

THE SYSTEMIC-INTEGRATIVE HORIZONTAL TRANSVERSALITY OF THE ENVIRONMENTAL DIMENSION OF SUSTAINABLE DEVELOPMENT: AN EVOLVING CONCEPT

Roberto Correia da Silva Gomes Caldas¹

Universidad de la Empresa (UDE) |

Camila Barreto Pinto Silva²

Universidade Metropolitana de Santos (UNIMES) |

Saulo Furtado Barroso³

Centro Universitário INTA (UNINTA) |

ABSTRACT

The elaboration and use of expressions with substantial content attract attention by its dynamic process of construction and acceptance. It is in this way that the conceptualization of “sustainable development”, in conjunction with “environmental transversality”, is taken in this study, in its origin, as an expression endowed with unique meaning, addressing its incorporation in the legal and corporate scenario as a global effort of dissemination of environmental information permeating the most different sectors of society, through different kinds of media, to allow a harmonious and balanced development. Thus, the study seeks to clarify the scope of

¹ Doctoral and Master’s degree in State Law from Pontifical Catholic University of São Paulo (PUC-SP) Degree in Law from PUC-SP. Professor at the Faculty of Law of PUC-SP Visiting Professor at Doctorate and Master’s Courses of Centro Universitário Curitiba (UNICURITIBA). Professor of the courses of Maestría en Derecho de las RRII y de la Integración en América Latina de la Universidad de la Empresa (UDE), and Master’s degree in Law of “Contratación pública sostenible” at Facultad de Ciencias Jurídicas y Sociales de Toledo of Universidad de Castilla-La Mancha (UCLM). External Researcher of Jean Monnet Chair of the Federal University of Minas Gerais (UFMG). Coordinator of the “Integração, Estado e Governança” Research Network. Director for Institutional Relations of the São Paulo Lawyers Institute (IASP) Lawyer in Brazil and Portugal. ORCID: <https://orcid.org/0000-0003-0772-4450>/e-mail: robertocsgcaldas@uol.com.br

² Doctoral researcher in Law Philosophy from PUC-SP. Master’s degree in Commercial Law from PUC-SP. Specialization in Business Law from PUC-SP. Degree in Legal and Social Sciences from PUC-SP. Professor of the Master’s Program at Universidade Metropolitana de Santos (UNIMES). PNPd Capes scholarship from Universidade Nove de Julho (UNINOVE). Experienced lawyer in the Business and Consumer Rights fields. ORCID: <https://orcid.org/0000-0002-4254-7763> / e-mail: camilabarreto@uol.com.br

³ Master’s student in the courses of Maestría en Derecho de las RRII y de la Integración en América Latina de la Universidad de la Empresa (UDE). Specialization and Master’s degree in Environmental Law from Universidade de Fortaleza (UNIFOR). Environmental Law Professor of the Law Course at Centro Universitário UNINTA. Environmental Law Lawyer. E-mail: saulobarroso.adv@gmail.com

the term “sustainable development” through the principles of integration and systemic transversality, which give its conceptual structure an inherent interdisciplinarity due to its horizontal dimension, thus contributing also to the conceptual evolution of the economic (according to a global circularity) and social (regarding inclusive responsibility and protection of vulnerabilities) dimensions. In this way, the present work intends to verify, through the use of the historic and deductive method, according to the bibliographic approach technique, the evolutive relevance of sustainable development (seen as an expression and contribution of different terms of knowledge), as well as the systemic reflections of its effective integrative transverse horizontality based on the theory of the triple bottom line, enhanced by today’s 5P (planet, profit, people, peace and partnership), on the promotion of the common good by implementing sectoral public policies, reaching the conclusion that the construction of the concepts of “environmental transversality” and “sustainable development” reveals itself as a process that is still evolving, with its sedimentation obtained gradually over time and the acquisition of a greater environmental awareness of the global society of risk and information.

Keywords: effectiveness; global circular economy; social responsibility; sustainable development; systemic-integrative horizontal transversality.

*A TRANSVERSALIDADE HORIZONTAL SISTÊMICO-INTEGRATIVA
DA DIMENSÃO AMBIENTAL DE DESENVOLVIMENTO
SUSTENTÁVEL: UMA CONCEITUAÇÃO EM EVOLUÇÃO*

RESUMO

A elaboração e utilização de expressões com conteúdo substancial chamam a atenção por seu processo dinâmico de construção e aceitação. É dessa maneira que a conceituação de “desenvolvimento sustentável”, em conjunto com “transversalidade ambiental”, é tomada no presente estudo, em sua origem, como expressão dotada de significado ímpar; abordando-se sua incorporação no cenário jurídico e corporativo consoante um esforço global de disseminação das informações meio ambientais permeando os mais diferentes setores da sociedade, por intermédio de distintas vias de comunicação, a permitir um desenvolvimento harmônico e equilibrado. O estudo busca, assim, esclarecer a amplitude

da terminologia “desenvolvimento sustentável” por intermédio dos princípios da integração e da transversalidade, os quais conferem à sua estrutura conceitual uma inerente interdisciplinaridade em função da horizontalidade trazida à dimensão ambiental, contribuindo, assim, também para a evolução conceitual das dimensões econômica (segundo uma circularidade global) e social (quanto à responsabilidade inclusiva e de proteção às vulnerabilidades). Desta forma, o presente trabalho se propõe a averiguar, mediante a utilização do método histórico e dedutivo, segundo a técnica de abordagem bibliográfica, a relevância evolutiva do desenvolvimento sustentável (visto enquanto expressão e contribuição de distintos termos do conhecimento), bem como os reflexos sistêmicos de sua efetiva transversalidade horizontal integrativa alicerçada na teoria do triple bottom line, potencializada pelos mais hodiernos 5P’s (planeta, prosperidade, pessoas, paz e parceria), ao se promover o bem comum implementando-se políticas públicas setoriais, chegando-se à conclusão de que a construção dos conceitos de “transversalidade ambiental” e de “desenvolvimento sustentável” se revela como um processo ainda em evolução, com sua sedimentação obtida gradualmente ao longo do tempo e pela aquisição de uma maior conscientização ambiental da sociedade global do risco e da informação.

Palavras-chave: *desenvolvimento sustentável; economia circular global; efetividade; responsabilidade social; transversalidade horizontal sistêmico-integrativa.*

INTRODUCTION

Elaboration and use of expressions with substantial content call attention for its dynamic process of constitution and acceptance. It is in this way that the conceptualization of “sustainable development” and “environmental transversality” is considered in this study, in its origin, as expressions endowed with unique meaning, addressing their incorporation into the legal and corporate scenario according to a global effort of environmental information dissemination, permeating the most different sectors of society, through different means of communication, in order to allow a harmonious and balanced development.

The study thus seeks to clarify the breadth of the term “sustainable development” via the principles of integration and transversality, which give its conceptual structure an inherent interdisciplinarity due to the

horizontality brought to the environmental dimension, also contributing to the conceptual evolution of the economic (according to a global circularity) and social (regarding inclusive responsibility, protective against vulnerabilities) dimensions.

In this context, the exchange of information between all interested persons and Public Administration is paramount, especially in relation to public policies and their related processes of creation and implantation, notably with regard to the impact of environmental bias on its sustainability, considered in the light of today's risk and information society.

Around the last quarter of the last century, an environmental awareness began to be more intensely guided by discussions and debate forums worldwide, in a fruitful exchange of information between the public and the private sectors, when, a priori, the connotation of "environment" needed to be agreed due to the pleonasm, which was characterized as a figure of speech consistent in the repetition of ideas in which such word meant the place where the human being is or lives.

After agreeing on the use of "environment" to designate the scenario into where humanity is inserted, and considering the heterogeneity of human activities, it was necessary to differentiate the meaning of words according to the degree of human intervention, adding an adjective for each context. Thus, in summary, the classification was done according to the doctrine, as natural, artificial, cultural and work environment, besides other possible categories or, still, synonymies (e.g., SIRVINSKAS, 2015; MILARÉ, 2011; FIORILLO, 2013).

Natural environment was understood as the corresponding natural resources and environments with minimal human interference; in its turn, the artificial, or urban environment, starts to represent the city scene, or the natural transformed to meet the contemporary society's desires and conveniences; on the other hand, the cultural environment was so named for being made up of material and immaterial elements, moving between archaeological sites and urban sites of historical or landscape value; finally, the work environment emerges characterized as the context of man in his workplace.

In this evolutionary stage of the expression "environment," it is possible to identify an element of intersection in all its retro-approached nomenclatures, namely, man (or his intervention) capable of significantly modifying the natural balance to the point of creating several micro-ecosystems, in addition to enhancing the possibility of destroying several others.

Depending on these findings, more developed nations, which had already reached a high degree of industrialization and economic development (with equivalent high degree of ecological depredation), realized that degradation by exploiting natural resource wealth reveals impossible or very difficult repair losses, with an environmental cost that can jeopardize the entire production system, as well as its recipient: humanity.

Therefore, in view of this evolving moment of international environmental awareness, the global scientific community sends an alert to the productive sector in favor of a development that proves to be sustainable, that is, that ends intergenerational equity and responsibility, highlighting, in this context, the horizontal cut of the systemic transversality of its environmental dimension, which, permeating all segments of public life (and its public policies), ends up exposing the need for a circular global economy in which the demand for natural resource wealth is balanced so that the desired economic prosperity – with the planet's natural capacity for recovering (regeneration) – is reached in a joint effort of the most varied segments (public and private), aiming at the perpetuation of the human species, that is, in attention to social responsibility (considered here in a broad sense of inclusion, cohesion, aggregation, and protection against vulnerabilities).

For this reason, production chain global planning has become imperative for its reconfiguration in order to equip itself with the concept of economic circularity (which is still evolving), duly enhanced by an inclusive, aggregating and social responsibility that protects against vulnerabilities, as a global environmental awareness, through holding and creating not only Conferences and Discussion Forums, but also a global policy of environmental education (both in schools and Universities, as well as before society as a whole), through which all relevant information can be disseminated in order to install a universalized (environmental) valuation, which, more recently, with the technological advances that mark the current information society, is clearly reinforced and enhanced (mainly by the Internet).

This study then aims to verify the interdisciplinary character of sustainability initiatives and the importance of exchanging and disseminating relevant information about them, making a systemic-integrative horizontal cut of the several areas of scientific knowledge corresponding to the different sectors of public life (and its public policies), whether of economic, natural sciences or even different branches of legal sciences which, as a whole, originate Environmental Law as a discipline with its

roots clearly fixed, v. g., in Constitutional and Administrative Law (but that derives from them, gaining autonomy with the guidelines launched, mainly, from the UN Stockholm Conference and its Recommendation 96 – see: ONU, 1973).

It is in this way that it is possible to expose the context of intersection between political and planning integration (with the integration of economic, environmental and social elements of development), which remains seen as sustainable, according to a pacifying conflict regulation that implies deliberative consultation, reform of existing institutions and transformation of current political processes, to mean state resilience with legitimacy of decisions in a democratic increase in its process.

In this sense, the research methodology will be based on the aforementioned theoretical bases, starting from the bibliographic approach technique (books, journals and articles published also on the Internet, without the intention of exhausting its authorized sources) to verify the contemporary understanding of sustainable development under a practical-legal prism, that is, of social effectiveness, in the old interpretation of Ferraz Júnior (1994), thus proposing to ascertain, according to the use of historical and deductive methods, the increasing and concrete relevance, over the last few years, of a truly sustainable development (seen as an expression and contribution of different terms of knowledge), as well as the systemic reflexes of its effective horizontal and integrative transversality based on the theory of the triple bottom line, enhanced by the most modern 5P (planet, prosperity, people, peace and partnership) of the 2030 Agenda (UN, 2015), when promoting the common good by developing sectorial public policies, also impregnated by the global concept of circular economy and social responsibility (inclusive, aggregating, cohesive, and protective against vulnerabilities).

The analysis will adopt methods capable of evaluating the diversity of contributions considered in the elaboration of concepts over time. Thus, the historical deductive method will allow evaluating the terminological meaning of “sustainable development” and its connection with that of “environmental transversality,” as well as its reflections directly on legislation in general, most regarding the discussion and elaboration of sectorial public policies, as well as their implementation influencing the corporate posture of national and transnational companies and organizations.

We start, therefore, from a historical view, listing the stages of the construction of concepts related to sustainability, followed by a reading

of the national legislative and normative regulatory evolution in a global scope, evidencing the interdisciplinarity involved to later consider the way in which Brazilian Law relates its sectorial public policies resulting from strategic state planning with the economic, social and natural sciences, influencing corporate and business attitudes along the productive chains.

It is worth mentioning that the basis of the discussion revolves around the conceptual evolution necessary for the construction of the terms “environmental transversality” and “sustainable development,” as well as their incorporation into the different legal systems (nationally and internationally – including according to global governance) and later application in the scenario of public policies with repercussions in the contemporary global, regional, national, and local economic context.

1 CONSTITUTION OF THE TERMINOLOGY “SUSTAINABLE DEVELOPMENT”

The idea of sustainability, currently so much discussed and disclosed, did not arise simply from an altruistic epiphany of some environmental activist. It has been weighed up since the negative impacts of the first industrial revolution emerged, even though they were put into perspective due to the positive aspects of the economic growth provided. In this sense, Sachs (2002, p. 47) asserts:

Development and human rights reached prominence in the middle of the century, as two main ideas designed to exorcise the memories of the Great Depression and the horrors of World War II, provide the foundations for the United Nations system and boost the processes of decolonization.

In a more recent historical record, in 1968 the so-called Club of Rome⁴ was founded, revealing a scenario in which a group of world leaders and scientists warned about the accelerated and, thus, unsustainable pace of exploiting wealth and natural resources (as then verified on a global scale), including due to the significant polluting potential resulting from the burning of fossil fuels (since, at the time, already at levels higher than the capacity for recovery, regeneration and rebalancing of the different affected ecosystems).

4 The Club of Rome is a non-governmental organization (NGO) that started in April 1968 as a small group of professional entrepreneurs, diplomats, scientists, educators, humanists, economists and senior government officials from different States who came together to address issues related to the indiscriminate use of natural resources, with damages to the environment in global terms (THE CLUB OF ROME, 2019).

The objective was, therefore, the creation of an environmental awareness that was against the irrational globally progressive consumerism and the correlated possibility of a collapse of humanity, by means of the adoption of some preventive and precautionary measures that removed the risks regarding protection and restoration of the environmental balance, which influenced several environmental management and education policies (SPAREMBERGER; PAZZINI, 2011).

Club of Rome's warning appeared in a document entitled *The limits to growth* (MEADOWS et al., 1972), which, "[...] although criticized in its calculations and prognoses, considered very radical, influenced the elaboration of the preliminary studies for the Stockholm Conference, [...]" (GRANZIERA, 2014, p. 58).

And at the global level, the United Nations (UN) Stockholm Conference, held in 1972, in Sweden, was the pioneering event that addressed the environment and economic and social development, in a parallel and interdisciplinary way, consolidating itself as a historical landmark for contemporary International Environmental Law.

The 1972 Stockholm Conference can be identified as a historic landmark, undertaken by multiple States, from which an instrument of International Law originated in order to coordinate efforts aimed at environmental protection (Sachs, 2009). It does not mean that any other tool was not created before that – it is possible to mention the 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State and the 1946 International Convention for the Regulation of Whaling –, but 1972 was the year in which the concept of sustainable development began to be elaborated, establishing, for the first time, the connection between environmental protection and economic development. The 1972 Conference also brought a new approach to the issue, that is, that of international cooperation. Recognizing that environmental degradation does not respect border boundaries, one comes to the logical conclusion that the matter must be dealt with collectively, as highlighted by Vicuña (MATA DIZ; ALMEIDA, 2014, p. 113).

As expected, the 1972 United Nations Conference on the Human Environment generated divergences between developed and developing nations, since the latter also based their economy on industrialization, which was still incipient, and therefore they saw the environmental question being posed as an obstacle (clearly of domination) by States in a more evolved and advanced process, as explained by Varella (2003, p. 30):

The pressure in favor of the environmental limits requested from the countries of the South was seen as an instrument used by the North to block the economic development of the emerging countries; this attitude is reflected in the speeches of the

diplomats of the South, who opposed the environmental issue and defended the same right to nature destruction that had been enjoyed by the countries of the North during the periods of greatest economic development.

However, in the light of the concepts dealt with in the abovementioned Conference and the principles it establishes in its Declaration (UN, 1973), it is necessary to distinguish between some ideas and conceptions that start strengthening, and, among which, it is worth mentioning the idea of sustainability that, in this context, ends up having “[...] the purpose of seeking to reconcile meeting the human being’s social and economic needs with the need to preserve the environment” (SIRVINSKAS, 2013, p. 139).

In this way, although a consensus on environmental protection was not reached (and it has not been reached so far), it can be said that the initial milestone in environmental deliberations occurred with the Stockholm Conference, which, above all, demonstrated true concern with the human capacity for consumption and degradation of natural resource wealth.

Following the events, the year 1987, again under the auspices of the UN, also proves to be a milestone for the global environmental issue due to the publication of the “Our Common Future” Report, also known by Brundtland Report (UN, 1987) – so named in honor of Norway’s first minister (Gro Harlem Brundtland), then president of the World Commission on Environment and Development (CMMAD), responsible for its elaboration –, in which the official origin of the term “sustainability” occurs in its most contemporary sense

“In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations” (*sic*) (UN, 1987, item 15, p. 43).

For Granziera, sustainable development, consequently, has an inherent future perspective, as a risk weighting factor of today’s society with a view to preserving the same capacity for the exploitation of natural resource wealth by future generations.

The term Sustainable Development relates to the future. Human activities developed at a certain moment have to consider, in light of the availability of the natural resources used, the possibility of being maintained over time, for future generations. If a given activity presupposes the depletion of the natural resources involved, care must be taken in authorizing its development, reaching the limit of restricting it (2014, p. 58).

And, even in this context of its current configuration, Romeiro (2012, p. 70) asserts:

Sustainable development can be achieved with a set of policies capable of simultaneously guaranteeing an increase in national income, access to basic social rights (economic security, access to health and education) and reducing the impact of increased production and consumption on the environment.

Consequently, in view of this novel conception of what is considered sustainable development, in the early 90s (more precisely in 1992), Brazil hosted the United Nations Conference on Environment and Development (UNCED), popularly known as RIO 92, in which a significant number of heads of State decided to subsequently issue a series of principles that reaffirmed the global commitment to the environmental issue, assessing the progress and gaps in the public policies employed so far in this regard.

In theory, what was sought was to maintain the purpose previously discussed, departing from the theory level and joining the pragmatic one in search of the effectiveness of the precepts, a phase in which “[...] development is allowed, but in a sustainable and planned way, so that the resources that exist today do not run out or become innocuous” (FIORILLO, 2013, p. 72).

The Conference resulted in the drafting of its Declaration on Environment and Development (UN, 1992) and Agenda 21⁵ (1992), which, as several other documents already published, served as inspiration and foundation for the later edition of the initiative nicknamed the Earth Charter (CCT, 2000).

The Earth Charter project draws inspiration from a variety of sources, including ecology, religious traditions, literature on global ethics, the environment and development, the practical experience of peoples living in a sustainable way, in addition to the statements and the relevant intergovernmental and non-governmental treaties (GADOTTI, 2008, p. 13).

Continuing the discussion forums organized by the United Nations, the World Summit on Sustainable Development (Rio+10) took place in 2002 in Johannesburg, South Africa, where Agenda 21 (UN, 1992) proposals were discussed and UNCED, which occurred in the previous decade, was analyzed. Need to eradicate poverty and the universality of access to water was emphasized (UN, 2002) on the occasion, although it was a meeting

⁵ As informed by the Ministry of the Environment (MMA), Agenda 21 can be defined as a planning tool for the construction of sustainable cities, in different geographical bases, which reconciles methods of environmental protection, social justice, and economic efficiency (BRASIL, 2019).

whose concrete repercussions did not meet expectations compared to previous Conferences.

After another decade, the UN Member States met again in Rio de Janeiro in 2012, at the United Nations Conference on Natural Development (Rio+20), aiming at setting global sustainable development goals that could be applied internationally, albeit with adaptations to national realities.

The main highlight of this summit revolved around the commitment made by Member States to eradicate extreme poverty, besides the development of an intergovernmental process for the further creation of the Sustainable Development Goals (SDGs) (UN, 2015), through a reassessment of the then still in force Millennium Development Goals (MDGs) (UN, 2000).

In this sense, in September 2015, after more than three years of discussion and elaboration, the SDGs became official (UN, 2015), by means of approval of an international resolution by 193 States in a UN General Assembly meeting, held in New York.

The document containing the SDGs, called Agenda 2030 (UN, 2015), highlights the need to eradicate extreme poverty as one of the central objectives, addressing, in addition to the three main traditional dimensions (economic, social and environmental), two other aspects relevant to sustainable development: peace and partnership.

The new Agenda 2030 (UN, 2015) addresses 17 goals, with 169 targets, to be achieved by the year 2030 according to the metrics of 232 international indicators that directly guide State efforts to eliminate extreme poverty and hunger, reduce inequalities, ensure economic, social and technological progress, guarantee the sustainable management of natural resources and the preservation of biodiversity, among other social segments covered by related public policies.

For this reason, Agenda 2030 (UN, 2015) is an update, due to a profound reassessment of the effectiveness of the MDGs (UN, 2000), which summarizes the international state commitments that have been signed over the last few decades (more specifically since the 1972 Stockholm Conference) in environmental matters and others influenced or permeated by them (in view of their systemic-integrative horizontal transversality), since it means the inclusion of some other relevant and current aspects considered essential to development in its goals and targets, including from the two sides that it contains in addition to the traditional tripod of sustainability, as in the case of the Global Compact (UN, 2019), in turn seen as the

synthesis of business commitments around sustainability corporate, with its four areas of activity (human rights, work, environment and anti-corruption) and its 10 principles.

Therefore, one verifies that the SDGs *per se* (UN, 2015), as well as their precedent MDGs (UN, 2000), appear as Member States' response after several international meetings promoted by the United Nations regarding the urgent need to establish that "Productive use does not necessarily need to harm the environment or destroy diversity if we are aware that all of our economic activities are firmly grounded on the natural environment" (SACHS, 2002, p. 32).

In fact, after decades of deliberations on environmental issues, the vast majority of world leaders have acquired not only awareness of an ecological state concept, but also conviction about the need for state action guided by a holistic and environmentally integrated view of public policies, before the obligation to work for the perpetuation of the species, and, above all, for maintenance of economic activities and world productivity.

And, in parallel with the elaboration by the States of the concept of development based on sustainability, the corporate world and the consumer society awoken to the limitations inherent to the exploitation of natural resource wealth, which, due to economic and socio-environmental evaluation, begins to be global, regional, national and locally regulated in favor of its rationalization (that is, even though by imposition and adoption of new public policies), consequently introducing changes in the production chain capable of reestablishing the ecological balance previously affected and, thus, making the environmental metaprinciple of sustainable development effective.

2 NATIONAL LEGISLATIVE EVOLUTION IN ENVIRONMENTAL MATTERS: BRIEF CONSIDERATIONS FROM NATIONAL ENVIRONMENTAL AND SOLID WASTE POLICIES

In Brazil, environmental concern was incorporated into the legal system in the early 1980s, notably by the enactment of Law no. 6.938/81 which, in an innovative way for the time, established the National Environment Policy, its purposes and mechanisms of formulation and application.

The aforementioned legislative regulation, which still prevails today, although undergoing some changes over the years, provides in its art. 2

that such policy “[...] aims to preserve, enhance and restore environmental quality conducive to life, to ensure, in the country, conditions for socio-economic development, [...]” (*sic*), which is an important legislative landmark because, as seen by the literalness of its text, since the 1980s, the concept of development based on the said tripod of sustainability (economic, environmental and social) was already positive, subsequently ratified in the subsequent constitutional text.

It should be noted that such legal provision appears as a true normative paradigm, since it expressly adopts the context of balance between the social bias and that of economic growth based on the exploitation of natural resource wealth, as taught by the national doctrine.

The reconciliation of the two values thus consists, under the terms of this provision, in the promotion of the so-called sustainable development, which is the balanced exploitation of natural resources, within the limits of meeting the present generation’s needs and well-being, as well as their conservation in the future generations’ interests (SILVA, 2010, p. 25).

In this sense, with the promulgation of the 1988 Constitution, the environment receives even more special attention, with its own constitutional chapter and inserted into the title of the social order, composed by art. 225, paragraphs 1 to 7, which, without establishing a specific definition of sustainability, development or sustainable development, addresses this theme in its head provision, by addressing some points expressed in the aforementioned Brundtland Report (UN, 1987), integrating, in a systematic way, with other devices of social (art. 193) and economic (art. 170, VI) order.

In such a way, nationally, there is a true normative revolution in environmental matters, since innovative concepts and principles are adopted in the body of the constitutional text that are compatible with the then emerging international environmental awareness (art. 225, VI), allowing us to face the environmental heritage no longer due to the civicism orientation of the right to property, but considering it a public good, for the common use of the people (art. 225, head provision), whose regulation is seen as a mechanism that aims to fulfillment of its specific social function and, consequently, the creation of diffuse and collective interests in this regard.

Furthermore, the 1988 Constitution, in its art. 225, head provision, also incorporates the idea of intergenerational solidarity when it protects the present generations’ right (synchronic solidarity), without prejudice to future ones (diachronic solidarity), consecrating the exploitation of natural

resource wealth according to a production dynamic that respects the environmental balance, even as a duty of preservation and defense placed on the State and the community (intergenerational responsibility), so that the descendants of today's risk and information society can enjoy the same ecological conditions and possibilities to meet their livelihood and development needs (intergenerational equity).

In this way, the then new Brazilian legal order recognizes the value of natural, human and social biodiversity, and, thus, with regard to regional differences and peculiarities, establishes additional legislative competence for the Member States (1988 Constitution in its art. 24), as well as granting the Municipalities the power to legislate on matters of local interest (1988 Constitution in its art. 30), in order to enable regional development in a sustainable manner. As Sachs (2002, p. 53) explains:

In general, the objective should be to establish a rational and ecologically sustainable use of nature for the benefit of local populations, leading them to incorporate the concern with biodiversity conservation into their own interests, as a component of the development strategy.

Therefore, the constitutional text of 1988 has a highly evolved commandment, elaborated in compliance with multidisciplinary criteria and a social, political, economic, environmental and cultural approach, with sustainable development as the norm.

It is worth mentioning that Brazil, influenced by its Federal Constitution and its national environmental policy, has gradually incorporated sustainability into its public policies (and the administrative contracts that make them concrete), according to an integrating environmental transversality, already having, for this purpose, a quite advanced legal structure, with rules on water resources, forests, solid waste, protection of fauna and fisheries, environmental crimes and licenses, etc., gradually accentuating the need for an economic circularity with a global avant-garde tendency.

However, it is worth mentioning that the effectiveness of such legislation adopted by the country has not yet been fully verified, which, if some day is really observed, will give rise to “[...] an endogenous *triple victory*,” while simultaneously meeting the criterion of social relevance, ecological prudence and economic viability, the three pillars of sustainable development” (SACHS, 2002, p. 35).

In the context of this observation, the sanction of Law no. 12.305/10, instituting the National Solid Waste Policy, which, despite still seeking its

greatest effectiveness in the different spheres and administrative levels of the country's public authorities, clearly implies an important advance for the implementation of the much needed and desired economic circularity, conceived in parallel and concurrently with all other solid waste management efforts.

Addressing a notorious concern not only with the management of solid waste and its polluting potential, but also with its intrinsic socio-economic aspect, Law no. 12.305/10 allows its reuse and recycling to be added to the production chain with significant economic (extending its life cycle) and social value, incorporating a segment of society, previously marginalized and relegated to poverty, into the discipline of this sensitive issue of environmental matters, including as a public policy adopted at all federal levels, deserving, therefore, all the legislative attention given.

Thus, in the example given, the activity of solid waste management becomes properly incorporated into the production chain, as part of its cycle, promoting, as far as possible, an equitable redistribution of results in pursuing the eradication of extreme poverty integrated with pollution reduction, implying sustainability in the development process, as explained by Silva (2010, p. 25-26):

It demands, as an indispensable requirement, economic growth that involves equitable redistribution of the results of the production process and the eradication of poverty (FC, art. 3), in order to reduce disparities in living standards and better service to the majority of the population. If development does not eliminate absolute poverty, does not provide a standard of living that meets the needs of the population in general, it cannot be classified as sustainable.

And such an equitable redistribution of economic results, with a search for the eradication of extreme poverty integrated with pollution reduction, in the legislation under comment on the National Solid Waste Policy, is supported by means of inclusive mechanisms, protective against vulnerabilities, to increase country's social cohesion, such as, among other instruments, incentive to the participation of garbage collectors cooperatives in its management (art. 8, IV), which has been further facilitated due to the provision of exemption from bidding in contracting this manpower by the Public Power to provide this service (art. 36, paragraph 2). In this regard, Sachs (2002, p. 55) believes that:

Most important, on the positive side, was the intense reflection on (urban and rural) resource saving strategies and on the potential for implementing activities aimed at *eco-efficiency* and resource productivity (recycling, waste management, conservation

energy, water and resources, maintenance of equipment, infrastructure and buildings aiming at extending their life cycle).

In the light of the National Solid Waste Policy (adopted according to the provisions of Law No. 12.305/10), there is a relevant application of the current concept of sustainability and circular economy, mainly when taking into account elements of an environmental nature and social responsibility, with affirmative actions of inclusion (social and economic) interconnected with the Administrative and Environmental Law doctrines, encouraging the local economy to generate resources from the mitigation of a local environmental liability:

More than ever, we need to return to the *political economy*, which is different from the economy, and to a flexible negotiated and contractual planning, simultaneously open to environmental and social concerns. A viable combination between economics and ecology is necessary, as the natural sciences can describe what is needed for a sustainable world, but it is up to the social sciences to articulate the transition strategies towards this path (SACHS, 2002, p. 60).

In this regard, integrated management, as in the example now focused on solid waste, in addition to promoting the use of idle and marginalized manpower in its process, also includes the adoption of technologies that enable the economic sustainability of the enterprise (including having the Internet as one of the main resources in today's information society) to, therefore, not only foster environmentally balanced activities, but also generate income and social inclusion – through the development of new relationships aimed at improving national sociality (SIMMEL, 1983) –, and the initiative observed here – the management of solid waste – is just one in a universe of possibilities, which, in general, enables the implementation of environmental legislation to achieve the sustainability that is so desired.

3 SUSTAINABLE DEVELOPMENT AS AN EXPRESSION OF THE TRIPLE BOTTOM LINE⁶ AND THE PILLARS OF SUSTAINABLE DEVELOPMENT GOALS (SDGs)

It is believed, therefore, that sustainability is embodied in a whole set of actions objectively aimed at maintaining the longevity of natural resource wealth in economically exploitable conditions (currently, preferably in a circular manner) to meet the needs of present and future generations

⁶ The ideas contained in this topic were previously partly addressed, in isolation, in Caldas and Moraes (2016) and Caldas (2019), and are now presented with additions, revisions and modifications.

(in evident intergenerational equity and responsibility), so that such natural resource wealth is not only preserved, but, as far as possible, restored, including taking into account the capacity for environmental regeneration.

For this reason, this concept of sustainability, when applied to human activity in relation to the environment *per se* brings the need for it to be fully assimilated by economic activities, without this being an obstacle to development through its collimated environment, consequently implying a resilience capable of introducing adaptations and transformations in the organizational and procedural corporate structures, through a novel corporate conception of circularity in the production chain, duly committed to the environmental principles of the Global Compact (UN, 2019) and, by extension, of the SDGs (UN, 2015).

In this context, it is understood that sustainability is the ability of an individual, or group (of individuals or companies and productive clusters, in general), to remain inserted into a certain environment without, however, negatively impacting it in a way that will cause its complete degradation, thus enabling further restoration or regeneration.

Thus, it can be conceived as the capacity to use natural resource wealth to, in some way, return it processed to the planet through practices or techniques observed for their restoration and regeneration, according to an economic circularity aggregating several related concepts (such as regenerative design, performance economy, cradle to cradle, industrial ecology, biomimetics, blue economy and synthetic biology).

In fact, all this current concept of sustainability (including corporate one) that aims at reconfiguration of the economy and its production process by introducing circularity and with social responsibility due to a systemic-integrative horizontal transversality of environmental issues, as elsewhere (MATA DIZ; CALDAS, 2016) and above (SACHS, 2002) mentioned, is based on three pillars: social, economic and environmental. To develop a company in a sustainable way, therefore, it is necessary to act in such a way that these three pillars coexist and interact in a harmonious way.

Created in 1994 by Elkington (2004), the term triple bottom line means that all entities, governmental or not, in the performance of their activities, need to observe a not only social or economic, but also environmental bias for a development considered sustainable. The definition of Elkington (2004), clearly directed to the corporate universe, was based on the 3P, that is, profit, people and planet.

The concept received criticism regarding the lack of clarity when considering and applying the respective variables, but the importance of the triple bottom line is undeniable for the maintenance of the defense of sustainable development in several areas, mainly in view of the clear need for a legal system that is consistent and coherent with higher level of environmental protection (MATA DIZ; GOULART, 2013), which more recently has been corroborated, including by the United Nations, both by its MDGs (UN, 2000) and by the later SDGs (UN, 2015), which went further, bringing two more foundations (peace and partnership) in addition to the three traditional ones, chosen from among a possible variety recognized by the doctrine (e.g., FREITAS, 2016; SACHS, 2002).

In the scope of corporate governance, it should be recognized that the triple bottom line method formulated by Elkington (2004) influenced, and still influences, the performance of private companies aimed at fulfilling the environmental and social dimension, since the

[...], called TBL (1998), evaluates the organizational performance not only by the profit provided by the business, but also by the integration of performance in the economic, social and environmental dimensions. For an organization to be successful, profitable and deliver value to its shareholders, it needs to be managed considering these three dimensions. The Triple Bottom Line is formed by Economic Efficiency, Social Equity and Environmental Preservation (LOURENÇO; CARVALHO, 2013, p. 12).

And corroborating what was stated above about the existence of a variety recognized by the doctrine of possible elements for sustainability, Carli and Costa (2016, p. 847), when analyzing the *sub examine* concept of the triple bottom line, verify that there are two others, which they identify as political and cultural,

[...] in addition to the three elements proposed by John Elkington, one has to also take into account, when profiling the content of sustainability, the political and cultural aspects. Along this path, sustainability would be based on five and not just three pillars, which would be: business profit, people, natural environment, work and cultural environment, and political aspects. The relationship between company-employee and company-community should be built on the basis of ethics, respect, and care.

In turn, the SDGs add two other elements to the three proposed by Elkington, as briefly mentioned above, peace and partnership (UN, 2015), in order to emphasize sustainable development intertwined with participatory/deliberative democracy and, furthermore, with the so-called “peace as governance” (RICHMOND, 2010), that is, to imply a concerted exercise

of state decision making, making them more legitimate at the end of the process, in a democratic gain and increase in function of peace social influence of a system of collaborative practices for the solution of conflicts in a consensual, dialogical way.

Therefore, it is necessary to analyze, in view of these pillars on which the contemporary conception of sustainable development seeks support, how the environmental dimension brings a perpetuated horizontal transversality that integrates them in a systemic way, including in relation to the public policies inspired by them, impregnated by the global conception of economic circularity and inclusive and aggregating social responsibility, protective from vulnerabilities, duly implemented; it is worth keeping it in retentiveness by the related administrative contracts (MATA DIZ; CALDAS, 2016).

4 THE SYSTEMIC-INTEGRATIVE HORIZONTAL TRANSVERSALITY OF THE ENVIRONMENTAL DIMENSION OF SUSTAINABLE DEVELOPMENT: AN EVOLVING CONCEPT⁷

For a better understanding of the horizontal cut provided by the environmental transversality, which promotes the integration of public policies planned in the state projection of the current meaning of sustainable development (which occurs in the obligatorily sustainable administrative contracts – Law 8.666/ 93, art. 3, head provision), the correct delimitation of the expression “environmental transversality” becomes quite pertinent so that the study does not remain, in any way, with ambiguities or falsifications. Thus, according to Mata Diz and Caldas (2016, p. 254),

[...] refers to the capacity that a sector has to reach all other areas with which it can correlate, and, within the legal universe, this transversality, more specifically in the scope of public environmental policies, arises from the moment when there is a need for its integration (of environmental issues) with the other sectorial public policies (energy, transport, health, agriculture, trade, etc.).

It can be seen, thus, that the environment, due to the enormous scope of its definition and its components (natural or artificial), interpenetrates all economic and social sectors and imposes its condition of ecological heritage on traditional areas in the search for the balance of environmental system.

As a principle, transversality has a direct relationship with the values

⁷ The ideas contained in this topic were previously partly addressed, in isolation, in Caldas (2019), and are now presented with additions, revisions and modifications.

of sustainability, permeating all sectors of public policies in a State promoting its development, considered by Seers (1972) as the very creation of the common good.

These values, translated as the institutionalized concern for people and the planet, without neglecting the original purpose of economic development (that is, profit), dialogue horizontally with each other, seeking an integrated balance.

In this context, the multidisciplinary character of Environmental Law stands out, which, in its origin, contains conceptual elements originating from other branches of knowledge, such as natural sciences, among which Geography and Biology are those that allow, through the use of their concepts, specific legal protection of certain environmental assets, such as fauna, flora, or water resources. It is from Geography, v. g., that the concepts related to demography and migration are extracted, which are the basis for the adoption of public policies aimed at ensuring the dignity and equality of human capital.

In a horizontal cut of the integration principle materialization, the transversality provided becomes responsible for introducing (environmental, economic and social) sustainability in planning and implanting all public policies: “The principles of political integration and planning meet the idea of economic, environmental and social integration. Political integration involves the creation of new structures, the reform of existing institutions and the transformation of current political processes” (CLARO; CLARO; AMANCIO, 2008, p. 291).

Faced with this horizontal systemic-integrative environmental transversality, the greening of public policies (and related administrative contracts⁸) represents one of the globalized formulas – within today’s risk (whose distribution and flexibility take place according to the principles of precaution and prevention) and information (duly enhanced by its dissemination on the Internet) society – to execute and implement them with a view to sustainable development, which is also seen according to the design not only of the 3P (of the triple bottom line), but also of the 5P (of the SDGs).

The national legal system, in view of this reality, has revealed itself as in line with such horizontal systemic-integrative environmental transversality, and its economic (e.g., circularity and other forms of waste

⁸ Public adjustments, considered the *locus* where public policies reach their highest degree of concreteness.

management) and social (regarding inclusive, aggregating, promoting and cohesive responsibility, protective against vulnerabilities) effects on the (integrated) implementation of sustainable public policies, duly harmonized from an ethical, cultural and political point of view (CARLI; COSTA, 2016).

The introduction of socioenvironmental criteria (including seen as requirements for the qualification of participants/partners) in public policies planned by the State for attention and respect for the vulnerabilities of certain parts of society, as well as the preference for ecologically appropriate and socially inclusive goods or services, demonstrate the effort of the Public Administration in the sense of raising awareness of the sustainability translated, also due to the need of an environmental rationality in the exploitation of the natural resource wealth (LEFF, 2002).

Thus, the interdisciplinary character that environmental transversality adds to public policies implies a commitment to sustainable development, meanly when they are also turned into instruments by the resilience inherent of the verified political integration (CLARO; CLARO; AMANCIO, 2008), acquiring essential dynamism to address the vulnerabilities in materializing the fundamental rights to which they relate, as well as for the resizing of the production chain through an economic circularity.

Such political integration, with its permanent resilience of organizational structures and state and business decision-making processes – these committed even to the principles of the Global Compact (UN, 2019) –, in conjunction with the integration of the foundations of today's global sustainable development (5P), remains maximized and updated through the participatory/deliberative four-year reassessment that the related public policies suffer when the Pluriannual Plans (PPAs) are reissued, in which they are legally placed, because with each review of their implementation context one can add a new point of view, suggested in function of either a new need to be met or from a consolidated and successful experience, such as that expressly provided for in the 2017/2019 Action Plan (CNODES, 2017) for assimilation of the SDGs, and their targets (UN, 2015), by public policies of all national federative spheres.

Thus, considering such conceptions of sustainable development and environmental transversality of public policies, it is possible to affirm that both are still in process of evolution and maturation from the most contemporary experiences from New Public Management and New Public Governance, whose values initially covered and on which they are currently

based (e.g., global circular economy, inclusive affirmative actions and protective against vulnerabilities, etc.) are revealed in the expansion of their limits, mainly from its horizontal intercommunication facilitated by interdisciplinarity.

CONCLUSION

In view of the above, the constitution of the conceptualization of “environmental transversality” and “sustainable development” is revealed as a process that is still evolving, with its sedimentation gradually obtained over time and the acquisition of greater environmental awareness in the global risk and information society, which is influenced by interdisciplinary points of view and a horizontal dialectic, according to the challenges to be overcome.

In this journey, one identifies that the development goals are shown to be resilient to the constant evolution of human needs, which have their sustainability translated as the harmonic balance between its different dimensions, evidencing, among them, the environmental, social, economic, participatory and conflict pacifiers, whose realization ends up meeting the fundamental rights in materializing human dignity in clear Constitutionalism and result-driven Administrativism.

The transformations and adaptations of humanity in terms of their means of subsistence and living in society, as well as their economic exploitation and production chains, are seen to be intertwined due to the systemic-integrative horizontal transversality of related environmental issues, which currently is more noticeable in the plans, programs, projects and state actions that contain public policies, which are thus made positive at the different federal levels by the respective PPAs.

The systemic-integrative horizontal transversality of environmental issues, and their harmonious overlap with other social and economic issues, is also shown to be desired by States inserted into contemporary processes of globalization and integration, as extracted from Agenda 2030 (UN, 2015) and of the Global Compact (UN, 2019), seen as mechanisms endowed with a clearly interdisciplinary content for the realization of globally planned sustainable development.

Thus, for a modern understanding of the terminological scope of the concept of sustainable development, it is necessary to have connected it to the concept of environmental transversality, because one cannot forget that

the dichotomy between economic development and environmental preservation is something that has yet to be equalized in a globalized discussion, with the participation of the most different segments and interested parties, which universalizes the understanding of what sustainability is, and its systemic integration to global, regional, national and local public policies.

Above all, it is essential not to lose sight of the fact that the central point in the concepts of sustainable development and environmental transversality, in reality, is man and his perpetuation as a living and productive being on the planet, and this is the meaning that guides his evolution in concomitance with multilateral cooperation capable of making the objectives outlined in the promotion of social welfare and dignity of all human beings viable.

REFERENCES

- ANTUNES, P. B. *Direito Ambiental*. 14. ed. São Paulo: Atlas, 2012.
- BRASIL. Ministério do Meio Ambiente. *Responsabilidade Socioambiental: Agenda 21*. Available from: <https://www.mma.gov.br/responsabilidade-socioambiental/agenda-21>. Access on: Aug. 7, 2019.
- CALDAS, R. C. S. G.; MORAES, K. C. A ética e a sustentabilidade na vertente do “triple bottom line” e a atuação empresarial responsável. In: RIBEIRO SILVA, C. V.; MATA DIZ, J. B.; LIMA, R. M. (orgs.). *Anais do III Seminário Internacional “Estado, Constitucionalismo Social e Proteção dos Direitos Humanos”*. v. 2. Pará de Minas: Virtual Book, 2016. p. 168-195.
- CALDAS, R. C. S. G. Contratação pública sustentável. In: RODRIGUES, N. F. L. C.; MATA DIZ, J. B.; CALDAS, R. C. S. G. (orgs.). *Perspectivas luso-brasileiras sobre contratação pública sustentável*. Lisboa: AAFDL, 2019. p. 39-68.
- CARLI, A. A.; COSTA, L. A. Sustentabilidade ambiental: parâmetro necessário à atividade econômica e requisito essencial à concessão de benefícios fiscais. *Quaestio Iuris*, Rio de Janeiro, v. 9, n. 2, p. 843-860, 2016. Available from: <http://www.e-publicacoes.uerj.br/index.php/quaestioiuris/article/viewFile/19832/16224>. Access on: Apr. 9, 2016.
- CLARO, P. B. O.; CLARO, D. P.; AMANCIO, R. Entendendo o conceito de sustentabilidade nas organizações. *Revista Administração – RADUSP*,

São Paulo, v. 43, n. 4, p. 289-300, out./dez. 2008. Available from: www.rausp.usp.br/download.asp?file=v4304289.pdf. Access on: Apr. 9, 2016.

CCT – COMISSÃO DA CARTA DA TERRA. *Carta da Terra*. Available from: https://www.mma.gov.br/estruturas/agenda21/_arquivos/carta_terra.pdf. Access on: Sept. 16, 2018.

CNODS – COMISSÃO NACIONAL PARA OS ODS. *Plano de ação 2017-2019*. Brasília, DF: CNODS, 2017. Available from: http://www.itamaraty.gov.br/images/ed_desenvsust/Plano-Acao-ComissaoNacional-ODS.pdf. Access on: June 17, 2018.

ELKINGTON, J. Enter the Triple Bottom Line. In: HENRIQUES, A.; RICHARDSON, J. (eds.). *The triple bottom line, does it all add up?: assessing the sustainability of business and CSR*. London: Earthscan, 2004. p. 1-16. Available from: <https://www.johnelkington.com/archive/TBL-elkington-chapter.pdf>. Access on: Apr. 9, 2016.

FERRAZ JÚNIOR, T. S. *Introdução ao estudo do Direito*. São Paulo: Atlas, 1994.

FIORILLO, C. A. P. *Curso de Direito Ambiental Brasileiro*. 14. ed. São Paulo: Saraiva, 2013.

FREITAS, J. *Sustentabilidade: direito ao futuro*. 3. ed. Belo Horizonte: Fórum, 2016.

GADOTTI, M. *Educar para a sustentabilidade: uma contribuição à década da educação para o desenvolvimento sustentável*. São Paulo: Instituto Paulo Freire, 2008.

GRANZIERA, M. L. M. *Direito Ambiental*. 3. ed. São Paulo: Atlas, 2014.

LEFF, E. *Epistemologia ambiental*. 5. ed. São Paulo: Cortez, 2002.

LOURENÇO, M. L.; CARVALHO, D. Sustentabilidade social e desenvolvimento sustentável. *RACE – Revista de Administração, Contabilidade e Economia*, Joaçaba, v. 12, n. 1, p. 9-38, jan./jun. 2013.

MATA DIZ, J. B.; ALMEIDA, F. T. S. A incorporação dos princípios ambientais internacionais pelo sistema jurídico brasileiro e a promoção da sustentabilidade ambiental. In: CUNHA, B. P.; SILVA, M. R. F.; DOMINGOS, T. O. (coords.). *Direito e sustentabilidade I*. Florianópolis: CONPEDI, 2014. p. 111-138. Available from: www.publicadireito.com.br/arti

gos/?cod=cff131894d0d56ca. Access on: Apr. 9, 2016.

MATA DIZ, J. B.; CALDAS, R. C. S. G. Contratos administrativos à luz de novas formas de gestão e da sustentabilidade: por uma concretização do desenvolvimento sustentável no Brasil. *A&C – Revista de Direito Administrativo & Constitucional*, Belo Horizonte, ano 16, n. 65, p. 249-275, jul./set. 2016. Available from: [http://www.revistaec.com/index.php/revistaec/article/view/267/632](http://www.revistaaec.com/index.php/revistaec/article/view/267/632). Access on: Sept. 17, 2019.

MATA DIZ, J. B.; GOULART, R. C. C. A aplicação do princípio da integração ambiental nas políticas setoriais europeias. In: SANCHES, S. H. D. F. N.; BIMFELD, C. A.; ARAUJO, L. E. B. (coords.). *Direito e sustentabilidade*. Florianópolis: CONPEDI, 2013. p. 37-66. Available from: <http://www.publicadireito.com.br/publicacao/unicuritiba/livro.php?gt=13>. Access on: Apr. 9, 2016.

MEADOWS, D. H. *et al.* *The limits to growth*. New York: Universe Books, 1972. Available from: <http://www.donellameadows.org/wp-content/uploads/Limits-to-Growth-digital-scan-version.pdf>. Access on: Sept. 17, 2019.

MILARÉ, É. *Direito do ambiente: a gestão ambiental em foco*. 7. ed. São Paulo: Revista dos Tribunais, 2011.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Conferência das Nações Unidas sobre o Meio Ambiente Humano. *Report of the United Nations Conference on the human environment, Stockholm, 5-16 June 1972*. New York: ONU, 1973. Available from: <https://digitallibrary.un.org/record/523249?ln=en>. Access on: Apr. 9, 2019.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Comissão Mundial sobre o Meio Ambiente e Desenvolvimento – CMMAD. *Report of the World Commission on Environment and Development: Our Common Future*. 1987. Available from: <https://digitallibrary.un.org/record/139811?ln=en>. Access on: Mar. 25, 2018.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Conferência das Nações Unidas sobre Meio Ambiente e Desenvolvimento. *Declaração sobre meio ambiente e desenvolvimento – Rio 1992*. 1992a. Available from: <http://www.direitoshumanos.usp.br/index.php/Direito-ao-Desenvolvimento/declaracao-sobre-meio-ambiente-e-desenvolvimento.html>. Access on: Apr. 9, 2016.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Conferência das Nações Unidas sobre Meio Ambiente e Desenvolvimento. *Agenda 21*. 1992b. Available from: http://www.conexaoambiental.pr.gov.br/sites/conexao-ambiental/arquivos_restritos/files/documento/2019-05/agenda_21_global_integra.pdf. Access on: June 17, 2018.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Conferência das Nações Unidas sobre o Meio Ambiente Humano. *Declaração de Joanesburgo sobre desenvolvimento sustentável*. 2002. Available from: https://webcache.googleusercontent.com/search?q=cache:Aeizm1Gtq_QJ:https://www.mma.gov.br/estruturas/ai/_arquivos/decpol.doc+&c-d=4&hl=pt-BR&ct=clnk&gl=br. Access on: Apr. 9, 2018.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. *Agenda 2030*. 2015. Available from: <https://nacoesunidas.org/pos2015/agenda2030/>. Access on: June 17, 2018.

ONU – ORGANIZAÇÃO DAS NAÇÕES UNIDAS. Programa das Nações Unidas para o Desenvolvimento. *Rede Brasil do Pacto Global*. 2019. Available from: https://www.pactoglobal.org.br/assets/docs/cartilha_pacto_global.pdf. Access on: June 17, 2019.

RICHMOND, O. P. Para além da paz liberal?: respostas ao “retrocesso”. *Contexto Internacional*, Rio de Janeiro, v. 32, n. 2, p. 297-332, jul./dez. 2010.

ROMEIRO, A. R. Desenvolvimento sustentável: uma perspectiva econômico-ecológica. *Estudos Avançados*, São Paulo, v. 26, n. 74, p. 65-92, 2012. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-40142012000100006&lng=en&nrm=iso. Access on: Aug. 6, 2019.

SACHS, I. *Caminhos para o desenvolvimento sustentável*. 2. ed. Rio de Janeiro: Garamond, 2002.

SEERS, D. What are we trying to measure? *Journal of Development Studies*, London, v. 8, n. 3, p. 21-36, abr./jun. 1972.

SILVA, J. A. *Direito Ambiental Constitucional*. 8. ed. São Paulo: Malheiros, 2010.

SIMMEL, G. *Sociologia*. São Paulo: Ática, 1983.

SIRVINSKAS, L. P. *Manual de Direito ambiental*. 11. ed. São Paulo: Saraiva, 2013.

SIRVINSKAS, L. P. *Manual de Direito ambiental*. 13. ed. São Paulo: Saraiva, 2015.

SPAREMBERGER, R. F. L.; PAZZINI, B. O ambiente na sociedade do risco: possibilidades e limites do surgimento de uma nova cultura ecológica. *Veredas do Direito*, Belo Horizonte, v. 8, n. 16, p. 147-168, jul./dez. 2011.

THE CLUB OF ROME. History. 2019. Available from: <http://www.clubofrome.org/about-us/history/>. Access on: Sept. 17, 2019.

UN – UNITED NATIONS. *United Nations Millennium Declaration*. 2000. Available from: <https://www.un.org/ruleoflaw/files/United%20Nations%20Millennium%20Declaration.pdf>. Access on: Aug. 6, 2019.

VARELLA, M. D. *Direito Internacional Econômico Ambiental*. Belo Horizonte: Del Rey, 2003.

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