the cultural meanings that the peoples of the Amazon give to nature. In this sense, in addition to the ways

³⁹ Acosta, Alberto, “O Buen Vivir: Uma oportunidade de imaginar outro mundo”, in Souza, Cidoval Moraes de (coord.), *Um convite à utopia*, Campina Grande, EDUEPB, 2014, p. 208.

⁴⁰ Descola, Phillippe, *La selva culta. Simbolismo y praxis en la ecología de los Achuar*, Quito, Abya Yala, 1996.

⁴¹ *Ibidem.*, pp. 416, 421, 428.

of thinking of indigenous peoples, it is necessary to highlight the values on which these peoples base their practices of coexistence with nature.

Leff⁴² considers that the manifestation of *Buen Vivir* shows the world that other ways of life are possible and that everyone is an intrinsic part of their ways of being and living. The author holds that:

Reivindicar el “vivir bien” no sólo significa un reclamo de justicia histórica frente al sometimiento de las formas de vida de los pueblos que sufrieron por la imposición de la racionalidad moderna; el imaginario del “vivir bien” también propone otra comprensión del mundo y se ofrece como muestra de cómo podría revincularse la vida humana con el orden natural; lo cual es una solución que va más allá de los alcances de una modernidad reflexiva, de los ajustes de la economía y los potenciales de la tecnología para controlar la degradación socio-ambiental y el cambio climático.⁴³

According to Capra,⁴⁴ there needs to be a change not only in perceptions and ways of thinking, but also in values. Therefore, a dynamic balance between human beings' thoughts and their values is necessary, since both may be seen as changes toward greater integration with nature. The Yanomami peoples lie within this context, as examples of integration with nature, community life and solidarity.

2. *Lessons from the Yanomami Indigenous People on the Amazon Forest*

Pope Francis, in his encyclical *Laudato Si'*, values the planet's lungs full of biodiversity, among which the Amazon stands out, warning that the importance of this forest for planet Earth and for the future of humanity cannot be ignored. The complex ecosystems of tropical forests and their biodiversity, when burned or cut down, lose countless species or turn into arid deserts, when a delicate balance between international economic interests and national sovereignty emerges. For the Pope, proposals for the inter-

⁴² Leff, Enrique, “Imaginarios Sociales y Sustentabilidad”, *Cultura y representaciones sociales*, México, vol. 5, num. 9, September 2010, p. 47.

⁴³ *Ibidem.*, p. 19.

⁴⁴ Capra, Fritjof, *op. cit.*

nationalization of the Amazon Forest only serve the economic interests of large international corporations.

The Amazon's biodiversity and its complexity are well known by the Yanomami, one of the largest isolated tribes in South America, who stand out as the best guardians of tropical forests, due to their importance for their preservation. For the Yanomami, *urihi*, the land-forest, nature is a living entity; it is not just a space for economic exploitation. These people consider the Amazon Forest as a living entity, inserted in the dynamics of the cosmos of exchanges between humans and non-humans, threatened by white predators. These peoples have a history of deep traumas occurred in contacts with the white man - whom the Yanomami call "commodity people" - and epidemics. Indigenous leader Davi Kopenawa Yanomami believes that "The land-forest can only die if it is destroyed by whites... The *xapiripé* spirits, who live in the mountains and play in the forest, will end up running away. Shamans will no longer be able to stop the smoke-epidemics and the evil beings that make us sick. Therefore, everyone will die.⁴⁵

In this regard, it is still time for the white man to learn a little from the Yanomami about all the scientific, shamanic and mythological knowledge that these people have on how to deal with life and nature. Krenak⁴⁶ asserts that it is necessary for the white man to realize that human beings are not the only and most interesting beings in the world and that many other beings also have a perspective on existence.

The Yanomami live in large communal houses called *yanos* or *shabonos*, which accommodate up to four hundred people. Each family has a fire in which food is cooked during the day. At night, hammocks are hung near the fire. Decisions are taken consensually, and everyone has the right to have a say in solving problems, in assembly, as they believe in equality among people.

Among the Yanomami there is a peculiarity: a hunter does not eat the meat of the animal he has killed. Instead, he shares the meat with his friends and family. In exchange, he receives the meat hunted by another hunter:

⁴⁵ Hutukara. *História dos Yanomami*, available at: <http://www.hutukara.org/index.php/hay/historia-dos-yanomami>.

⁴⁶ Krenak, Ailton, *Ideias para adiar o fim do mundo*, 1st. ed., São Paulo, Companhia das Letras, 2019.

an example of sharing, solidarity, and care for others.⁴⁷ On the Yanomami peoples, Hamilton Krenak gave his testimony:

...how is it possible that a set of cultures and peoples is still capable of inhabiting a Cosmo vision, inhabiting a place on this planet that we share in such a special way, in which everything gains meaning? People can live with the spirit of the forest, live with the forest, be in the forest. I'm not talking about the movie Avatar, but about the lives of twenty or so thousand people — and I know some of them — who inhabit the Yanomami territory, on the border of Brazil and Venezuela. This territory is being ravaged by prospecting, threatened by mining, by the same perverse corporations that I have already mentioned and that do not tolerate this kind of cosmos, the kind of imaginative capacity and existence that an original people like the Yanomami is capable of producing.⁴⁸

The Yanomami have great botanical knowledge and use approximately five hundred species of plants as food, medicine, as well as for the construction of houses and other artifacts. Because the Amazon rainforest soil is not very fertile, the Yanomami plant a new garden every two or three years. For them, the world is a soul *plenum*, as they believe that “a true culture and effective technology consist in establishing an attentive and caring relationship with the mythical nature of things — a quality that, precisely, Whites completely lack”.⁴⁹

In this sense, according to the Food and Agriculture Organization of the United Nations (FAO) Report,⁵⁰ recognized indigenous territories are those with the most preserved areas, intact with vegetation, as well as the lowest rates of deforestation.

The urgency of protecting tribal populations in Brazil comes from previously known cultural, political, economic, and geographic issues that were aggravated by the Covid-19 pandemic. The increased demand for food, en-

⁴⁷ Survival. *Os Yanomami*, disponível em: <https://www.survivalbrasil.org/povos/yanomami>.

⁴⁸ Krenak, Ailton, *op. cit.*, pp. 25 y 26.

⁴⁹ Kopenawa, Davi and Albert, Bruce, *A queda do céu: palavras de um xamã Yanomami*, São Paulo, Cia. das Letras, 2015, p. 14.

⁵⁰ Pontes, Nádia, “Indígenas são peça-chave contra crise climática, diz FAO”, *Deutsche Welle*, 03.25.2021, disponível em: <https://www.dw.com/pt-br/indígenas-são-peça-chave-contra-crise-climática-diz-fao/a-56983183>.

ergy, minerals and wood and the greed for the control and exploitation of natural resources have put pressure on indigenous peoples and their territories, and this threat has disastrous environmental and social impacts. At the same time, we are facing the environmental and climate crisis, problems that the indigenous people are part of the solution to, says the Food and Agriculture Organization of the United Nations (FAO) report.

Given the problems listed, indigenous peoples are influential in nature conservation — in Yanomami, *hutukara* —, they understand the Amazon Forest as “the machine of the world” that is guarded by the *xapiri* — spirits who present themselves to the shamans,⁵¹ and may contribute to the biodiversity, to the rainfall regime and to moisture transportation. A FAO report finds that the loss of carbon dioxide, which causes the greenhouse effect, is much smaller in indigenous reserves in the Amazon. In this context, FAO still considers that the preservation of forests by indigenous peoples becomes a viable solution that needs to be supported internationally and widely disseminated throughout the Brazilian territory. However, last year, illegal invasions aimed at logging and prospecting led to an increase in this rate. For these reasons, the UN report proposes concrete actions to strengthen indigenous organizations.

In view of so many uncertainties brought by the pandemic for all of humanity — especially for the most vulnerable — and the advance of climate change, the world is looking for ways to recover. One of the ways to recover would be to give more voice to the indigenous peoples and their wisdom. A transformation is needed in the ways of thinking and managing nature and the abundant resources it makes available to all people on the planet. Ulrich Beck⁵² considers that climate change is a moment of metamorphosis, where there is an agglutination between nature, society, and politics, which means that nature cannot be understood without society, nor does society exist outside of nature. Thus, the author considers that: “Global risk is not a global catastrophe. It is the prediction of the catastrophe. This implies that it is time to act — to rip people out of their ruts and pull politicians out of the ‘limitations’ that supposedly surround them”.⁵³ In a risk society, a metamorphosis is characterized by the end of the distinction between

⁵¹ Kopenawa, Davi and Albert, Bruce, *op. cit.*, p. 13.

⁵² Beck, Ulrich, *A metamorfose do mundo*, Rio de Janeiro, Zahar, 2018.

⁵³ *Ibidem*, p. 63.

nature and society. In the wake of this thought, Slavoj Žižek⁵⁴ points out that environmental issues should not be dealt with as lost causes, but that they should be addressed as political issues. In his words, “the only way to confront the threat of ecological catastrophe is by means of large-scale collective decisions”.⁵⁵

Bauman⁵⁶ understands that “vulnerability and uncertainty are the two qualities of the human condition, from which ‘official fear’ is molded: the fear of human power, of power created and manipulated by man. This ‘official fear’ is constructed according to the pattern of inhuman power reflected by ‘cosmic fear’”.⁵⁷ When people are vulnerable and insecure about what will happen the next day, survival and safety seem more distant, as they live in times of uncertainty.

IV. UNCERTAINTIES ABOUT THE ENVIRONMENT IN WHICH HUMANITY LIVES

In the middle of an era of globalization, the environmental crisis is not the only problem around the world. Leff (2011) highlights that along with ecological risks and environmental degradation, new and old social problems can be found, among which the following stand out:

[E]l choque entre culturas, el fundamentalismo ideológico-político, la violencia social y el terrorismo; la inseguridad alimentaria, la desigualdad social y la pobreza; la corrupción de la sociedad y la narcotización de la economía y la política; la equidad de género, los nuevos derechos humanos, el pensamiento ecológico y complejo.⁵⁸

For the author, what is at stake is not only the growth and stability of the economy supported by scientific-technological progress, but various

⁵⁴ Žižek, Slavoj, *In defense of lost causes*, London-New York, Verso, 2008.

⁵⁵ *Ibidem*, p. 461.

⁵⁶ Bauman, Zygmunt, *Vidas desperdiçadas*, Rio de Janeiro, Zahar, 2005.

⁵⁷ *Ibidem*, p. 62.

⁵⁸ Leff, Enrique. “Sustentabilidad y racionalidad ambiental: hacia ‘outro’ programa de sociología ambiental”, *Revista mexicana de sociología*, México, vol. 73, num. 1, 2011, p. 10.

problems related to communication, energy, risk, traditions, family, as well as the Rule of Law itself.

In this understanding, Leff⁵⁹ asserts that socio-environmental degradation is a global problem. It is not about the transition from the era of progress to the ecological era, but rather a crisis of civilization, which is nothing more than a crisis of knowledge in the face of which, it is necessary to understand the world that lies in the environmental crisis. In addition, it is required to reorient behavior so that humanity may act today thinking about a sustainable future for the next generations. For Leff,⁶⁰ the epistemological bases of science did not include sustainability.

Thus, the author proposes an environmental rationality, a real change in thinking in order to understand the world inserted in the environmental crisis. Therefore, it is necessary to deconstruct paradigms and guide knowledge and wisdom toward sustainability and the resolution of socio-environmental problems, in addition to questioning the conceptions and ways of thinking, knowing, perceiving, being and living in the world. Moreover, at the same time, one need contest the current society's lifestyles, modes of production, power relations, social actions and the ethical values of this society, so that there is a primarily environmental sociology that recognizes the environmentally situated man.

Consequently, there must be a change in the anthropocentric paradigm, which defends the environment simply because human civilization depends on it, to reach a change in rationality, which Leff calls environmental rationality, as he understands:

Partimos de una constatación: que la crisis ambiental es una crisis de las formas de racionalidad y de los procesos de racionalización instaurados en el planeta que, fundados en las formas de conocimiento de la ciencia moderna, han invadido e intervenido al mundo, desencadenando un proceso de degradación socioambiental que desemboca en la destrucción de las bases de sustentabilidad de la vida.⁶¹

⁵⁹ *Idem.*

⁶⁰ *Ibidem*, p. 10.

⁶¹ Leff, Enrique, "Imaginarios Sociales...", *cit.*, p. 47.

Leff⁶² proposes an environmental sociology, based on a sociological deconstruction permeated by cultural, social, ethical, and cognitive changes, which impacts ways of life and develops power strategies. For him, this is a true deconstruction and reconstruction with sociology as a strategic proposal for action, with the objective of halting environmental deterioration and reversing ecological destruction.

Daniel A. Farber⁶³ also holds that the environmental crisis is a knowledge crisis. It is necessary to assess the intergenerational effects, which is one of the great challenges of environmental regulation toward sustainable development. Hence, it will only be possible to balance the obligations to future generations and the sacrifices to be made by today's society if there is a change in rationality. Nevertheless, there is a difficulty in analyzing and considering the present costs and future benefits, as it is difficult to understand the future possibility of damage. Therefore, this is an exercise in faith, ethics, fullness and certainty that sacrifices are necessary. It is an act of impoverishment of one generation for the benefit of others. It is like planting dates to be harvested by future generations. In this sense, Enrique Leff asserts:

Más allá de la necesidad de diagnosticar sus causas —las formas en que del pensamiento metafísico a la ciencia moderna y a la globalización económica se construyó un mundo insustentable—, esta crisis requiere una respuesta teórica, ética y estratégica. Esto implica un cambio de pensamiento para comprender el mundo inscrito en la crisis ambiental y la necesidad de una nueva racionalidad social que permita reorientar los comportamientos individuales y sociales ante las leyes límite de la naturaleza y las condiciones ecológicas de la vida humana. La crisis ambiental atrae así al pensamiento sociológico hacia una reflexión sobre las perspectivas de un futuro sustentable.⁶⁴

The author criticizes the commodification of nature and proposes a “prospective environmental sociology”, considering that environmental decisions go through a process of credibility and legitimacy. It is a true reconstruction of a sustainable future, as there is today an environmental and/or

⁶² *Idem.*

⁶³ Farber, Daniel, *op. cit.*

⁶⁴ Leff, Enrique. “Sustentabilidad y racionalidad ambiental...”, *cit.*, p. 10.

ecological crisis, of anthropogenic origin, as it results from human action in the environment that intervenes in it irrationally when it comes to sustainable development.

In the wake of Leff's⁶⁵ thinking, in order to reach environmental rationality, Klaus Bosselmann⁶⁶ defends the Ecological Rule of Law, which provides for the interdependence between biotic and abiotic elements, and which allows the construction of the Rule of Law based on ecological ethics through ecocentrism, which recognizes an intrinsic value of all beings that make up ecosystems. Environmental ethics may influence the ecological justice discourse in order to determine the relationship between intragenerational and intergenerational issues, as there are competing claims and priorities. Thus, the author emphasizes that the mere integration of economic, environmental, and social policies should not be confused with sustainable development, whose scope goes beyond this integration, as it is a change in rationality, thought, and, consequently, in conduct. In order to have a legal system that protects the environment there must be a social rationality that encourages behavior. For the author, sustainable development is "the duty to protect and restore the integrity of the Earth's ecological systems".⁶⁷

In this context, Pope Francis⁶⁸ considers that the reality of humanity and the planet and its continuous accelerated changes, together with the intense pace of life and work, contrast with "the natural slowness of biological evolution. Added to this is the problem that the objectives of this rapid and constant change are not necessarily oriented toward the common good and toward sustainable and integral human development".⁶⁹

Change is necessary; however, today there is a concern, because change cannot destroy the world and the quality of life of its inhabitants. After a time of confidence in progress and in man, a part of humanity is more aware of and sensitive to the environment and to the care for nature. Therefore, it is necessary for each human being to recognize the contributions that each one can make to the environment. In this sense, the indigenous

⁶⁵ *Idem.*

⁶⁶ Bosselmann, Klaus, "O princípio da sustentabilidade: transformando direito e governança", *Revista dos Tribunais*, São Paulo, 2015.

⁶⁷ *Ibidem.*, p. 78.

⁶⁸ Pope Francis, *Carta Encíclica Laudato Si' sobre o cuidado da casa comum*, São Paulo, Paulinas, 2015, pp. 17 y 18.

⁶⁹ *Idem.*

peoples may contribute with their accumulated knowledge, in the search for the planet's sustainability, for quality of life, so that ecological disasters and future pandemics are avoided.

In relation to climate change, Pope Francis⁷⁰ regards it as one of the greatest current challenges facing humanity, a global problem with major environmental, social, economic, distributive, and political consequences. He makes an appeal to humanity, a call to be aware of the necessary change in behavior, ways of life, production, and consumption, in order to combat the human causes that produce global warming.

Still in relation to the great challenges facing humanity, there is the depletion of natural resources and the issue of water. There is an impossibility of maintaining the current level of consumption of the richest people in society and in the most developed countries, as the habits of waste and disposal are extremely high. The quality of the water available to the poor causes the death of many lives every day. Access to clean water, despite being a fundamental right, is not the reality of poor people in the country.

In this regard, Pope Francis asserts that the world owes a great social debt to the poorest who do not have access to safe drinking water, as they are being denied the right to life and dignity; and calls upon all humanity to the need to care for our common home. This is also a concern of the UN, which since 1972 has officially discussed issues related to the environment and sustainability.

1. On Care for our Common Home: a UN Concern for 50 Years

Never has man mistreated and harmed the “common home” as in the last two centuries. Therefore, rights and interests of future generations were incorporated into national legislation and international agreements. The issue of the environment began to be officially addressed by the UN in 1972, at the United Nations Conference on the Human Environment, when issues related to the impacts of human actions on the planet were discussed for the first time. Also discussed were issues related to the global environment, which affect indigenous peoples. At that conference, the protection of the

⁷⁰ *Idem.*

environment for current and future generations was considered a fundamental goal for all of humanity.

This was also a concern of RIO-92, when debating the environmental theme and establishing a set of political agreements with goals and objectives to be achieved in the following decades by all signatory countries of the final document of that conference.

Breskow and Mattei⁷¹ consider that from Rio-92 on, the theme of sustainable development has begun to be dealt with differently. Since the conference, talking about development has “presupposed to establish the necessary mediations between the economic and social and environmental spheres, making it clear that a sustainable development model could not do without the perfect articulation between these three spheres”.⁷²

Within the scope of the protection of indigenous rights, Eco-92 recognized and strengthened the role of indigenous populations and their communities for the sustainable development of the environment, in addition to the historical importance of indigenous peoples and their lands, who descend from the first inhabitants of these lands. It also recognizes that these peoples must enjoy all human rights and fundamental freedoms, without any hindrance.

Rio-92 acknowledged “the interdependent and integral nature of the Earth, our home” and in proclaiming the Rio Declaration on Environment and Development, in Principle 22 it emphasizes the vital role of indigenous peoples in environmental management and development. Thus, the Declaration considers that indigenous peoples and their local communities have a unique, historical and valuable relationship with their lands, which, for the most part, are descendants of the first inhabitants of these lands; the term “lands” should be understood here as the environment in which these peoples traditionally live.

In view of the dramas of global environmental degradation, both the International Conference on the Human Environment and the United Nations Conference on Environment and Development included the right of access to a healthy, balanced environment in the list of fundamental guarantees for

⁷¹ Beskow, Eduardo and Mattei, Lauro, “Notas sobre a trajetória da questão ambiental e principais temas em debate na Conferência Rio + 20”, *Revista NECAT*, vol. 1, núm. 2, 2012, pp. 4-12.

⁷² *Ibidem*, p.1.

all human beings. The main theme of Rio +20 was sustainable development, in which the global, social, and environmental problems were recognized.

In this context of international debates and agreements, all human beings are called to cooperate in the care for creation, as instruments of the Creator, each in their own way, according to their culture, experiences, and abilities. Boaventura de Sousa Santos⁷³ considers that the pandemic and quarantine reveal alternatives for adapting to new ways of life aiming at the common good. It is necessary to think about new possible ways of living well, producing, and consuming in society.

Pope Francis⁷⁴ highlights that “an integral ecology requires an opening to categories that transcend the language of the exact sciences or biology and put us in contact with the essence of the human being”.⁷⁵ In this sense, he argues that there is a great deterioration of our “common home” and launches the urgent challenge to protect it and this includes a concern to unite the human family in favor of sustainable and integral development, because changes are possible. In his words, “The Creator does not abandon us; he never backs down from his project of love”.⁷⁶

Deilton Ribeiro Brasil⁷⁷ argues that: “There is no sustainable development without respect for human and fundamental rights, in other words, human and fundamental rights are intimately linked to sustainable development”.⁷⁸ In this context, human beings may contribute to the construction of the common home by building a space of intra- and inter-generational concerns, where respect for human rights, fraternity, and social friendship among all men and women of this world prevail.

2. On Fraternity and Social Friendship

All social groups and minorities discriminated against by the current socioeconomic system are included in the concern for the poor, in the ex-

⁷³ Santos, Boaventura de Sousa. *A cruel pedagogia...*, cit.

⁷⁴ Pope Francis, *op. cit.*, p. 11.

⁷⁵ *Idem.*

⁷⁶ *Ibidem*, p. 13.

⁷⁷ Brasil, Deilton Ribeiro, “Prefácio”, in Calgaro, Cleide (coord.), *Constitucionalismo e Meio Ambiente*, Porto Alegre, Fi, 2020, t. III, pp. 15 y 16.

⁷⁸ *Idem.*

isting conflicts between rich and poor, between whites and non-whites, between communities with Western lifestyles and indigenous peoples, and between North and South. Thus, the concern for social justice symbolizes the social dimension of ecological justice, also called intra-generational justice. Therefore, an ecological approach will always be a social approach, which integrates justice into environmental debates, so that both the cry of nature and the cry of the poor are heard.

Boaventura de Sousa Santos⁷⁹ advocates that social injustice is directly related to cognitive injustice, in such a way that the fight for global social justice is also necessarily a fight for global cognitive justice.

The abyssal lines proposed by Santos⁸⁰ have not remained fixed over time. Thus it is possible see that the other side of the line seems to be expanding while this side of the line is shrinking. In general, the author understands that: "it seems that Western modernity can only expand globally to the extent that it violates all the principles which underpin the historical legitimacy of the regulation/emancipation paradigm on this side of the line".⁸¹ This way, he considers that human rights are constantly violated so that they can be defended; just as democracy is destroyed to be saved and life is extinguished to be preserved.

In this context of inequalities, social exclusion is a product of the inequality established between power relations. Thus, post-abyssal thinking emerges, which radically breaks with the forms of thought and action of Western modernity, which proposes an ecology of wisdoms, which recognizes the existence of a plurality of heterogeneous and sustainable types of knowledge, in addition to scientific knowledge. There are different forms of knowledge of life and spirit, society and matter in the world, composing an enormous sociocultural diversity, which favors the recognition of epistemological plurality. In this way, indigenous peoples are the best representatives of post-abyssal thinking.

Pope Francis⁸² warns that there are not two crises — one environmental and the other social — but a single complex socio-environmental crisis, so he considers it essential to seek solutions that interact with natural and

⁷⁹ Santos, Boaventura de Sousa, "Para além do pensamento abissal...", *cit.*

⁸⁰ *Idem.*

⁸¹ *Ibidem*, p. 79.

⁸² Pope Francis, *op. cit.*,

social systems. The solutions to these problems require considering them in their entirety, in order to fight poverty and exclusion, restoring human dignity to human beings and, at the same time, taking care of nature. Thus, social ecology is also institutional and multidimensional, as it reaches dimensions from the family to international life, through the community to the nation.

In this understanding, the disappearance of a culture is as serious or more serious than the disappearance of a plant or animal species. “The imposition of a hegemonic lifestyle linked to a mode of production can be as harmful as the alteration of ecosystems”.⁸³

Therefore, it is necessary and urgent to pay attention to the communities of indigenous peoples and their culture, which the Guarani peoples call *Nhandereko*. However, *nhandereko* for these peoples is more than what the white man understands as a culture, it can only be understood if lived. It is all way of being, of living, of raising children, of seeing the world, of relating spiritually.⁸⁴ Indigenous peoples are the main interlocutors, especially when it comes to projects that affect spaces occupied by their communities. They consider that the land — *Pachamama* - has not only economic value, but also sacred value as a gift from God and from their ancestors who rest in it, and with it, they need to interact to maintain their identity and their values, for this reason, they are the best caretakers of their territories.

This care for nature is embedded in a lifestyle based on gratuitous brotherly love for brothers and sisters and in communion with fellow human beings. This gratuity leads human beings to love nature — which they cannot control — to love their brothers and sisters, and to experience a true universal brotherhood, because as human beings we are all brothers and sisters.

In this sense, Pope Francis understands that for a community to develop and practice fraternity from human beings and nations living in social friendship, a better policy aimed at the common good is necessary. However, what is seen, most of the time, is the politics expressed in forms that hinder the way for the world to be different. Thus, to develop solidarity habits and to put oneself in the other's shoes and think about human life in

⁸³ *Ibidem*, p. 120.

⁸⁴ Comissão Guarani Yvyrupa, “*Nhandereko – Nossa modo de viver*”, CGY, 2015, disponível em: <http://videos.yvyrupa.org.br/nhandereko-nossa-modo-de-viver/>.

its entirety are necessary to give quality to the relationships between men and women; so that society itself is driven to react to the injustices it practices and the abuses of power.

VI. CONCLUSION

Disasters demonstrate the collapse of governmental and non-governmental structures in society, which, for various reasons, are forced to pay a high price. Considering that every human being is also a creature of this world, who has rights such as being happy and living with dignity and in harmony with nature, one cannot fail to recognize the effects of environmental degradation and the disposal culture on the lives of the men and women who inhabit this planet.

From three conceptual scenarios, the legal nature of the COVID-19 Pandemic has been proven a physical disaster of a biological nature. In this scenario, Disaster Law plays an important role, as it is responsible for risk management, in order to achieve a new stabilized normality. The emergency of public health issues provokes a serious social destabilization, caused by the increased physical, social, and informational vulnerability of citizens and communities, which has a devastating impact on the most vulnerable, especially indigenous peoples. These cumulative and intertwined vulnerabilities are part of the configuration of the Pandemic as a disaster, which allows the concepts of risk and vulnerability, structuring the Disaster Law, to trigger in each branch of the Law the concern about decisions that reach prevention, mitigation, compensation, and reconstruction, by means of emergency responses.

In this sense, responsibilities, especially of a civil nature, of public and private actors are identified, in view of the anticipated knowledge of risk, competence, the duty to act and the omission of the Public Administration. In the face of the COVID-19 pandemic disaster, although everyone is at risk, some are more unprotected than others are because they are more vulnerable physically, socially, or technologically. Those over 60 or those with comorbidities, such as obesity, respiratory diseases, and heart disease, represent physical vulnerability. Characteristics such as social class, income, race, and ethnicity influence the degree of exposure to risk of a

community, by evidencing social vulnerability. Finally, technological or informational vulnerability stands out due to the lack of clarity in the information presented to the Brazilian population. This makes the planning of adequate actions to combat vulnerability more difficult and highlights the lack of identification of the most vulnerable people in order to implement emergency aid policies that really reach the physically and socially needy.

Thus, denialist presidential pronouncements, which oppose social distancing and science, encouraging inappropriate behavior in the face of fighting the pandemic, in total disagreement with the recommendations of the WHO and the Ministry of Health, and the lack of testing of the population, are demonstrations of the informational vulnerability to which Brazilians are exposed. These cause confusion in the Brazilian population, and create a false sense of safety, propitiating further spread of the virus.

When analyzing the current situation of humanity, both in relation to the wounds of planet Earth and the human causes of environmental degradation, it is clear that there is a need to change course so that humanity can leave the spiral of self-destruction through which it is sinking. We live in a world in which the prevailing culture produces misery, hunger, and disasters, caused by man himself, a culture that disregards ecosystems, either for economic advantage or for ignorance.

In this context, the indigenous peoples — who are on the other side of the abyssal line — and their ancestral knowledge and wisdom, may be part of the solution to the problems, by teaching other people their *Teko Porã*, well living in harmony with nature. It is time to learn from the indigenous peoples, especially the Yanomami about all the scientific, shamanic, and mythological knowledge they have on how to deal with life and with nature, in order to realize that humans are not unique and the most interesting beings in the world, and that many other beings have a perspective on existence. Indigenous peoples value the balance between humans and nature, as if it were a web, to which all living organisms are connected. They have a philosophy based on spiritual principles, which allows them to live and act in relation to nature in a way that is quite different from most humans. Their science of healing through nature and their medicine are examples of conserved values that can contribute to the improvement of living conditions in a conflicted society such as the West.

In the wake of this reasoning, everyone needs to perceive living systems in a new way, because as their inner world became more diverse, the human

being began to lose their connection with nature and therefore became a fragmented being.

For there to be an effective change in attitudes toward nature, it is necessary for man to be aware and use his autonomy to promote his own good, and for the good of organisms, natural systems, and ecosystems. Furthermore, a change in the perception of living systems is necessary, based on the assumption that nothing can be seen in isolation, but interconnected, as if it were a web: the web of life. By remembering that everything is interconnected, the human being has become an absolute dominator, and therefore, his existential base collapses, because, instead of collaborating with God in the work of creation, the human being replaces God, and in this way provokes the revolt of nature. The new eco-complex ecological issues, in which disasters are included, clash with anthropocentrism and man's certainties about life on Earth. Therefore, to recover humanity, one must recover the previously existing connection to the web of life, that is, to be "ecoliterate" it is necessary to have the wisdom of nature.

Disasters should be seen as an opportunity to overcome the disrespect for the limits of nature and as the beginning of the construction of a better world, with social practices for building sustainability, based on fraternity and social friendship, and concerned about the care for our common home.

Climate change is a moment of metamorphosis, an amalgamation of nature, society, and politics, which means that nature cannot be understood without society, nor does society exist outside of nature. In this metamorphosis, the distinction between nature and society ends. On the other hand, it is not about the transition from the progress era to the ecological era, but rather a crisis of civilization or a crisis of knowledge, through which it is necessary to understand the world and redirect human behavior, thinking about a sustainable future for the next generations. Therefore, it is essential to seek solutions that consider the problems integrally, in order to fight poverty and exclusion, giving back to human beings their dignity and taking care of nature, through an environmental rationality that recognizes the environmentally situated man.

Within the scope of the Environmental Rule of Law, the development of public educational and inspection policies are examples of actions to achieve the ideal of ecosystem protection and compliance with environmental legislation. This is hard work, which cannot be done overnight and

therefore needs solid foundations that allow risk management and the reduction of vulnerabilities.

Human beings need to reinvigorate the awareness that they are part of a single human family, without any political or social barriers, with no room for indifference in this context. Although people no longer believe in a happy future or trust in a better world to come, human beings need to rediscover their true place in the “common home” and be willing to change with a view to fraternity and social friendship.

In this endeavor, the *nhanadereko* of the indigenous peoples is a model to be followed as a culture of life in harmony with nature, so that the *Teko Porã* may be a new way of living present in all nations of the world, always protected by the *Pachamama*, Mother Earth.

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