# IMPACT OF GLOBALIZATION ON BRAZIL'S NATURAL ENVIRONMENT

### IMPACTO DA GLOBALIZAÇÃO SOBRE O MEIO NATURAL BRASILEIRO

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**Abstract:** Globalization brings states together in processes of integration and interdependence, resulting in immeasurable effects on the economy. However, given the inseparable link between development and the exploitation of natural resources, the phenomenon likewise impacts the natural environment on a global scale. On this note, the environmental damage that has plagued Brazil, especially due to the imbalances that characterize its multiple relations with rich countries, requires investigation. Thus, by adopting the deductive, bibliographic, and documentary method, the present work analyzes the impacts of globalization on Brazil's natural environment. To this end, it contextualizes the concept of sustainability from a global scenario, addressing some of the challenges of economic globalization for sustainable development, especially in poor countries. In addition, reflections of the globalized economy on Brazil's natural environment, especially the displacement of environmental damage from rich to poor nations, are discussed. The results

demonstrate that the advanced Brazilian constitutional text reflects the spread of environmental protection as a universal value. However, this new order does not yet reflect the environmental awareness of Brazilian society. Subsequently, economic globalization could represent a force contrary to the maintenance of Brazil's ecosystems. The expansion of the market allows some companies to relocate polluting activities to poor countries, where the environmental protections are lower or, in practice, even nonexistent due to the lack of supervision.

**Keywords:** Brazilian Constitution of 1988; International Law of Human Rights; Globalization; Sustainable development; Environment.

Resumo: A globalização aproxima os Estados em processos de integração e interdependência. Seus efeitos sobre a economia são bastante conhecidos. Contudo, dado o indissociável liame entre desenvolvimento e exploração de recursos naturais, o fenômeno impacta o meio natural, em escala global. O debate é amplo e complexo, de modo que, sobre esse viés, os danos ambientais que têm assolado o Brasil, especialmente em decorrência do desequilíbrio que marca suas múltiplas relações com países desenvolvidos, carece de investigação. Assim, adotando-se o método dedutivo, bibliográfico e documental, o presente trabalho traz uma análise dos impactos da globalização sobre o meio natural brasileiro. Para tanto, contextualiza a concepção de sustentabilidade no cenário global, abordando alguns desafios da globalização econômica para o desenvolvimento sustentável, notadamente nos países pobres. São discutidos reflexos da economia globalizada sobre o meio natural brasileiro, sobretudo o deslocamento de danos ambientais, de nações ricas para pobres. Os resultados demonstram que que o avancado texto constitucional brasileiro reflete a disseminação da proteção ambiental como um valor universal. No entanto, essa nova ordem não representa a consciência da sociedade brasileira sobre o valor do meio natural. Ademais, a globalização econômica poderia representar uma força contrária à manutenção dos ecossistemas do Brasil. A expansão do mercado permite que algumas empresas realoquem atividades poluidoras para países pobres, onde as proteções ambientais são mais baixas ou, na prática, até inexistentes, dados os limites que se impõe à atuação dos órgãos ambientais.

**Palavras-chave:** Constituição Federal de 1988, Direito Internacional dos Direitos Humanos, Gobalização; Desenvolvimento Sustentável; Meio Ambiente Natural.

**SUMMARY:** Introduction. 1. Sustainability in the global scenario. 2. Globalization challenges for sustainable development in poor countries. 3. Effects of globalization on the natural environment in Brazil. Conclusion. References.

#### INTRODUCTION

Throughout history, the development of society has always been related to the exploitation of natural resources, and for a long time, it was believed that nature had an infinite power to restore itself. This conception justified indiscriminate exploitation, with a view to the legitimate aspirations of nations for progress, and the term "development" was always considered from a purely economic connotation.

After three centuries of industrial advancement, the scenario today is very different, and the risks from the unsustainable exploitation of the environment are serious and imminent. In addition, the challenges surrounding its protection are vast and diverse, and many of them rooted in international relations. The exchange of people and goods, enhanced by rapid technological develop-

ment, influences societies in several ways, especially economically, socially, and culturally.

This paper aims to contribute to the discussion by analyzing how the economic bias of global relations impacts Brazil's natural environment. Although globalization is a widely studied subject, there is much to be unraveled from the proposed perspective of the observed displacement of environmental damage from one side of the planet to the other—from rich to poor countries.

The case of a Norwegian mining company that polluted Amazonian rivers is presented as one of the many known examples of the dark side of globalization, namely, the displacement of environmental damage. The point is that some companies comply with sustainability and human rights rules within their countries, but then violate these practices in other countries. This demonstrates that corporate responsibility is guided more by the certainty of punishment than by laudable values.

The results were obtained using the deductive method, through bibliographic and documentary research based on an analytical study of articles, journals, documents, and bibliographical reviews.

#### 1. SUSTAINABILITY IN THE GLOBAL SCENARIO

Until recently, people were little concerned about the impact of human activity on Earth as the effects of this relationship were unknown or underestimated. It was only since the second half of the twentieth century, when major economic, ecological, and human losses were associated with the exploitation of natural resources that the environmental issue became relevant.

Note that during this period, technological development reached a relevant milestone in the understanding of the dynamics of the Earth. In addition, scientific knowledge exposed the risks of the adopted development model and stirred public opinion about the finitude of the existing resources. The dropping of the atomic bomb on Hiroshima contributed to the perception that humanity had achieved sufficient technological power to destroy life on earth.

In the second half of the 20<sup>th</sup>, the wave of environmental awareness resulted in the perception that the economic growth model had led to a progressive scarcity of natural resources. This concern was sanctioned in the United Nations Stockholm Declaration on the Human Environment in 1972. In poor countries, the idea was initially received as an attempt to curb the industrialization processes that had not yet materialized.

In 1983, with the aim of overcoming the dilemma, the World Commission on Environment and Development, under the leadership of Norwegian Prime

Minister Gro Harlem Brundtland, presented the "Our Common Future Report." The report contained a proposal for sustainable development, which was defined as meeting the needs of present and future generations.

This report was also met with severe criticism for not recognizing the differences between the North and South.¹ Graf (1992) states that the main quality of global hegemony must be the ability to maintain the prospect of mutual gain. The author remarks that, in the scenario proposed by Brundtland, the report only granted the superiority of the political, economic, and social order of the North, as all the demands and aspirations of the South were already achievable within the previous world order, and not in the proposed new model in the report.

In 2000, the United Nations (UN) organized the Millennium Summit, held in New York City, to discuss the fight against global poverty. Among the many factors that contribute to poverty, environmental issues were widely emphasized, and sustainability became a decisive element in the fight against poverty. Subsequently, the Summit inspired the Millennium Development Goals (PADILHA, 2010).

Elkington (1997) notes that the sustainability agenda had previously focused on harmonizing the financial and environmental sectors, but has turned out to be much more complex, with the inclusion of a third pillar—social justice. The author reports that exposing the growing predatory aggressiveness of industry has raised the question of what types of financial, industrial, and entrepreneurial activities sustainable capitalism will require:

[...] But sustainable capitalism will need more than just environment-friendly technologies and, however important these may be, markets which actively promote dematerialization. We will also need to address radically new views of what is meant by social equity, environmental justice, and business ethics. This will require a much better understanding not only of financial and physical forms of capital, but also of natural, human, and social capital (ELKINGTON, 1997, p. 72)

A society becomes sustainable when it is organized in a way that safeguards the biodiversity around it and is nourished by renewable and recyclable resources. As a result of its work and production, it becomes more autonomous, overcoming poverty or at least able to reduce it. In addition to this, its citizens have relevant employment and guaranteed social security upon old age or in case of disabling illness. Furthermore, social, political, and gender equality is continu-

<sup>&</sup>lt;sup>1</sup>This expression is used to express the socio-economic divide between "rich" or "developed" countries and the "poor," "developing," or "emerging" countries.

ally sought. Finally, it will be sustainable if its citizens are socially participatory and environmentally aware (BOFF, 2018).

The adjective "sustainable" reveals important parts of the development model that need to be achieved, such as the incorporation of the social and economic dimensions in relation to humanity, as well as the ecological facet that can be attained by respecting the natural environment and its resources, on which humanity depends. Accordingly, development will be sustainable not only when it has connections with an ecological model of respect for the natural environment, but also when it meets demands, such as the respect for democracy and human rights (SILVEIRA; ROCASOLANO, 2015).

Defined as an ideal political concept, open to questioning and reinterpretation, together with the ideals of "freedom," "democracy," and "justice," the concept of sustainable development should guide the debates on development. This is a proposal for reorienting development so that society's progress can be sustained (MEADOWCROFT, 2007).

Thus, given the realization that development transcends the initial paradigm between economic growth and environmental protection, and encompasses all dimensions of human wellbeing for both present and future generations, sustainability is a fundamental part of this process. This is not a static concept, as human needs are constantly changing, and moreover, the balance in the fulfillment of these needs assumes peculiar and distinct contours across nations.

In poor countries, the road to sustainability is much longer. A critical view of the divergence of interests involved is necessary to identify, understand, and, as much as possible, overcome the real obstacles to the preservation of the natural environment on a global scale. It is assumed that the goal of sustainability, to be achieved by balancing ecological, economic, and social values, will never be the result of a single and definitive equation that applies to all countries, and must be adjusted on a case to case basis.

## 2. GLOBALIZATION CHALLENGES FOR SUSTAINABLE DEVELOPMENT IN POOR COUNTRIES

Technological development has broadened international relations and brought states together. The exchange of people and goods has influenced societies in a number of aspects, especially economically, socially, and culturally, such that the research of such relationships can take place from a multitude of perspectives.

This phenomenon is conceptualized by Torrado (2000) as a bundle of complex processes of exchange in the relations between societies, nations, and cul-

tures. The author adds that such processes have generated a dynamic of interdependence between the economic, political, and cultural spheres, in which the current processes of globalization develop, causing events in one part of the world to impact others strongly.

Souza (1997) adds that the phenomenon involves conflicts, and therefore, winners and losers, and so the discourse on globalization turns out to be the story of the winners themselves. It states that through this process, a certain condition or entity can extend its influence over the whole world. In line with this, there is no global condition for which there is no local root.

From an economic point of view, it covers the processes that enable the conception, development, production, distribution, and consumption of products and services on an international scale, which aim to respond to the needs of world markets and govern by almost universal standards, developed by organizations, such as corporate networks (LIMA TORRADO, 2000).

The methods of natural resource exploitation have become more complex as multinational companies continue to specialize in industrial, financial, technological, commercial, administrative, and cultural skills, which have become key elements in globalization. Multinational corporations, which previously had most of their operations centered in their home countries, replicated small versions of themselves in each country in response to trade barriers that arose in the postwar period (MARTINELLI; MIDTTUN, 2010).

In addition, globalization implies a new way of realizing state sovereignty, which is detrimental to the free movement of goods. There arose a need for joint action to establish heterogeneous rules and procedures to be adopted between countries (GOMES, 2004). On the challenge of easing sovereignty for poor countries, Islam reflects (2015, p. 43):

Economic globalization has diluted state sovereignty in a manner that produces winners and losers. The winners, mostly the Northern states, have benefited from the liberalization of trade in manufactured goods and in services and from de enhanced protection of investor rights and intellectual property. The exclusion of agricultural trade, transfer of technology, and the cross-border movement of people from the WTO framework have produced losers—predominantly Southern states, which encounter economic and political dislocations and loss of sovereignty.

This market-led system has not produced sustainable results. With the possibility of freely determining the most profitable location for their headquarters and branches, multinational companies have found advantages on the other side

of the globe in operating in countries where the operational barriers are fewer. The need to create wealth has led poor countries to compete for the most interesting proposals in terms of the mitigation of environmental and labor requirements, low wages, and tax exemptions, among other advantages to appeal to multinational companies (LIMA TORRADO, 2000).

As a result, isolated environmental protection measures are no longer effective in protecting the natural environment as a single integrated system. Restrictions on land use to protect natural ecosystems in rich countries can only shift environmental degradation to a distant location, increasing the importation of products. Thus, the obligation to use biofuels in one place can increase global greenhouse gas emissions because of indirect land-use changes in remote locations (LAMBIN; MEYFROIDT, 2011).

Social and economic differences lead to the adoption of practices in poor countries that would have been prohibited and severely punished in rich countries. The subordinate and dominant positions in the international division of labor lead to poor countries taking risks beyond their control (FREITAS, 2000). Recent work accidents in mining dams in Brazil, involving the Vale S. A. in 2019 and Samarco (a subsidiary of Vale S.A.) in 2015, can be taken as an example. Both incidents had enormous environmental impacts, causing more than 300 deaths. Furthermore, the heavy metal contamination of the basins of the Doce and Paraopeba Rivers threatened ecosystem services and the health of present and future generations.<sup>2</sup>

Given this scenario, state power is often obliged to yield to the bargaining power of companies, which are important sources of economic and social maintenance in certain locations. This exposes the gap in the accountability of new players in globalization, such as large multinational corporations and powerful states (MARTINELLI; MIDTTUN, 2010).

Hence, there is a need for reflections on the relationship between human rights and the environment. Human rights encourage dialogue where it is needed and a culture of caring for the person and their environment, as well as structuring other situations related to environmental justice. These features are particularly relevant to environmental protection in poor countries, where other obstacles, such as corruption, bad governance practices, and environmental injustices, are prevalent (KOTZÉ, 2015).

<sup>&</sup>lt;sup>2</sup> The Samarco disaster in 2015, caused 19 deaths and released 50 million of tailings, which extended over 36 municipalities to a total of 650 km along the Doce River. The Vale S.A. disaster in 2019, had more than 300 deaths and missing people, and 131 victims were Vale S.A. employees. This time, 13 million of tailings were released, which extended to 18 municipalities at least along 250 kilometers. (FREITAS; DA SILVA, 2019)

Environmental sustainability has been strongly defended as a Human Right. In this sense, the right to sustainable development compromises not only the state and the individual but also the private enterprise. There are links and responsibilities between the private company and sustainable development, especially due to the social-solidarity function imposed on companies by the rights of equality and solidarity (SILVEIRA; NASPOLINI SANCHES, 2015).

Given the current difficulties of the international human rights system, the first step will always be to raise awareness of the defects, with a desire to overcome them. Although internal problems can be corrected with the volitional determination of the authors, human rights cannot exist in isolation. In addition, whatever their form and content, they need to be coordinated with the economy (LINDGREN-ALVES, 2017).

Due to its peculiarities, economic globalization creates a series of challenges to sustainable development, especially for poor countries. Although technological advances have enabled an integrated understanding of the movements that make up the Earth's evolutionary dynamics, economic globalization represents a force contrary to the maintenance of the planet's ecosystems. In this context, research on human rights and sustainable development, focusing on the performance of multinationals in poor nations, is extremely relevant.

Another point to consider is the need for rich countries to recognize their historical share of responsibility in the current crisis scenario; in fact, they should be given a greater burden for several reasons. First, they are the main causes of past degradation; second, they continue to consume a huge portion of the planet's resources; and third, these countries have superior technological and financial capacities to protect the environment (ISLAM, 2015).

Considering the force of the big corporations in the globalized scenario, they likewise have great potential for helping realize fundamental rights. Thus, the paradigm shift towards sustainable development requires the commitment of major players in globalization, such as states and multinational corporations, to fulfill basic human needs.

### 3. EFFECTS OF GLOBALIZATION ON THE NATURAL ENVIRONMENT IN BRAZIL

As seen, globalization involves countries, nations, regions, corporations, associations, and organizations, such that separate local events can influence a large number of countries. There is an increase in the number of problems that are common across states, as well as a variety of issues that they may involve.

Positive and negative events, such as the struggle for environmental preservation or the drug trafficking mafia, also assume a global character (MARSONET, 2017).

In this context, the ethical influence of the environmental movements that emerged in the United States and Europe in the second half of the twentieth century on the constitutionalization of Brazil's Environmental Law can be seen as a relevant reflection of the impact of globalization on the legal protection of the environment in Brazil. The Brazilian Constitution of 1988 provides specific protection of the environment, declared as a fundamental right. Moreover, it also brings many international environmental law principles, for example, principles of prevention and intergenerational equity article, both guaranteed in Article 225 (BRAZIL, 1988).

Although the present study does not focus on the analysis of the process that underlies the emergence of environmental law in society, globalization has disseminated environmental protection as a universal value, to the point that the Eurocentric bias of environmental law can be observed not only in the Brazilian Constitution but in most Latin American constitutions drafted after the Stockholm Conference of 1972.

Herman Benjamin (2015), when discussing the extraordinary advances that the constitutionalization of the environment represents, reflects that it is a time of healthy globalization of the constitutional debate. He recounts that constitutions are significant in the development of ideologies and contemporary political regimes and serve as an indicator of the transition between the two models of states.

However, the unsustainable operations of multinational companies are a negative impact of globalization on the natural environment, notably in the mineral sector. The historical analysis of mining activities in Brazil reveals, among other things, the fragility of environmental regulations, and the lack of projects able to promote sustained development. As mineral extraction is not a long-term activity, the risks posed by dams, mines, and other abandoned infrastructure tend to go beyond the mining cycle (COELHO *et al.*, 2017).

Cases of dam ruptures or leakages, with negative social, environmental, and human consequences, have become more prevalent. The Mariana disasters in 2015 and Brumadinho in 2019, caused by the mining companies Samarco and Vale, respectively, are not isolated examples. According to the National Water Agency Report, in 2017, there were 24,092 dams registered with the inspection bodies for various uses, and only 3% were inspected that year (ANA, 2017).

In the present study, the Norwegian mining company that has been polluting Amazonian rivers was chosen because it demonstrates the force of globaliza-

tion against environmental preservation in poor countries. The company, Hydro Alunorte, has been operating in the Amazon since the 1990s, and it has been responsible for repeated leaks of tailings dams in the municipality of Barbacena, causing damage to the environment and the health of the local population that feeds on the fish in the rivers.

This case is emblematic because its largest shareholder is the Government of Norway, and Norway is a member of the UN and is repeatedly selected as the best country to live in, according to the Human Development Index, which takes into account the income, life expectancy, and education level of the countries. Norway has one of the highest Eco-efficiency scores, an indicator used to quantify a country's progress towards sustainable development (MACIEL; KHAN, 2017).

During an official visit by President Michel Temer to Norway in 2017, the Norwegian government publicly made harsh criticism of the increase in deforestation in the Amazon. In retaliation, they reduced their funding of deforestation projects by 50% in the Amazon. At the time, it was found that Hydro was the defendant in nearly 2,000 lawsuits for contamination of rivers and communities in Barbacena and had not paid Brazilian Institute of Environment and Natural Resources - IBAMA fines of R\$ 17 million for a toxic mud overflow in 2009 (SENRA, 2017).

In February 2018, after a period of heavy rains, residents of communities near the plant warned authorities of a flood of red mud that flooded the streets, houses, and areas of the Amazon rainforest. Artesian wells also overflowed, raising fears about water quality, as hazardous products such as Sodium hydroxide are used in the processing of the plant (NOGUEIRA, 2018).

The Evandro Chagas Institute, an agency of the Ministry of Health, conducted an on-site inspection and reported that the company used a clandestine pipeline for untreated effluent discharges into a set of Murupi river springs, causing contamination. After denying irregularities in March 2018, Hydro admitted that it made the emissions through a pipeline not covered by their permits, but stated that it had no indications that emissions had a negative impact on the environment (KUDSEN, 2018).

By court order, in March 2018, it was determined that Hydro's aluminum refinery would operate at 50% capacity. In October of that year, following the ban on the use of new technologies to extend the life of a disposal area, the company announced that it would suspend production and lay off 4,700 employees. Within the days, the embargo was lifted, with IBAMA's prompt authorization to use the technology (KARAGIANNOPOULOS, 2018).

The case is paradoxical, to say the least. The government that punishes Brazil for not preserving the Amazon is also responsible for a company that operates in the Amazon clandestinely and causes severe environmental degradation. This demonstrates that it is only the certainty of punishment that determines the performance of companies and guides their attitudes, and their values or culture have a minimal impact. However, as demonstrated, the subordinate Brazilian position in the international division of labor limits all punitive action against these companies.

International action and regulation are required to ensure that companies are not accepted simply as profit-oriented entities. They must be committed to environmental preservation, ethical conduct, and care about the impact of their performance in the community where they operate. Thus, it is perfectly possible in certain situations to demand that part of the profit from business activities be employed in the fulfillment of social rights, leading to a better distribution of wealth and enabling human development (SILVEIRA; NASPOLINI SANCHES, 2015).

In addition, the example reveals the contradiction between internal democracy and international relations. As democracy strengthens within nation-states, relations between them become less democratic because the political responsibility of the government towards its domestic electorate tends to make it a selfish actor in the international sphere (MARTINELLI; MIDTTUN, 2010).

In this scenario, the idea of cooperation in the relationship between countries also assumes relevant contours. Study on the subject demonstrate that while positive interventions by national governments can achieve high levels of sustainable development, the contribution of all countries is essential, given that the planet's overall health and wellbeing depends on a global effort (HOLDEN; LINNERUD; BANISTER, 2014).

The need arises for an ethical and supportive vision for all of humanity. From a sustainability standpoint, this does not mean taking a stand against progress but agreeing to cooperate not to achieve it at any cost. States need to promote the welfare of humanity by taking responsibility for the pressure on nature. In addition, the differences between developed, developing, and the least developed states need to be considered to give rise to equitably different responsibilities (CAMPELLO, 2013).

Thus, due to its peculiarities, globalization directly impacts the preservation of Brazil's natural environment. Despite the positive impact on the constitutionalization of Brazil's Environmental Laws, this advanced text does not yet express the wishes of Brazilian society. In contrast, the unsustainable operation

of multinationals in Brazil exposes a dark side of the studied phenomenon that negatively impacts Brazil's natural environment.

#### CONCLUSION

Environmental awareness has emerged in heavily industrialized societies, following negative experiences with major environmental disasters, and has influenced international environmental regulations. However, while in rich countries, environmental regulation came after capital accumulation through unsustainable exploitation of natural resources, in poor countries, this regulation preceded development and was viewed as an attempt to block development.

As a proposal to overcome the initial paradigm between economic development and the protection of the natural environment, the ideal of sustainability was realized as a new understanding of development that seeks to address all of the dimensions of human wellbeing, for present and future generations alike. However, it should be noted that the goal of sustainability, to be achieved by balancing ecological, economic, and social values, will never be the result of a single and definitive equation that applies to all countries, under penalty of distortion of the ideal sought.

Globalization, as a bundle of exchange processes between nations and other international actors, impacts societies in many ways. In this context, it appears that the advanced Brazilian constitutional text reflects the spread of environmental protection as a universal value. In addition to elevating the environment to the category of fundamental law, it marks a milestone in the transition to a State of Environmental Law. However, it must be remembered that this new order does not yet reflect the environmental awareness of Brazilian society.

Meanwhile, economic globalization has increased competition and produced only a few sustainable results. With the expansion of global markets, a large range of options was presented so that multinational companies could freely determine the most profitable place to set up their headquarters and offices. At the same time, the need for poor countries to create wealth leads them to accept unsustainable proposals; this cycle further widened inequalities.

In this scenario, the more restrictive environmental regulations in rich countries may not imply effective bonuses for the preservation of the natural environment. This is because, in many cases, companies choose to relocate polluting activities in poor countries.

As new international actors, multinationals operate in a gap of accountability in the international sphere. This situation implies the protection of the earth's

ecosystem, which deserves further study and international regulation. In addition, in the globalized scenario, companies must be committed to solidarity and ethics.

As democracy strengthens in nation-states, relations between them become less democratic. Indeed, the same development that reduces inequalities within countries increases inequalities between them. In other words, high rates of development positively impact the internal environment of countries, reducing inequalities between people of the same nationality. The same democratic values, however, do not guide their relations with poor countries.

Thus, the studied phenomenon creates a series of challenges to sustainable development, mainly for environmental preservation on a global scale. Although technological advances have enabled an integrated understanding of the movements that make up the Earth's evolutionary dynamics, economic globalization represents a force contrary to the maintenance of its ecosystems.

The transition to a sustainability path on a global scale is one of humanity's greatest challenges. There is a need for an ethical and supportive vision for all humanity, as well as the integrated attention of the terrestrial environment as a single ecosystem. Understanding that isolated environmental protection measures can be ineffective and imply damage displacement is a start.

We are all bound by the environment we are destroying, and the wellbeing of present and future generations depends on actions that transcend borders. Moreover, given the strength of economic globalization, the pursuit of sustainable solutions requires a joint effort between countries and other international actors, such as multinational corporations. Thus, the way these actors interact, and their responsibilities need to be reformulated.

#### REFERENCES

AGÊNCIA NACIONAL DE ÁGUAS (Brasil). *Relatório de Segurança de Barragens 2017*. Brasília: ANA, 2018. Disponível em: https://www.ana.gov.br/noticias/45-barragens-preocupamorgaos-fiscalizadores-aponta-relatorio-de-seguranca-de-barragens-elaborado-pela-ana/rsb-2017.pdf/@@download/file/RSB%202017.pdf. Acesso em: 16 out. 2019.

BENJAMIN, A. H. Constitucionalização do ambiente e ecologização da Constituição brasileira. *In:* CANOTILHO, J. J. G.; LEITE, J. R. M. (Orgs.). *Direito Constitucional Ambiental brasileiro*. 6. ed. rev. São Paulo: Saraiva. p. 83-156, 2015.

BOFF, L. Sustentabilidade: o que é: o que não é. 5. ed. rev. e ampl. Petrópolis: Vozes, 2017.

BRASIL. Presidência da República. Constituição da República Federativa do Brasil de 1988. *Diário Oficial [da] República Federativa do Brasil*, Brasília, 5 out. 1988. Não paginado. Disponível em: http://www.planalto.gov.br/ccivil\_03/Constituicao/Constituicao.htm. Acesso em: 16 out. 2019.

CAMPELLO, L. G. B. Meio ambiente e estado constitucional cooperativo. *Thesis Juris*, São Paulo, v. 2, n. 2, p. 353-378, 2013. Disponível em:http://www.revistartj.org.br/ojs/index.php/rtj/article/download/12/pdf. Acesso em: 16 out. 2019.

COELHO, M. C. N. *et al.* Regiões econômicas mínero-metalúrgicas e os riscos de desastres ambientais das barragens de rejeito no Brasil. *Revista da Associação Nacional de Pósgraduação e Pesquisa em Geografia*, São Paulo, v. 13, n. 20, p. 83-108, 2017. Disponível em: http://ojs.ufgd.edu.br/index.php/anpege/article/download/6903/3843. Acesso em: 16 out. 2019.

ELKINGTON, J. *Cannibals with forks*: the triple bottom line of twenty-first-century business. Oxford: Capstone, 1997.

FREITAS, C. M.; DA SILVA, M. A. Acidentes de trabalho que se tornam desastres: os casos dos rompimentos em barragens de mineração no Brasil. *Revista Brasileira de Medicina do Trabalho*, v. 17, n. 1, p. 21-29, 2019. Disponível em:https://link.gale.com/apps/doc/A594553234/AONE?u=capes&sid=AONE&xid=c8cb76b1. Acesso em: 16 out. 2019.

GOMES, E. B. *A globalização econômica e a integração no Continente Americano*: desafios para o Estado brasileiro. Ijuí: Unijuí, 2004.

GRAF, W. From Brandt to Brundtland and beyond: Hegemonic-ideological aspects of the north-south dialogue in the 1990s. *History of European Ideas*, Oxford, v. 15, n. 1-3, p. 399-406, 1992.

HOLDEN, E.; LINNERUD, K.; BANISTER, D. Sustainable development: our common future revisited. *Global Environmental Change*, Amsterdam, v. 26, p. 130-139, 2014. Disponível em: https://www.sciencedirect.com/science/article/pii/S0959378014000727/pdfft? md5=f9c30c14db11c24b2ea36991a572f666&pid=1-s2.0-S0959378014000727-main. pdf. Acesso em: 16 out. 2019.

ISLAM, M. R. History of the north-south divide in international law: Colonial discourses, sovereignty, and self-determination. *In:* ALAM, S. *et al.* (Ed.). *International environmental law and the global South*. New York: Cambridge University Press. p. 23-49, 2015.

KARAGIANNOPOULOS, L. Hydro gets key tech permit for Brazil plant, plans to restart operations. *Reuters*, Oslo, 6 out. 2018. Não paginado. Disponível em: https://www.reuters.com/article/us-norsk-hydro-brazil/hydro-gets-key-tech-permit-for-brazil-plant-plans-to-restart-operations-idUSKCN1MG0CU. Acesso em: 16 out. 2019.

KOTZÉ, L. J. Human rights, the environment, and the Global South. *In:* ALAM, S. *et al.* (ed.). *International environmental law and the Global South*. New York: Cambridge University Press. p. 171-191, 2015.

LAMBIN, E.F.; MEYFROIDT, P. Global land use change, economic globalization, and the looming land scarcity. *Proceedings of the National Academy of Sciences*, Washington, v. 108, n. 9, p. 3.465-3.472, 2011. Disponível em: https://www.pnas.org/content/pnas/108/9/3465.full.pdf. Acesso em: 16 out. 2019.

LIMA TORRADO, J. Globalización y derechos humanos. *Anuario de Filosofía del Derecho*, Madrid, n. 17, p. 43-73, 2000. Disponível em: https://www.boe.es/biblioteca\_juridica/anuarios\_derecho/abrir\_pdf.php?id=ANU-F-2000-10004300074. Acesso em: 16 out. 2019.

LINDGREN-ALVES, J. A. Dificultades actuales del sistema internacional de derechos humanos. Revista de la Secretaría del Tribunal Permanente de Revisión, Asunción, v. 5,

n. 10, p. 246-273, 2017. Disponível em: http://www.revistastpr.com/index.php/rstpr/article/download/269/371. Acesso em: 16 out. 2019.

MACIEL, H. M.; KHAN, A. S. O índice de ecoeficiência em âmbito internacional: uma análise comparativa do desempenho de 51 países entre os anos de 1991 e 2012. *Sustentabilidade em Debate*, Brasília, v. 8, n. 1, p. 125-140, 2017. Disponível em: http://periodicos.unb.br/index.php/sust/article/view/16463/14748. Acesso em: 16 out. 2019.

MARSONET, M. National sovereignty vs. globalization. *Academicus International Scientific Journal*, Vlorë, v. 8, n. 15, p. 34-45, 2017. Disponível em: http://www.academicus.edu.al/nr15/Academicus-MMXVII-15-047-057.pdf. Acesso em: 16 out. 2019.

MEADOWCROFT, J. Who is in charge here? Governance for sustainable development in a complex world. *Journal of Environmental Policy & Planning*, London, v. 9, n. 3-4, p. 299-314, 2007.

MARTINELLI, A.; MIDTTUN, A. Globalization and governance for sustainability. *Corporate Governance*, Bradford, v. 10, n. 1, p. 6-17, 2010.

NOGUEIRA, M. Evidence of contamination at Hydro plant in Brazil, researchers say. *Reuters*, Oslo, 9 mar. 2018. Disponível em: https://www.reuters.com/article/us-norsk-hydro-brazil/evidence-of-contamination-at-hydro-plant-in-brazil-researchers-say-idUSKCN1GL2X6. Acesso em: 16 out. 2019.

PADILHA, N. *Fundamentos constitucionais do Direito Ambiental brasileiro*. Rio de Janeiro: Elsevier, 2010.

RIBEIRO, L. G. G.; SILVA, L. E. G. S. A Conferência de Estocolmo de 1972 e sua influência nas Constituições Latino Americanas. *In:* COSTA, F. V.; GORDILHO, H. J. S.; BRASIL, D. R. (org.). *A proteção ambiental em suas múltiplas dimensões.* Maringá: IDDM, 2018. p. 12-68. E-Book. Disponível em: http://www.uit.br/mestrado/images/publicacoes/A\_PROTEO\_AMBIENTAL\_EM\_SUAS\_MLTIPLAS\_DIMENSES\_-\_EBOOK.pdf. Acesso em: 16 out. 2019.

SILVEIRA, V. O.; MÉNDEZ ROCASOLANO, M. Derechos humanos, desarrollo y poder, una relación comprometida. *In*: ENCONTRO DE INTERNACIONALIZAÇÃO DO CONSELHO NACIONAL DE PESQUISA E PÓS-GRADUAÇÃO EM DIREITO, 3., 2015, Madrid. *Anais* [...]. Madrid: Ediciones Laborum, 2015. v. 2. p. 143-171. Disponível em: https://www.conpedi.org.br/wp-content/uploads/2016/03/Vol.-2-Madrid.pdf. Acesso em: 16 out. 2019.

SILVEIRA, V. O.; NASPOLINI SANCHES, S. H. D. F. Direitos humanos, empresa e desenvolvimento sustentável. *Direito & Desenvolvimento*, João Pessoa, v. 6, n. 12, p. 145-156, 2015. Disponível em: https://periodicos.unipe.br/index.php/direitoedesenvolvimento/article/view/293/275. Acesso em: 16 out. 2019.

SANTOS, B. S. Uma concepção multicultural de direitos humanos. *Lua Nova*, São Paulo, v. 39, p. 105-124, 1997. Disponível em: http://www.scielo.br/pdf/ln/n39/a07n39.pdf. Acesso em: 16 out. 2019.

SENRA, R. Noruega é maior acionista da mineradora denunciada por contaminação na Amazônia. *BBC*, Washington, 28 jun. 2017. Disponível em: https://www.bbc.com/portuguese/brasil-40423002. Acesso em: 16 out. 2019.