

THE ROLE OF THE AMAZON COOPERATION TREATY FOR SHARED WATER MANAGEMENT *

EL PAPEL DEL TRATADO DE COOPERACIÓN AMAZÓNICA PARA LA GESTIÓN COMPARTIDA DE LAS AGUAS

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Abstract:

This study aims to highlight the important role of the Amazon Cooperation Treaty – ACT for the management of the Amazon shared river basin. There are challenges in the organizational and operational structure that need to be address. This article also focus on the major historical milestones during the 35 years of the treaty, which represent a breakthrough for shared water management in the region. In the last part, the rules and principles of internal and international law applicable to the ACT countries are analyzed. It concludes that, on one hand, it is important updating the internal laws of water management in the Amazon countries, and on the other, it is also important the adaptation to general principals of international law, and more specifically, to integrated and participatory principles in the field of shared river basins management is also essential to guide the economic, social and environmental development of the Amazon region.

Resumen:

Este estudio tiene como objetivo poner de relieve el importante papel del Tratado de Cooperación Amazónica - TCA para la gestión compartida de la cuenca del río Amazonas. Existen retos en la estructura organizativa y operativa que necesitan que

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ser direccionados. Además, este artículo se centra en los hitos históricos más importantes durante los 35 años del tratado, que representan un gran avance para la gestión del agua compartida en la región. En la última parte, se analizan las normas y principios del derecho interno e internacional aplicables a los países del TCA. Concluyese que, por un lado, es importante actualizar las leyes internas sobre la gestión del agua en los países amazónicos, y por otro, también es importante la adaptación a los principios generales del derecho internacional, y más concretamente, a los principios integrados y participativos en el campo de gestión compartida cuencas es también esencial para guiar el desarrollo económico, social y ambiental de la región amazónica.

Key Words: Amazon Cooperation Treaty; shared water management; national water laws; principals of international water law

Palabras Clave: Tratado de Cooperación Amazónica; la gestión compartida del agua; leyes de aguas nacionales; principios de derecho internacional del agua

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1. INTRODUCTION

The Amazon region has a vast land area within which lies the largest biodiversity, the largest river basin and the largest rainforest in the world. However, all this natural wealth is distributed in eight countries of Latin America.

Given the existence of a plurality of normative states, the Amazon Cooperation Treaty – or only ACT - is presented as the main instrument of international environmental law, intended to guide the actions of the protection and use of natural resources in the Amazon countries, including the large spring of water in the region.

The Amazon River Basin represents 20% of all fresh water entering the oceans and the largest aquatic biodiversity. These Amazonian aquatic systems play an important role in the global carbon cycle, influencing the maintenance of the hydrological cycle and climate, not only in the Amazon countries, but also in several regions of Latin America. Furthermore, in the Amazon, the use and exploitation of water resources have a social impact, since water is essential for the Amazonian people, providing the main mode of transport, of obtaining energy and food production.

The importance of the Amazon River Basin requires international protection established by the coordinated efforts of these riparian countries, through preventative and repressive actions to prevent and repair damage caused by human activities.

In this sense, this study aims to highlight the important role of the Amazon Cooperation Treaty for the management of their shared basin. Thus, we're going to highlight the main challenges of the treaty and its organizational and operational structure, and subsequently we will focus on the major historical milestones during the

35 years of the treaty, which represent a breakthrough for shared water management in the region.

2. CHALLENGES, STRUCTURE AND FUNCTION OF THE AMAZON COOPERATION TREATY - ACT

Before looking specifically at the influence of the Amazon Cooperation Treaty in shared water management in the region, this section will present the most important aspects of the creation, objectives, structure and function of the treaty.

The idea of a treaty for the Amazon region was initially conceived by the Brazilian government and presented to the other nations in early 1976, with the aim of forming an economic and industrial integration, emphasizing instruments that would ensure free trade.

However, this idea became a plan of cooperation in research and exploitation of resources, to unite the region through transportation and communication networks, and establish a central information database.¹

The Amazon Cooperation Treaty (ACT) was signed in Brasilia on 3 July, 1978 by Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Surinam and Venezuela², but only came into force on 2 August, 1980, and was not open for future accessions.

The application area not only involves the part of the territories of the signatory countries in the Amazon River Basin, but also any territory of these countries, which by their geographical, ecological or economic characteristics are considered closely linked to this river basin. In this case, the concept of international river basin also includes other contiguous regions (Article II).³

The Treaty has 28 articles, with guidelines for international cooperation to be developed by the signatory countries. Its main objective, in accordance with Article I,

¹ In this sense SOLA consider that the Brazilian initiative is justified by its geographical position, ie, Brazil is at a disadvantage in relation to Peru, Bolivia and others who have the headwaters of major Amazon rivers. SOLA, F. *Direito das Águas na Amazônia*. Juruá, Curitiba, 2015, p.168.

² It should be noted that French Guiana - French overseas territory - only has observer status in the ACT.

³ "The signatory states can be identified as: 1. Riparian of the Amazon River: Peru, Brazil and Colombia; 2. Bordering of Amazon tributary rivers: Bolivia, Ecuador and Venezuela; 3. Not riparian countries, but located in the zone of influence of the Amazon Basin: Guyana and Suriname". SOLA, F., *Op. Cit*, p.166.

is "to promote the harmonious development of their respective Amazonian territories, for these joint actions to produce equitable and mutually beneficial results, and to provide for the preservation of the environment and conservation and wise use of natural resources in these territories."

This is definitely an important and unique multilateral instrument for international cooperation of the Amazon countries, and it operates basically on two fronts: scientific cooperation in the exploitation of natural resources in the Amazon River Basin and the creation of an efficient system of communication between the countries of the region. More specifically, it deals with issues such as economic development, environmental protection, commercial shipping, rational use of water resources, utilization of wildlife, promoting scientific research, exchange of information about conservation measures, aspects of health, protection of indigenous culture, tourism development, conservation of ethnological and archaeological treasures, among others.

Furthermore, the Treaty serves as the appropriate framework for discussion and the format of the new integration agreements in the region. Indeed, the Treaty fomented the intensification of bilateral agreements between these countries, particularly focusing on areas of cooperation in border areas.

SOLA⁴ explains that, in general, the methodological approach of bilateral agreements has obeyed the logic of promoting inter-agency mechanisms, which have a structured planning based on basic physical and social studies of the respective national problems, for further regional analysis, which will be transformed into binational strategic development plans. Therefore, the execution of each binational plan or program is the responsibility of the Commission of the Ministries of Foreign Affairs of each country.

Regarding the organizational structure of the treaty, we can say that the key bodies for the development of the treaty's objectives are: the Permanent Secretariat (which until 2002 was indeed temporary); the Amazon Cooperation Council; the Permanent National Commissions; and the Special Committees, whose skills are reflected in the articles XXI to XXIII of the treaty.

Regarding the operational structure, the basic activities that drive the main agreements of cooperation are: the Meetings of Ministers of Foreign Affairs, the Meetings of

⁴ SOLA, F., *Op. Cit.*, p.171.

diplomatic representatives of each country party that form the Amazon Cooperation Council (ACC) and the Presidents Meetings.⁵

In accordance with Article XX, the Meeting of Ministers of Foreign Affairs of the signatory countries must occur whenever it deems appropriate and desirable to establish basic guidelines for common policies in the region, and to assess the development of the regional cooperation process and adopt decisions to achieve the objectives set in the instrument. The condition imposed by the Treaty is that it has to be initiated by any of the signatory countries and have the support of at least four Member States. Usually these meetings are preceded by Amazon Cooperation Council Meetings.

It is noteworthy that the Meeting of Ministers is the highest body within the Treaty, the level of decision making for the management and coordination of the agreements, while the Council is the second highest level of the hierarchy, and as such considers the initiatives and projects submitted by the parties and take appropriate decisions for bilateral or multilateral studies and projects.

The truth is that both the Ministers and Council Meetings have not had regularity in recent years. Although under the treaty, the Council Meetings should be held annually, but effectively, in the 35 years of the treaty, there have only been 18 meetings of the Council⁶ and 13 meetings of Ministers⁷. The consequence of this lack of frequency of meetings has been reflected in the ACT effectiveness, which for three decades has had small advances for the Amazon cooperation. Only with the increased rate of the ACT meetings, have larger thematic and institutional deepenings begun to occur.

⁵ The Meeting of Presidents of the Amazon Countries is a key dialogue forum on common interests, exchange of views on issues affecting the area, and the consensus on the actions to achieve the development of the region through joint policies and strategies.

⁶ The Meetings of the Cooperation Council are detailed here: I Meeting (1983, Lima - Peru); II Meeting (1986, La Paz - Bolivia); III Meeting (1988, Brasilia-Brazil); IV Meeting (1990, Bogotá-Colombia); V Meeting (1993, Quito, Ecuador); VI Meeting (1994, Lima, Peru); VII Meeting (1995, Lima, Peru); VIII Meeting (1997, Caracas - Venezuela); IX Meeting (1998, Caracas - Venezuela); X Meeting (2000, Caracas - Venezuela); XI Meeting (2002, Santa Cruz de la Sierra - Bolivia); XII Meeting (2004, Manaus - Brazil); XIII Meeting (2005, Iquitos - Peru); XIV Meeting (2010, Lima - Peru); XV Meeting (2011, Brasilia - Brazil); XVI Meeting (2012, Cochabamba, Bolivia); XVII Meeting (2013, The Coca - Ecuador); XVIII Meeting (2014, Paramaribo - Suriname).

⁷ These were the 13 Meetings of Foreign Ministers conducted in the context of the ACT: I Meeting (1980, Belém - Brazil); II Meeting (1983, Cali - Colombia); III Meeting (1989, Quito-Ecuador); IV Meeting (1991, Santa Cruz de la Sierra - Bolivia); V Meeting (1995, Lima - Peru); VI Meeting (2000, Caracas - Venezuela); VII Meeting (2002, Santa Cruz de la Sierra - Bolivia); VIII Meeting (2004, Manaus - Brazil); IX Meeting (2005, Iquitos - Peru); X Meeting (2010, Lima - Peru); XI Meeting (2011, Manaus - Brazil); XII Meeting (2013, The Coca - Ecuador); XIII Meeting (2014, Paramaribo - Suriname); XIV Meeting (2015, must be in Venezuela).

The Permanent National Commissions (CNP) are responsible for the treaty's implementation in the signatory countries and the implementation of decisions taken by the Ministers of Foreign Affairs and the Council Meetings. According to SOLA⁸, although formally established in most of the Amazon Cooperation Treaty Organization – or only ACTO - member states, the CNP have not been significantly effective, so now they are investing in the committee's institutional strengthening. Regarding the Special Committees, in accordance with Article XXIV of the treaty, they can be convoked to study specific problems or issues when necessary.

3. HISTORICAL PROGRESS OF THE AMAZON COOPERATION TREATY IN SHARED WATER MANAGEMENT

In this section, we will highlight the meetings and the milestones more relevant to water management in the ACT's field.

In the V Meeting of Ministers of Foreign Affairs held in 1995, which resulted in the Declaration of Lima, specific cooperation activities were proposed for water resource management, and previous meeting's proposals of creating effective new institutional structures were reaffirmed

Notably, the Amending Protocol signed in Caracas in December 1998 (which came into force on 2 August, 2002), effectively has expanded the institutional structure of the Treaty, with the creation of the Amazon Cooperation Treaty Organization (ACTO), which now has a permanent secretariat, altering Article XXII of the Treaty.

ACTO is headquartered in Brasilia - Brazil⁹, and has legal personality power to make agreements with the non-Member States and other international organizations. In other words, ACTO is an organization with the specific mandate of the eight Amazon countries to defend their natural resources and define strategies for managing and protecting this river basin's waters, through consensus and tailored solutions to shared environmental problems .

⁸ SOLA, F., *Op. Cit.*, p.178

⁹ According to MAMED and CAVALCANTE, the fact that there is not at least one office in each capital TCA Amazonian countries, may jeopardize the effectiveness of the cooperation process, because the physical distance of this body from the real problems in each country. This can result in a dangerous superficiality in developing policies. MAMED, D. O., CAVALCANTE, J.R., *Cooperação Internacional para Tutela Ambiental na Amazônia: o Papel da Organização do Tratado de Cooperação Amazônica*, in *Anais do Universitas e Direito*, PUCPR, 2012, p.166.

ACTO is also in charge of establishing an area of political and technical dialogue; managing regional implementation of activities, implementing programs and projects in accordance with the member countries' mandates; identifying funding sources; producing reference information for the region and strengthening its institutional capacity.¹⁰

The Permanent Secretary is not a political body, but a subsidiary body of the Ministers of Foreign Affairs and the Cooperation Council. In accordance with the modifications made by the Protocol is in charge "of implementing the objectives of the Treaty in accordance with the resolutions of the Foreign Ministers Meetings and Amazon Cooperation Council". This secretariat should also develop, in coordination with the contracting parties, their work plans and program activities and formulate their budgets, which must be approved by the Amazon Cooperation Council.

Regarding the planning actions of ACTO, in 2004 at the VIII Meeting of Ministers of Foreign Affairs in Brasilia the 2004-2012 Strategic Plan was adopted. This first strategic plan was formulated by ACTO and identifies strategic priorities and thematic areas, one of which is water management. To carry out this plan, some international agreements were made, notably with other international organizations, and some projects have been implemented.

More specifically, regarding the shared water management, within the Strategic Plan the project "Integrated and Sustainable Management of Transboundary Water Resources in the Amazon River Basin" was developed and signed in 2005 in Washington D.C.-USA. This project is funded by the Global Environmental Facility (GEF), with the support of the United Nations Programme (UNEP) and the General Secretariat of the Organization of American States (GS-OAS). The results obtained in the preparation phase of this project were published in 2007 and declared that the program should focus on two fronts to protect and utilize the waters of the Amazon: study the ecosystem and its interactions with the Amazon river basin and the relationship between global climate and hydrological cycle in the Amazon Region.

The expected results of GEF Project are¹¹: the construction of a shared vision for the Amazon River basin; Transboundary Diagnostic Analysis of the Basin; research on aquatic ecosystems, groundwater and sediment in border areas; Atlas of Hydro-climate

¹⁰ SILVA, S. T. da . "O Tratado de Cooperação Amazônica, a Agenda Estratégica e a Rio+20", in OLIVEIRA, C. C.; SAMPAIO, R. S. da R. (Org.), *Instrumentos Jurídicos para o Implementação do Desenvolvimento Sustentável*. 1ed.Rio de Janeiro: FGV, Direito Rio/Programa em Direito e Meio Ambiente, 2012, v. 1, p.191.

¹¹ Project website: www.gefamazonas.otca.info.

Vulnerability of the Amazon River Basin; pilot projects on Integrated Water Resources Management; demonstration projects under special priorities for adaptation and response to climate change; an Integrated Information System; Communication Strategies, Education and Finance; a Multi-stakeholder Participation Plan; Strategic Action Program - PAE.

According to the GEF's Programme Report¹², several achievements are being made in each of the project components. Under Component I of the project Understanding the Amazon Society Activity "Institutional Cooperation in the Amazon river basin," was established, which is a sort of institutional mapping of the national bodies responsible for water resources management, including an assessment of organizational resources, human, infrastructure and financial requirements to improve the participation of developing countries in this area.

Component II seeks to "understand the natural resources basis of the Amazon River Basin". One of their goals is to "Improve knowledge on Amazonian aquatic ecosystems," which takes place in several specific areas (hotspots) and will guide and be reproduced throughout the Amazon.

Component III includes, among other things, the identification and mapping of critical water pollution issues and prepares preventive measures to control water pollution in the Amazon river basin. The results of various scientific research made by the GEF Amazon Project will serve as input for formulating the Strategic Action Program - PAE, the main objective of the Project.

The existence of political tensions between the Amazon countries caused a pause in the Treaty negotiations, which resulted in five years (2005-2010) without the Meetings of Ministers.

In the process of resumed negotiations in 2009, there was a meeting of Amazon Presidents, which adopted the Declaration of Manaus. At his meeting, the heads of state decided to "give ACTO a new and modern role as a forum for cooperation" but also recognized that sustainable development of the Amazon is a priority and should be achieved "through an integrated, participatory, shared and equitable management, in order to give an autonomous and sovereign response to current environmental challenges".

¹² OTCA, Informe del Programa GEF Amazonas: Aguas Amazónicas, Año 1, Número 2, 2013. Available from: http://otca.info/portal/admin/upload/publicacoes/517-BOLETIN_2_ESP_pressed1.pdf. Accessed : 10th October 2015.

In the following year, in the ministerial area, in its X Meeting (in 2010, in Peru), the ministers adopted the Amazon Strategic Cooperation Agenda (2010-2018), which gives a role to ACTO as a forum for cooperation, exchange of knowledge and actions of short, medium and long term.¹³ One of the thematic focuses of this agenda is water management, whose main objective is "support the development and dissemination of a reference framework for efficient, integrated and comprehensive water resources management to promote increased access to water resources and its services by the population, especially sanitation, as a measure to improve the quality of life of Amazonian populations."¹⁴

Another milestone that deserves to be highlighted is the XI Meeting of Ministers of Foreign Affairs, held in Manaus-Brazil in 2011. At that time, the Declaration of the Foreign Ministers to the Rio + 20, was signed where they agreed to evaluate and determine actions and measures, in order to achieve development through balance between sustainable natural resource use, its protection and conservation.

4. RULES AND PRINCIPLES OF INTERNAL AND INTERNATIONAL LAW APPLICABLE TO THE ACT COUNTRIES WATERS

In this section the importance of updating the internal laws of water management in the Amazon countries will be highlighted. The adaptation to international law (mostly because of the treaties to which they are signatory countries), of the modern principles of international environmental law, and more specifically, to integrated and participatory principles in the field of shared river basins management is also important.¹⁵

¹³ OTCA, El Cambio Climático en la Región Amazónica - Acciones de la OTCA, PRA/OTCA, 2014, p.11. Available from: http://otca.info/portal/admin/upload/publicacoes/531-libro.cambio.climatico_esp.pdf Accessed: 10th October 2015.

¹⁴ OTCA, Agenda Estratégica de Cooperación Amazónica, PRA/OTCA, 2011, p. 25. Available from: http://otca.info/portal/admin/upload/apresentacao/AECA_eng.pdf Accessed: 10th October 2015.

¹⁵ The constitutional field in Latin America was enlarged both by densification originating in the constitution issues such as fundamental rights, but also by a new materials or new categories of rights such as the right to the environment ecologically balanced or the right to have access to water. However, only the proclamation of such rights in constitutions is not enough, there is the need for its implementation to build fairer societies. SILVA, S.T. da, "Gestão compartilhada das águas na Amazônia", ZAMUDIO, H. B., et. al. (Ed.), in *Amazonia y Agua: Desarrollo Sostenible en el Siglo XXI*, Unesco, Extea, 2009, p.438.

4.1. Internal rules of water management in the ACT countries

In general, most of the ACT member countries have already incorporated the fundamental principles of international law in their water resource legislation or are updating the legislative process to incorporate them.

Brazil (1997), Ecuador (2014), Peru (2009) and Venezuela (in 2007) have recently updated their water laws. Bolivia is trying to reform its current domain law and water use (repealed in several parts). Colombia currently is making attempts to pass water law, because it does not have specific regulations. Suriname has a very old water laws (1932) and Guyana has a law on water's public administration (Guyana Water Authority Act) of 1972, amended in 1997.

Regarding water management principles, in the recent study (published by CEPAL and written by EMBID IRUJO and MARTIN)¹⁶ on the Latin America experience of new water laws, a common feature is the affirmation of the river basin as a management unit, which often involves the existence of organisms at this level and consultative bodies with water user's involvement.

However, this report concludes that the fact that countries adopt these modern principles in their legislation, is not accompanied by the effectiveness of these legal precepts, since some of the analyzed water laws have limited application or lack of regulatory development.

On many occasions, not just in relation to water laws (and other subjects) passed in the last ten years, it has been observed that many precepts remain mere declamatory performances of the respective parliaments. This means that the laws don't represent: effective organization of public administration, the implementation of economic-financial management plans, or in the implementation of the principles of participation and integrated management.

According to MAMED and CAVALCANTE¹⁷, another aggravating factor for the lack of effectiveness of the treaty is that the current environmental laws of the ACT countries do not directly reference the treaty, but cite other international documents

¹⁶ EMBID IRUJO, A. MARTIN, L. La experiencia legislativa del decenio 2005-2015 en materia de aguas en América Latina, CEPAL - Serie Recursos Naturales e Infraestructura N° 173, Naciones Unidas, Santiago de Chile, 2015. p.50.

¹⁷ MAMED, D. O., CAVALCANTE, J.R., Op.Cit., p.164.

such as Agenda 21 and the Stockholm Conference. This could be interpreted as lack of consideration of the treaty in the legislative process.

4.2. International law applicable to the shared water management in the ACT countries

In addition to the internal rules of each country, the water management in the region must also be guided by international law sources, among which are the international law and shared water management principles and environmental international treaties to which the Amazonian countries are linked.

Among the international commitments of the Amazon countries are often part, we can cite: the Protocol of San Salvador (right to a healthy environment); the Convention n° 169 of International Labour Organization - ILO (a free and informed of indigenous peoples prior consultation); the Convention on Biological Diversity (CBD - conservation of biodiversity, sustainable use and equitable sharing of benefits) and its Protocols; the United Nations Convention on Climate Change (mitigation and adaptation).

In relation to the international law principles, we can say that the ACT is assigned to two keys to setting and implementing their public policies principles: the principle of national sovereignty and the principle of regional cooperation for natural resources management. Despite the difficult joint implementation, in fact, they should be applicable as interdependent and complementary principles, as will be seen soon.

These principles of shared natural resources management have been introduced into international law by the Charter of Economic Rights and Duties of States. This law, on the one hand, affirmed the principle of national sovereignty over natural resources located in their territory; and on the other hand, called the obligation to cooperate in the natural resources exploitation shared by two or more States (Resolution no. 3281 of the United Nations General Assembly, 1974).

Specifically on the principle of national sovereignty in relation to their natural resources, this is adopted as a principle both in the Stockholm Declaration in 1972 (Principle 21), and in the Rio Declaration in 1992 (Principle 2), which declared that: "States have the sovereign right to exploit their own resources pursuant to their environmental and development policies, in accordance with the United Nations Charter and the principles of international law."

The principle of national sovereignty finds its proper bounds in the application of other principles of international law. On one hand the exploration, development and

disposition of natural resources must be exercised in accordance with national development interests and the welfare of each State, on the other, it is up to those states to ensure that activities within the limits of their jurisdiction or control do not cause damage to the other State's territories. In addition, it should preserve the interests of present and future generations.

A priori this principle is limited by other international agreements entered into by each country, as well as all other general principles of international law. Thus, we reaffirm our view¹⁸ that the dogma of national sovereignty has been relaxed to lose its absolute character, because in today's globalized world there is no space for such rigidity in the principle of national sovereignty, especially in the sense of avoiding international conflicts over the use of common natural resources.

The need for international cooperation is supported by two other principles of international law: the principle of equitable utilization of natural resources and the principle of common but differentiated responsibilities. Within the ACT, the Declaration of Lima in 2010 reaffirmed the Principle 7 of the Declaration of Rio on common but differentiated responsibilities.¹⁹

So when we speak of preserving the interests of present and future generations, States are being called upon to cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. Then, considering the different contributions to global environmental degradation, States have responsibilities to reduce or eliminate their methods of production and consumption which are not viable.

On the other hand, SILVA²⁰ alerts us that this principle is guided by the objective of intergenerational equity and can only be placed in a context of responsibility taking into account not only the future but also the question of distributive justice and access to a healthy environment at present.

¹⁸ MAMED, D. O., CAVALCANTE, J.R., Op.Cit., p.164.

¹⁹ This principle establishes that the countries responsibilities are different because they have not contributed equally to the current level of pollution that we have on the planet. One responsibility regards the need to balance the North-South dichotomy, and also developing countries understand it is not their responsibility be in charge of the pollution alone. To summarize, they do not have enough financial resources and at the same time they are not the only ones responsible for the problem.

²⁰ According to SILVA, S.T. da, O Direito Ambiental Internacional, in *Coleção para Entender*, Ed. del Rey, Belo Horizonte, 2009, p.107.

In fact, the joint application of the principles of national sovereignty and regional cooperation as proclaimed in the ACT has not been effective, because for many years the notion of national sovereignty in practice preceded regional cooperation, and this integration was reserved for the territorial planning of each State.

4.3. Principles of International Water Law adopted by the ACT

The ACT includes provisions on water management, and declares that the Amazon waters and other international Amazonian rivers, play a function in communication between countries and establish a complete freedom of commercial navigation, based on reciprocity (Article III).

Given the role that the Amazonian rivers have in the process of economic and social development in the region, the ACT proclaims the rational use of water resources. However, it does not set specific criteria for achieving that goal.

The truth is that in the context of the Amazon river basin, the rational use of shared water resources is no easy task. Establishing physical boundaries is its first hurdle in the large amount of water coming from countries which are upstream that feed those which are downstream, especially to Brazil. Also within each national border there are different laws, which impose different rules on the social relationships of water, mainly in the field of indigenous peoples and traditional communities which are practically the same.

Necessarily, protection and use of water in the Amazon countries need, therefore, a vision of the Amazon river basin in its entirety, as well as the intrinsic relationship between the hydrological cycles and forests, biodiversity and ways of living and using water.²¹

The proper management of shared waters must be marked out by two basic principles: the principle of integrated water management, based on the adoption of watershed management as a territorial unit²²; and the principle of participatory management, with the establishment of management policies and specific administrative procedures and the participation of water users.

²¹ According to SILVA, S.T. da, DANTAS, F.A.de.C, “Águas na Amazônia e Direito Ambiental Internacional”, in *Revista NEJ - Eletrônica*, Vol. 17 , nº. 1, 2012, p.44.

²² DELGADO PIQUERAS and PASSOS GOMES defend the integrated management of shared river basin as the centerpiece of the development of international legal regime of the watercourses basins. DELGADO PIQUERAS, F; PASSOS GOMES, V., *Op. Cit.*, p.101.

Indeed, at the international level, the theory of equitable management of shared water resources has been discussed in numerous international documents since the New York Declaration in 1958. Through the Helsinki Rules of 1966, it is understood that water management should occur in an area considered an international basin. However, although this conceptualization is gradually being expanded, there are still different definitions in the various countries, which are not reflected in international treaties and predominant solutions tailored to specific cases.

The international doctrine considers the River Basin to be understood not only as surface water but also groundwater, coastal water and territories between the springs and rivers that was the understanding of the Amazon Cooperation Treaty under the Article II above.

Despite not being ratified by any Amazonian country, the United Nations Convention of 1997 (of non-navigation uses of International Watercourses), is currently the main international instrument to regulate shared waters. This convention has not adopted the broad definition of international basin, but the concept of international watercourse, which includes "a system of surface waters and ground waters, by virtue of their physical relationship a unitary whole and normally flowing into a common terminus."²³

The 1992 Helsinki Convention and the 1997 New York Convention agree that the most appropriate management of shared water models is through the creation of bodies and institutions linked to a supranational authority.²⁴

The natural consequence of the establishment of bodies and institutions of cooperation is the adoption of a unified strategy and planning of the basin, as well as continued efforts to develop knowledge, exchange of information and projects based on transparency and fairness in the management of financial resources used by such transnational institutions. These challenges have also been undertaken by the Amazon countries since its cooperation agency – ACTO was created.

²³ This text took almost 17 years to enter into force, it was depending on ratification, accession, acceptance of 35 countries, what happened on 17 August, 2014, 90 days after the accession of Vietnam. Currently it has 16 country parties and 36 countries that ratified it.

²⁴ The 1992 Helsinki Convention uses the term "joint bodies" (Art.9.2.) While the 1997 NY Convention considers the creation of a "joint management mechanism" (art. 24), as well as the possibility of establishing committees or joint mechanisms of cooperation.

The principle of participatory management of shared waters in the Amazon countries is fundamental to the process of establishing cooperation policies, although, this was not embodied in the ACT's text.

According to SOLA²⁵, it is possible to find both joint implementation of integrated and participatory management in the proceedings of the Rio Acre Working Group, consisting of a multidisciplinary team of Brazil, Bolivia and Peru.

Finally, we cannot forget that the river and the water cycles have key roles in the universe of Amazonian populations and determine their *modus vivendi*. Historically constructed social relations and customs adopted by the Amazonian peoples, as expressed by SILVA and DANTAS²⁶, - represent the human wealth of the Amazonia. For this reason, decisions that affect these relations should promote the populations' participation. Participation not only in an informative but also advisory way, with the ultimate aim of leading to the adoption of a truly sustainable model in its three aspects - economic, environmental and social.

The protection and use of waters in the Amazon are demanding solid studies in these three dimensions (environmental, economic and social), to ensure that agreements and joint actions of the Amazon countries are more extensive, i.e., both integrated as ecosystem resources and at a politically participatory level, because promoting awareness also means promoting opportunities for reflection and discussion for policy making.

In this sense, we understand that the principles of integrated and participatory management also depend on the implementation of international scientific cooperation,, which in turn comprises the expansion of scientific knowledge and the dissemination of information to the Amazonian people.²⁷

²⁵ SOLA, F., Op.Cit., p.210.

²⁶ SILVA, S.T. da, DANTAS, F.A.de.C, "Águas na Amazônia...", p.43-44.

²⁷ The cooperation with other countries has had an important role, as the case with almost fifty years of cooperation agreement between the INPA and the Max-Planck Institute (.). The current demand for information involves the basic studies of environmental dynamics and the advanced modeling system. These studies must support the decision-making about new hydroelectric dams planned for the Amazon, from mining activities, including oil, the opening of new roads, the management of aquatic species of commercial importance and the use of waterways for transportation and communication. Moreover, it is vital to use modern technologies to develop new products and processes based on biological diversity and chemistry of the aquatic environment of the Amazon. "VAL, A. L., et al., "Amazônia: Recursos Hídricos e Sustentabilidade", in BICUDO, C.E. de M., TUNDISI, J. G., SCHEUENSTUHL, M. C. B. (Orgs.). *Águas do Brasil: análises estratégicas*, Instituto de Botânica, 2010, p.106.

Indeed, the article VII of the Amazon Cooperation Treaty guarantees the species preservation of the species in the region through the promotion of "scientific research and exchange of information and technical personnel between the competent authorities of the respective countries, in order to increase knowledge of the Amazon's fauna and flora resources and to prevent and control diseases in these territories."

According to the recent report about the actions of ACTO²⁸, for the performance of this target, this organization is seeking to improve the scientific understanding of these interactions within the Amazon river basin, triggering the following scientific studies: the Hydro–Meteorological Atlas of vulnerability to identify and map vulnerabilities to climate change; Transboundary Diagnostic Analysis to identify priority transboundary problems, to analyze causal chains and present possible solutions; a detailed analysis of river ecosystems associated with environmental threats and socio-economic impacts, and also the study of the hydrogeological characteristics the Amazon aquifer and sediment load.

Note that the Treaty, in fact, was just beginning to gather pace when it celebrated thirty years of existence, and its current focus is still in an initial phase of expansion of scientific knowledge, which must be used to support political decisions.

It is also from 2010, at the X Meeting of Ministers and the creation of the Strategic Agenda, when the first expression of specific actions that envisage the stakeholders' participation were made.

In the Declaration of Manaus, issued at the XI Meeting of Ministers of 2011, a greater concern was demonstrated for improving the quality of life of the Amazonian people. First, the creation of a joint agenda of social inclusion in the Amazon region was suggested as necessary for the eradication of poverty. Also in this meeting, a series of measures were proposed to promote knowledge about the Amazon: the promotion of academic mobility; the Ecuadorian initiative to create an Amazon Regional University; the development of an integrated information system and regional standardized indicators to facilitate research in the Amazon by national and regional institutions; the promotion of the inclusion of traditional knowledge and practices of the local community and indigenous peoples; the implementation of the "Observatory of the Amazon", a permanent forum that brings together institutions and authorities related to the topic, emphasizing the study of Amazonian biodiversity.

²⁸ OTCA, *El Cambio Climático...* Op. Cit., p. 14.

The "Observatory of the Amazon" could be a key platform for the production of knowledge and the exchange of information, on the biodiversity of the region as provided in the ACT. This reference center should assemble interdisciplinary teams, environmental and social scientists, and representatives of indigenous peoples and traditional communities to produce studies on the relationship between forests, climate, water and society, including the protection of traditional knowledge.

However, so far we have seen many proposals but little political force for their implementation. As VAL and others²⁹ warn, one of the main bottlenecks is that there are few installed institutions active in the region able to produce such information.

5. CONCLUSIONS

Generally, we can say that in these 35 years of the Treaty scarce results have been achieved. However, following the negotiations held in the nineties for the institutionalization of the Treaty, creating and installing the ACTO Permanent Secretariat in 2002, some progress has to be considered.

ACTO is essential to implementing the objectives of the ACT, because it acts as centralizing body for facilitating exchanges of information and joint activities, including actions for shared water resources management in the Amazon.

With the creation of the ACTO, ACT follows the international trend adopted as best suited for shared water management. This creation of institutions linked to a supranational authority model is capable of generating effective institutionalized cooperation where there is a deepening the interactions between countries increasing trust and closer decision-making.

Furthermore, the importance of ACTO to reduce the cost of information and negotiation processes is evident. In short, creating ACTO has been instrumental in increasing financial contributions to the implementation of ACT objectives. Since 2000, there is an annual budget with contribution quotas for each member country. In addition, the implementation of programs and projects funded by different international organizations has also increased.

The ACT, as the only multilateral instrument that the Amazon countries have with the specific objective of protecting natural resources, and ACTO, as the body that carries out the activities of the treaty, are essential for the natural resource management in the

²⁹ VAL, A. L., et al., Op. Cit., p.106.

region. However, there are domestic legal rules on environmental matters that dictate the scope of this protection, hence the importance of these internal rules being in harmony with modern institutions and international environmental principles.

In the final analysis, considering that the ACT was signed in an era whose focus was the search for economic development, we can say that its appearance at that time represents one of the signs of efforts of the Amazon countries toward environmental preservation. However, it did not reach the development that was expected.

The irregularity of their shared actions, represented by peaks of proposed goals in political meetings, followed by long periods of ineffectiveness, do not deny that, It is the most advanced cooperation mechanism for the region.

At least ACT has shown, especially through their policy statements in recent years that they intend to continue evolving and adopting modern principles of International Water Law, embodied primarily in the recognition of the principle of integrated water management and the principle of participation.

Hence the effectiveness of shared management of Amazonian waters depends on who carried out the integrated ecosystem management, integration of sectoral policies (horizontal management) and integration of different levels of management bodies (vertical management).

From the institutional relaunch of the Treaty in 2009, the Council meetings became effective annual ministerial meetings and also gained pace immediately reflected in the quantity and quality of projects and programs on water management currently underway in the field of ACT, mainly in the production of prospective studies that form the basis for the arbitration of rights between countries.

In this context, this first step of cooperation should generate speed, mostly on the triad of information-knowledge-involvement (including traditional knowledge, social inclusion and respect for indigenous rights and riverside communities), which is the basis for political decisions that guide the economic, social and environmental development of the Amazon.

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