RELAÇÕES INTERNACIONAIS NO MUNDO ATUAL

CENTRO UNIVERSITÁRIO CURITIBA - UNICURITIBA - VOLUME 5 - NÚMERO 38/2022 CURITIBA/PARANÁ/BRASIL - PÁGINAS 237 A 252 - ISSN: 2316-2880

OPPORTUNITIES FOR ENVIRONMENTAL PARADIPLOMATIC PRACTICES AT TRANSNATIONAL STRATEGIC ALLIANCES FOR INNOVATION

Juliana da Silva Ribeiro Gomes Chediek
Doutoranda em Direito Público da Faculdade de Direito da Universidade de Coimbra, Portugal e investigadora do Instituto Jurídico da Universidade de Coimbra. É mestre em Direito pela Universidade do Estado do Rio de Janeiro – UERJ, Brasil. É licenciada em Direito pela Universidade Federal do Rio de Janeiro – UFRJ. Trabalhou, por mais de dez anos, com contratos de pesquisa edesenvolvimento no Governo do Brasil. Atualmente, dedica suas investigações às parcerias de ecoinovação e suas repercussões no Direito Administrativo. Email: juliana.chediek@ij.uc.pt

ABSTRACT

This study intends to demonstrate the need to apply sustainable practices in international strategic alliances. These transactions are adjustments between public and private players aiming at the generation of innovative products, processes and services and at the transfer and the dissemination of technology. Unlike the European regulation, Brazilian legislation does not explicitly mention the need of adopting sustainable practices in these contracts, but the application of the systematic interpretation, the dialogue of sources and the precautionary principle make it possible to use them. This study stands for the idea that fostering innovation should always go hand in hand with environmental goals. In addition, the paper puts forward the proposition that the incorporation of sustainable practices in the public-private environment, can comprise transverse paradiplomatic action in environmental matters with the fulfillment of the sustainable development agenda in the generation of innovative products, processes and services in international alliances and projects.

Keywords: International Strategic Alliances; Innovation Procurement; Environmental Paradiplomacy; Sustainability; Precautionary Principle

OPORTUNIDADES PARA PRÁTICAS PARADIPLOMÁTICAS AMBIENTAIS EM ALIANÇAS ESTRATÉGICAS TRANSNACIONAIS PARA INOVAÇÃO

RESUMO

Este estudo pretende demonstrar a necessidade de aplicar práticas sustentáveis em alianças estratégicas internacionais. Essas transações são ajustes entre atores públicos e privados

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

visando à geração de produtos, processos e serviços inovadores e à transferência e disseminação de tecnologia. Diferentemente da regulamentação europeia, a legislação brasileira não menciona explicitamente a necessidade de adoção de práticas sustentáveis nesses contratos, mas a aplicação da interpretação sistemática, o diálogo das fontes e o princípio da precaução possibilitam sua utilização. Este estudo defende a ideia de que a promoção da inovação deve sempre andar de mãos dadas com os objetivos ambientais. Além disso, o trabalho apresenta a proposição de que a incorporação de práticas sustentáveis no ambiente público-privado pode compreender uma atuação paradiplomática transversal em questões ambientais com o cumprimento da agenda de desenvolvimento sustentável na geração de produtos, processos e serviços inovadores em âmbito internacional alianças e projetos.

Palavras-chave: Alianças Estratégicas Internacionais; Aquisição de Inovação; Paradiplomacia Ambiental; Sustentabilidade; Princípio da precaução

1 INTRODUCTION

The so-called "Brazilian innovation law"[1] was created to provide a favorable environment for innovation by bringing together researchers, companies, and the government, and promoting synergy among the players in the innovation ecosystem. The dogma brought by the innovation law is mainly directed to economic development, competitiveness and the promotion of the productive system.

Unfortunately, unlike other Brazilian public procurement regulations, the innovation legislation provides little about the need to adopt sustainability criteria and practices in these contracts. The sustainability criteria and practices are, for example, listed in art. 4 of Decree No. 7. 746/12[2], such as: less impact on natural resources such as flora, fauna, air, soil and water; preference for materials, technologies and raw materials of local origin; greater efficiency in the use of natural resources such as water and energy; greater generation of jobs, preferably with local labor; longer useful life and lower maintenance cost of the asset and the work; use of innovations that reduce pressure on natural resources; and environmentally regular origin of natural resources used in goods, services and works.

[1] Brazilian federal law 10,973/04, known as the "innovation law". Available at: http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/l10.973.htm

[2] Brazilian Federal Decree 7,746/12 regulates article 3 of the Bidding Law, establishing criteria and practices for the promotion of sustainable national development in federal public procurement. Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/decreto/d7746.htm

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

In contrast, procurement regulations in Europe show the legislator's concern with the preservation of sustainability together with the promotion of innovation in public procurement. According to the Directive 2014/24/EU (article 22), innovation means the implementation of a new or significantly improved product, service or process with the purpose of helping to solve. societal challenges or to support the Europe 2020 strategy for smart, sustainable and inclusive growth.

The definition of innovation in Brazilian innovation law, concerns the introduction of novelty or improvement in the productive and social environment that results in new products, services or processes, or that comprises the addition of new features or characteristics to an existing product, service or process that can result in improvements and effective gain in quality or performance (article 2, IV).

In comparative terms, we conclude that in the Brazilian context, the protection of sustainability is guaranteed exogenously, that is, from external constitutional and legal guarantees, which, through systematic interpretation, can be applied to national and international strategic alliances.

The objective of this work is, based on the precautionary principle[3] and on the use of the dialogue of sources[4], to support the full adoption of the sustainability criteria and practices in public procurement concerning strategic alliances and innovation cooperation projects, despite the legislative silence on the matter.

In addition, the paper puts forward the proposition that the incorporation of sustainable practices in the public-private environment, especially in the field of international law, can comprise paradiplomatic action in environmental matters with the fulfillment of the sustainable development agenda in the generation of innovative products, processes, and services in international alliances and projects.

[3] According to Aragão (2008) the precautionary principle today corresponds both to a political will and a legal need. The right of citizens to be protected against foreseeable, excessive, and unnecessary risks stems from the right to liberty and security enshrined in several international texts, among them the Universal Declaration of Human Rights, the European Convention for the Protection of Human Rights and Fundamental Freedoms, and the Charter of Fundamental Rights of the European Union.

[4] "*L'existence de plusieurs sources, caractéristique des systems juridiques actuels, necessite la recherche de solution des conflitos qui peuvent maître entre elles. On dispose, en principe, de deux voies pour résoudre ces conflits. La première consiste à donner prévalence à une source en écartant l'autre, c'est-à-dire en appliquant une certaine hiérarchie entre elles. (…) La seconde solution consiste à chercher à coordonner les sources. Tout législateur actuel se trouve face au problème posé par le recours aux diverses sources du droit international prive. A mona vis, une méthode qui tend à coordonner les sources est préférable à une solution hiérarchique*." JAYME (1995)

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

Relações Internacionais do Mundo Atual Unicuritiba
[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

2 SUSTAINABILITY PRACTICES IN PUBLIC PROCUREMENT FOR INNOVATION

The main values shared by the Brazilian innovation law are the economic development, the competitiveness, and the promotion of the productive system. This principiology is guided, in constitutional terms, by the Brazilian State's commitment to foster technological development, placing itself as a protagonist in research contracts, scientific and technological training and innovation[5].

Therefore, the promotion of innovation represents an important factor of social development and economic development of the State, as pointed out by the Organization for Economic Cooperation and Development - OECD[6].

However, the dynamics of fostering innovation is not detached from a normative system - constitutional, infra-constitutional and international[7] - that promotes and encourages sustainable development. Therefore, fostering innovation should always go hand in hand with environmental protection.

Nowadays, the main environmental protection regulations in Brazil are: the New Brazilian Forest Code, Law 12.651/12 (which revoked the 1965 Forest Code and establishes the responsibility of the owner to protect the protected spaces between the Permanent Preservation Area and the Legal Reserve, conditioning the right to property to the limitations of the legislation), the National Environmental Policy, Law 6. 938/81 (prohibits pollution, requires licensing and regulates the appropriate use of environmental resources, stipulates that the polluter is obligated to indemnify the environmental damage he causes, regardless of guilt), the Environmental Crimes Law, Law 9605/98 (provides on criminal and administrative penalties derived from conduct

5 Constitution of the Federative Republic of Brazil, article 218. Available at: http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm

6 OECD. *Science, Technology and Industry Outlook 2012.* Available at: <https://www.oecd.org/sti/sti-outlook-2012-national-strategies-for-sti.pdf>

7 According to ARAGÃO (2002) the concern with competition distortions, derived from different environmental protection policies, justified, in the 1970s and 1990s, the adoption of uniform environmental protection measures, through international instruments, multilateral conventions and deliberations of international organizations. The first international initiatives to alert European public opinion to the ecological problems resulting from economic development, calling into question the values proclaimed by the consumer society, were the United Nations Conference on the Environment, held in Stockholm in June 1972 and the publication, at the same time, of the "Club of Rome" report on the limits of growth. In October 1972, a meeting of the Heads of State and Government of the member states of the European Communities was held in Paris.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

and activities that are harmful to the environment, Pesticides Law, Law 7802/89 (regulates research, production, transport, storage, sale, use, and the final destination of residues and packages of pesticides, their components and related products), the National Solid Waste Policy, Law 12305/10 (establishes principles, objectives, instruments, and guidelines related to the integrated management of solid waste, including hazardous waste, and defines the responsibilities of generators and public authorities), the National Water Resources System, Law 9433/97 (Establishes the National Water Resources Policy and System, conditions the intervention in public waters to be authorized by the competent body, establishes charging for the use of water as a limited natural resource with high economic value), the Environmental Protection Area, Law 6902/81 (establishes the guidelines for the creation of Ecological Stations and Environmental Protection Areas), among others.

Since the United Nations Conference on the Human Environment, held in 1972 in the city of Stockholm, the theme of sustainable development has been consistent on international agendas in the search for conciliation between development and environmental conservation, together with the construction of social equity. The event was a milestone and its final declaration contains nineteen principles that represent an Environmental Manifesto for our times. By addressing the need to "inspire and guide the peoples of the world to preserve and improve the human environment," the manifesto laid the foundation for the United Nations System's new environmental agenda. Since then, countries have been pursuing solutions for the major environmental challenges, related to the production and consumption model adopted by countries around the world.

In 1992, the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro, created a plan of action to promote sustainable development, called Agenda 21, which outlined strategies for nations to considerably reduce or eliminate unsustainable patterns of production and consumption.

Ten years later, in 2002, at the World Summit on Sustainable Development (RIO+10), the Johannesburg Plan was approved, which proposed the elaboration of a set of programs, with a ten-year duration (10 Years Framework Program), to support and strengthen regional and national initiatives to promote changes in consumption and production patterns. Thus, in 2003, the Marrakesh Process began, designed to

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

give applicability and concrete expression to the concept of Sustainable Consumption and Production (SCP).

Each United Nations member country participating in the process must develop its own action plan, which will be shared with other countries at the regional and global level, generating subsidies for the construction of the Global Framework for Action on SCP. In this step, Brazil established the National Steering Committee for Sustainable Production and Consumption and the Sustainable Production and Consumption Action Plan - PPCS, articulating several ministries and partners from both the private sector and civil society. The Plan presents a range of six priorities, considering the current moment and the implementation capacity of the actors involved, and among them is sustainable public procurement. The Plan offers to all, governmental and non-governmental segments, including the productive sector, the opportunity to learn and meet goals that will be beneficial to all of society. It presents a range of six priorities among many that would fit within the scope of a set of actions aimed at changing standards in both production and consumption. They are: increasing recycling; education for sustainable consumption; environmental agenda in public administration; sustainable public procurement; sustainable buildings; sustainable retailing and consumption[8].

Since then, the Brazilian government, as a major consumer, has encouraged sustainability through actions that include sustainability criteria in public procurement and contracting.

Sustainable public procurement is a current practice at international level. During the Rio+20 Conference, held in Rio de Janeiro with the proposal to expand the experiences and good practices of the Millennium Development Goals, a new environmental agenda for sustainable development was designed, the 2030 Agenda (UN, 2015), consisting of programs, actions and guidelines that should guide the United Nations and member countries in pursuit of sustainable development. Among the sustainable development goals, Goal 12 was established, which deals with "ensure sustainable production and consumption patterns", seeking to "12.1 Implement the 10-

[8] Brasil. Ministério do Meio Ambiente. Comitê Gestor Nacional de Produção e Consumo Sustentável. ***Plano de Ação para a Produção e Consumo Sustentáveis – PPCS*.** September, 2010. Available at: <https://www.mma.gov.br/estruturas/243/_arquivos/plano_de_ao_para_pcs___documento_para_consulta_243.pdf>

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

Year Plan of Programs on Sustainable Consumption and Production, all countries taking action, and developed countries taking the lead, taking into account development and capabilities of developing countries" and "12.7 Promote sustainable public procurement practices, in accordance with national policies and priorities".

Accordingly, at the national level, the Brazilian Federal Decree 7,746/12 regulated article 3 of the Bidding Law (Law 8,666/93), establishing criteria and practices for the promotion of sustainable national development in federal public administration contracts. According to art. 2 of the Decree, the Federal Administration may acquire goods and contract services considering criteria and practices of sustainability objectively defined in the call for tenders.

Both public procurement in its classical sense (in which there is a counterpart between the parties) and administrative partnerships between public and private entities (in which there is the union of public and private efforts to achieve the same objective) are transactions where public authority aims to achieve a purpose of public interest. The problem that arises is whether the sustainability practices and criteria imposed on public procurement in general are equally applicable to the recently created innovation deals, given the lack of mention of sustainability in the legislation on innovation.

Administrative Law was traditionally based solely on the need to legitimize the exercise of government authority (FREEMAN, 2000)[9]. Administrative partnership is, since its classic conception, an institute designed to raise the administrative law to new formats. Partnerships between private and public parties are the consolidation of the expansion of the Administrative Law to be applied to people who are not members of public administration but charged with missions of collective interest. The innovation partnership comes to follow this trend (as well as the other instruments of Decree No.

[9] "Private participation in governance is neither marginal nor restricted to the implementation of rules and regulations. A variety of nongovernmental actors, including corporations, public interest organizations, private standard setting bodies, professional associations, and nonprofit groups, engage in "public" decision making in myriad ways. Nongovernmental actors perform "legislative" and "adjudicative" roles, along with many others, in a broad variety of regulatory contexts. They set standards, provide services, and deliver benefits. In addition, they help implement, monitor, and enforce compliance with regulations. Nongovernmental organizations exert, in the context of a larger network of relationships, coercive power. A careful inquiry into the private role in governance reveals not only its pervasiveness, but also the extent to which it operates symbiotically with public authority. That is, the relationship between public and private actors in administrative law cannot properly be understood in zero-sum terms, as if augmenting one necessarily depletes the other." FREEMAN, 2000.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

9283/2018 such as strategic alliances), presenting more lenient requirements for its configuration.

Present regulations allow Brazilian government to stimulate and support the formation of strategic alliances and the development of cooperation projects involving companies, Scientific and Technological Research Institutions (ICT)[10] and private non-profit research entities aiming to generate products, processes and innovative services. These alliances can involve foreign partners, especially when there are advantages for technological and industrial development policies. Government support can involve networks and international projects of technological research, technological entrepreneurship actions and the creation of environments that promote innovation and the training of qualified human resources[11].

However, although the legislation has regulated several forms of national or international transactions to promote technological innovation, there is no mention about the necessary observance of sustainability in these deals.

Accordingly, if sustainability is the constitutional principle that determines the responsibility of the State and society for the realization of material and immaterial development, socially inclusive, environmentally clean, innovative, ethical and efficient - regardless of legal regulation - it is important to apply this principle in innovation procurement and strategic alliances for innovation, as it will be shown below.

To Canaris (1996), one of the tasks of the system in obtaining Law is to contribute to the full composition of the teleological content of a legal norm or institute. Thus, the interpretation of legal institutes must take place as part of the overall legal order and against the background of the relevant connections. The system serves to guarantee and carry out the value adequacy and inner unity of Law, as it shows the value incongruities, providing for the improvement of Law, both by delimiting threatening contradictions of values and by determining gaps[12].

[10] The Scientific and Technological Research Institutions (ICT) are entities that have as institutional mission to perform basic or applied research activities of a scientific or technological nature (art. 2º, V, Federal Law 10,973/2004). In management and innovation projects, the ICTs are responsible for carrying out the technical activities foreseen in the Work Plan of the contractual instrument.

[11] Federal Decree 9,283 of February, 7th, 2018 Available at: http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2018/Decreto/D9283.ht

[12] Claus-Wilhem CANARIS (1996) clarifies that the function of the system in the science of law is to translate and develop the evaluative adequacy and inner unity of the legal order. Thus, the concept of legal system should develop from the function of systematic thinking. The legal system is, therefore, the

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

This idea dialogues with Bosselmann's (1996, p. 43) insights on the principle of sustainability. In his view, a legal system is not capable of initiating social change on its own, nor of monitoring it. However, the legal system may formulate some parameters for the direction of social change. Principles such as sustainability, or any other principle of environmental law, gain validity as soon as they are recognized as sufficiently relevant. They can influence policies and laws regardless of their legal nature.

In Brazil, in addition to the international environmental protection treaties to which the country is a signatory[13], the Federal Constitution establishes the sustainable development paradigm, which brings great legal security for the application of the sustainability principle at all legislative levels. The Constitution of the Federative Republic of Brazil guarantees everyone the right to an ecologically balanced environment as an asset for common use by the people and essential to a healthy quality of life, imposing on the government and the community the duty to defend and preserve it for present and future generations (Article 225).

Also, treaties and conventions on environmental law are sources that cannot be ignored and are incorporated into domestic legislation[14]. This is a practical application of Erik Jayme's dialogue of sources, according to which the legal system must be interpreted in a unitary manner. The theory arises to promote the idea that the Law must be interpreted as a whole in a systematic and coordinated manner. According to the theory, one legal rule would not exclude the application of another, as happens with the adoption of the classical criteria for solving conflicts of rules.

axiological or teleological order of general legal principles, with a corresponding order of values, teleological concepts or legal institutes.

[13] The main international environment treaties signed by Brazil are: the Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO, 1972), the Convention on Biological Diversity (United Nations, 1992b) International Labour Organization of Indigenous and Tribal Peoples Convention No. 169 (ILO, 1989).

[14] The Brazilian process of incorporation of international treaties has its own procedure and is regulated by the Federal Constitution. After negotiations between the countries involved, the head of the Executive Branch (the President of the Republic) proceeds with the signing (art. 84, VIII of the Brazilian Federal Constitution). At this stage, the treaty is not yet binding and has no effect on the domestic and international legal systems. After that, the treaty is sent to the Legislative Branch for consideration and approval, and then voted on in the House of Representatives and the Senate. Once approved, a legislative decree is issued, signed by the President of the Senate and published in the Diário Oficial da União. And, finally, the treaty moves on to the ratification stage, an act to be performed by the President of the Republic. The ratified text must be deposited with the depositary world body. Finally, the legislative decree that approved the treaty is published, and the Executive Branch is responsible for promulgating it by a decree signed by the President of the Republic and endorsed by the Minister of Foreign Affairs.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

On the other hand, Brazil has assumed, both internally and externally, a precautionary stance in its public purchases, so that the mapping of risks in execution must consider that cooperation projects, innovation partnerships and strategic alliances will also imply the adoption of sustainability criteria and practices in these contracts. The precautionary principle is a principle that communicates directly with innovation procurement since technological risk and uncertainty are features of such contracting. According to Aragão (2008, p. 20), the fundamental assumptions for applying the precautionary principle are the existence of environmental risks and scientific uncertainty about the risks. In turn, technological risk is, in technical terms[15], the possibility of failure in the development of a solution, resulting from a process in which the outcome is uncertain due to insufficient technical and scientific knowledge at the time when the decision is made to carry out the action.

Responsible research and innovation are about doing science "with" and "for" society, which presupposes alignment between research on the one hand, and societal needs, concerns, and expectations on the other (ARAGÃO, 2020). For this reason, the stimulation and promotion of innovation within the European Union are, from the outset, umbilically linked to social and environmental sustainability.

Innovation, as a factor in economic development, has grown relevance in European Union documents since the deliberations of the March 2000 Lisbon Extraordinary European Council, in which EU leaders stated their goal of making the EU "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion" by 2010. Ten years later, facing an economic and financial crisis, the European Commission presented the Europe 2020 Strategy, in which bases were established to leverage the economic development of Europe from smart growth (based on knowledge and innovation), sustainable (efficient in terms of resource use, greener and more competitive) and inclusive (with high levels of employment, social and territorial cohesion. The Strategy signed the commitment - at the European Union level - to improve the general conditions for business innovation (focusing, for example, on public procurement and smart regulation), the launch of European innovation

[15] This definition is in Brazilian Federal **Decree 9,283/2018,** article 2, III. Available at: <http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2018/Decreto/D9283.htm>

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

partnerships (in order to accelerate the development and application of technologies needed to meet the challenges identified), the increase of EU instruments in support of innovation and knowledge partnerships, strengthening the link between the education system, business and research and innovation, among other initiatives . In parallel, the strategy defined sustainable growth, as the building of a more sustainable competitive economy in which resources are used efficiently, exploiting Europe's leadership in the race to develop new processes and technologies, including "green" technologies, accelerating the deployment of smart grids using ICTs, exploiting EU-wide networks and strengthening the competitive advantages of our companies, in particular at the industrial and SME level, as well as by providing assistance to consumers on resource efficiency.

This idea of an inseparable union between innovation and environmental sustainability has legal foundation and is applicable, in view of the above, to agreements, partnerships, alliances and innovation projects supported by the Brazilian Government, for the reasons stated above. Therefore, the exclusion of the criteria and practices for the promotion of sustainable national development from strategic alliances and cooperation projects would not only offend the legal system as a whole but would also represent a major setback.

3 STRATEGIC ALLIANCES AS OPPORTUNITIES FOR SUSTAINABILITY STANDARDS AT INTERNATIONAL LEVEL

A final point to be analyzed is about how innovation alliances signed between Brazilian institutions and international entities can, transversely, become opportunities for the practice of environmental paradiplomacy[16].

[16] PAQUIN (2004) explains that the word “paradiplomacy” appears in the scientific literature in the 80s, in the context of the renovation of the studies about federalism and comparative politics. The concept is not accepted by all doctrine. The term paradiplomacy refers to international activities of sub-state entities. The author understands that paradiplomacy is implemented when a mandate is given to official representatives of a sub-state government or a city council to negotiate with international actors: *“La politique économique et commerciale, la promotion des investissements étrangers et l’attraction de centres de decisions, la promotion des exportations, la science et la technologie, l’energie, l’environnement, l’éducation, l’immigration et la mobilité des personnes, les relations multilaterals, le developpement international et les droits de l’Homme forment les grands dossiers paradiplomatiques.”*

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

As said, the international strategic alliances for innovation were created by the innovation legislation. They are agreements celebrated by companies, ICTs and non-profit organizations for research and development activities aimed at generating innovative products, processes and services and at the transfer and dissemination of technology. These alliances can be stimulated and supported by public administration entities (e.g. municipalities, foundations, regulatory agencies, development agencies) and government support may contemplate international networks and international technological research projects or involve foreign partners.

On the other hand, sustainability criteria[17] and practices[18] are requirements that must be observed in sustainable public procurement - whether in the technical specification of the object to be contracted or in the definition of the contractor's obligations[19] - so that the government encourages the production of goods and services using its purchasing power as an instrument of social justice.

Such criteria and practices guide sustainable public purchases, informing the rational and conscious choice of priorities in acquisitions for the promotion of the common good. For this reason, as seen above, the use of these criteria and sustainability practices in innovation alliances, projects and partnerships is encouraged.

Besides the direct benefits to the environment, it can be said that, indirectly, the adoption of these requirements by sub-state entities in international innovation transactions raises the standards of sustainability to the transnational level, repercussing on negotiations that, perhaps, would have no space if they were celebrated at the state level. It is, therefore, the transversal exercise of a paradiplomatic activity in favor of sustainability.

[17] Sustainability criteria are parameters used in public procurement that take into consideration the least environmental, economic or social impact, through the State's purchasing power. In the acquisition and rental of goods, the criteria are the use of recycled, non-toxic, biodegradable and eco-efficient materials (art. 5 Decree 7,746/12). In the procurement of engineering works and services, the criteria are safety, functionality and adequacy to the public interest, economy in execution, maintenance and operation, the possibility of using local labor, materials, technology and raw materials for execution, maintenance and operation, ease of execution, maintenance and operation, the adoption of technical, health and safety standards and adequate environmental impact (art. 6 Decree 7,746/12). Other criteria that can be used are sustainable space, energy efficiency, water resource efficiency, materials, labor and local technologies, construction waste management, etc.

[18] Sustainability practices are initiatives, often routine, that one has in using natural resources and materials with less impact on the environment.

[19] Art. 3º Decree 7,746/2012. Available at: <http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Decreto/D7746.htm>

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

Let's take a practical example. One can imagine that a State that has not ratified an international environmental treaty has a public university focused on research and development of new technologies. This university, in turn, may develop a cooperation project with a Brazilian public research institution, supported by the Brazilian federal government. In this case, the innovation projects/alliances should mandatorily observe sustainability practices and criteria during the negotiation and execution of the partnership. This imperative arises from the Brazilian legal system, regardless of the regulatory system adopted by the country where the research institution is based. As a result, the standards of sustainability in contracting end up being adopted by players who otherwise would not.

Thus, under the paradiplomatic[20] perspective, the negotiation of international strategic alliances and cooperation projects may represent an important mechanism for developing the notions of sustainability at transnational level, beyond the standard negotiation techniques between public and private international parties.

4 FINAL CONCLUSIONS

Although the Brazilian innovation law has move forward, offering a range of contractual options tailored to the specificities of research and development contracts, the legislator's main concern was to foster economic development, downplaying sustainability role in innovation matters. And it is not difficult to understand why.

Since the pre-pandemic era, Brazil has been trying to survive an economic crisis with political roots and aggravated by the global context. Successive governments have sought to reduce the State's debt with reforms, and much remains to be done. The focus on fostering innovation - driven from Constitutional Amendment number 85 of 2015 - aimed at stimulating industrialization for the generation of employment and income, resembling the European context of the early 1960s, when

[20] André Lecours (2008) teaches that local governments also operate in the international context by being international actors, what is known as "paradiplomacy", which is most visible in the industrialized liberal democracies of the Occident. As an example, the author cites the regions of Quebec, Catalonia, the Basque Country, Flanders, and Wallonia, as well as areas of Germany and France that have devoted considerable efforts to developing international actions.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

the concern of governments and peoples aimed only at economic growth (ARAGÃO, 2002), minimizing the protection of the environment. As seen, the Europe of the 2000s seeks innovation allied with sustainable development, which seems to be the best way forward.

On the other hand, until 2018, the Brazilian normative system have advanced a lot in terms of environmental protection, not only because of the ratification of the aforementioned international environmental protection treaties, but also in terms of constitutional guarantees. The hope is that this wind of change keeps on blowing.

For this reason, this work intends to demonstrate, first of all, the inexorability of the application of sustainability criteria in strategic alliances and international cooperation projects, despite the silence of the innovation law.

Finally, the paper addresses the paradiplomatic dimension of acting among sub-state entities in environmental matters in the field of innovation contracting. That dimension may. represent, ultimately, a practical example of the consolidation of the phenomenon of global (CANOTILHO, 2003) or transnational (DOBNER, 2010) constitutionalism.

REFERENCES

ARAGÃO, Alexandra. (2002) *Direito comunitário do ambiente.* ***Cadernos CEDOUA.*** Coimbra: Almedina, 2002.

ARAGÃO, Alexandra. (2006) ***O Princípio do nível elevado de proteção e a renovação ecológica do direito do ambiente e dos resíduos.*** Coimbra: Almedina, 2006.

ARAGÃO, Alexandra. (2008) *Princípio da precaução: manual de instruções.* ***RevCEDOUA.*** Vol. 11, Nº 22

ARAGÃO, Alexandra. (2020) *Pesquisa e Inovação Interdisciplinar Responsável: a Rede JUST-Side e os Indicadores Jurídicos de Efetividade*. In: ***Direito ambiental, territorialidades e informação geográfica /*** editores : José Rubens Morato Leite... [et. al]. Rio de Janeiro: Lumen Juris, 2020. p.3-20.

BOSSELMANN, Klaus (2008) **The principle of sustainability:** transforming law and governance. Hampshire: Ashgate, 2008.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]

CANARIS, Claus-Wilhelm. (1996**) *Pensamento sistemático e conceito de sistema na ciência do Direito*.** Lisboa: Fundação Calouste Gulbenkian, 1996, 2ª ed., p. 279-289.

CANOTILHO, J.J.Gomes. (2003). ***Direito constitucional e teoria da constituição.*** Coimbra: Almedina, 2003.

DOBNER, Petra. (2010) More law, less democracy? Democracy and transnational constitucionalism. In. DOBNER, Petra, LOUGHLIN, Martin. (orgs). **The Twilight of Constitutionalism?** Oxford: Oxford University Press, 2010.

JAYME, Erik (1996). **Recueil des cours:** collected courses of The Hague Academy of International Law 1995. Tome 251. The Hague/Boston/London: Martinus Nijhoff Publishers, 1996.

LECOURS, André. (2008) **Political Issues of Paradiplomacy***:* Lessons from the Developed World. Clingendael Institute, 2008. Available at: www.jstor.org/stable/resrep05373.

PAQUIN, Stéphane. ***Paradiplomatie et relations internationales***: *Théorie des strategies internationales des régions face à la mondialisation.* Frankfurt am Main: Peter Lang, 2004.

[Received/Recebido: Setembro 12, 2022; Accepted/Aceito Outubro 30, 2022]