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Analysis of Environmental Legal Aspects in South America and International Environmental Treaties Ratified by Brazil

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CONTENT

1. Introduction

As part of the LIFE Certification Methodology's continuous process of improvement, with a view to supporting future proposals for its improvement, as well as projects for its international adaptation, the LIFE Institute set up a Temporary Technical Commission to undertake a study focusing on issues related to legal aspects.
The present Executive Summary presents a summary of the principal results obtained by the study, whose main topics were:

Analysis of environmental legislation at an international level:

In order to obtain a general view in terms of the requirements which demand biodiversity conservation actions, the environmental legislation, at a federal level, of certain South American countries was surveyed. Indications were thus obtained of the effort necessary in each country for organizations from specific sectors to undertake biodiversity conservation actions voluntarily – that is, beyond the legal requirements.

Analysis of International Treaties and Agreements:

Surveying of International Treaties and Agreements related to biodiversity, signed and/or ratified by Brazil.

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2. Objective of the work

This work's principal aims were to undertake the analysis of environmental legislation in different countries and considering different sectors of the economy, in addition to the analysis of International Treaties and Agreements related to Biodiversity, signed and/or ratified by Brazil.

3. Methodology

The work was undertaken through bibliographic review of doctrine, legislation, official public documents, scientific articles and specialized sites (open and closed) from each of the countries in question.

Books and articles on economics, environmental policy, civil law and administrative law related to the issue served as sources of secondary information.

Primary information was obtained through interviews undertaken with specialists from government environmental bodies, specialists involved in research and extension courses, and specialists from private companies and non-governmental organizations (NGOs) in the countries studied, making use of video-conferencing for consolidating data.

The analysis of the environmental legislation was undertaken considering the following countries: Brazil, Argentina, Chile, Uruguay, Paraguay and Colombia. For each of these countries, legislation specific to the mining, energy and agroforestry sectors was analyzed.

Due to the great complexity involved in undertaking a comparative in-depth study, because of factors such as differences between countries, differences between regions/states within particular countries, differences between sectors, and subjectivity in relation to the interpretation and application of laws, among others, the study's scope was restricted to legislation at a federal level in each country.

To this end, some specific activities were carried out, such as:

Survey the literature referent to the issue;

Mapping and delineating the areas of interest;

Selecting and consulting the legal databases by country of interest, available in open and restricted areas of the Internet;

Consulting specialists from the different countries of interest, using the Latin American Network of Environmental and Forestry Law (Rede Latino Americana de Derecho Forestal) – RELADEFA/IUFRO as the basis for contact;

Reviewing the specialized literature on environmental certification and legislation;

Studying the applicability of the International Treaties and Agreements related to Biodiversity.

4. Analysis of Environmental Legal Aspects in South America

5. ANALYSIS OF ENVIRONMENTAL LEGISLATION AT AN INTERNATIONAL LEVEL

5.1 The Environment in the Federal Constitutions of the Countries Studied

BRAZIL

The Brazilian Constitution of 1988 was the first to specify environmental rights as a fundamental right in Brazil. Prior to this, only the 1946 Charter had contained guidance relating to precepts on the protection of health and on the State of Brazil's competence to legislate on waters, forests, game and fishing, which allowed the elaboration of protective laws, such as the Public Health Code and the Forest, Water, and Fishing Codes (DA SILVA, 1994).

The 1988 Constitution dedicated one chapter exclusively to the environment, stating:

Art. 225. All have the right to an ecologically-balanced environment, a good for the common use of the People, and which is essential for healthy quality of life; it is the duty of the Government and the People to defend this and preserve it for present and future generations.

§ 1 - To ensure that this right may be put into effect, the Government shall:

I – preserve and restore essential ecological processes and provide the ecological management of the species and ecosystems;

II – preserve the diversity and integrity of Brazil's genetic heritage and inspect the bodies dedicated to researching and manipulation of genetic material;

III – define, in all the units of the Federation, those territories and their components which are to receive particular protection, their alteration or suppression being permitted only under the law, and any use which compromises the integrity of those attributes which justify their protection being forbidden;

IV – require, by law, prior to the installation of works or activity which may potentially cause significant degradation of the environment, a study of the environmental impact, which shall be made public;

V – control the production, commercialization and use of techniques, methods and substances which carry risks to life, quality of life and the environment;

VI – promote environmental education at all levels of teaching and the sensitization of the public to the preservation of the environment;

VII – protect the flora and fauna, being prohibited by law those practices which put at risk their ecological functions, lead to the extinction of species or submit animals to cruelty.

§ 2 - Those who exploit mineral resources are obliged to restore the degraded environment, in accordance with the technical solution required by the competent public body, by law.

§ 3 - Conducts or activities considered harmful to the environment will render the infractors, whether private individuals or corporate bodies, subject to penal and administrative sanctions, irrespective of their obligation to put right the damage caused.

§ 4 - The Brazilian Amazon Forest, the Atlantic Forest, the Serra do Mar mountain range, the Pantanal of Mato Grosso and the Coastal Zone are national heritage and their utilization shall occur, by law, following conditions which ensure the preservation of the environment, including in relation to the use of natural resources.

§ 5 – Land which has always been public and land brought under the care of the State, necessary for the protection of natural ecosystems, shall not be made available.

§ 6 - The location of nuclear power plants shall be defined under federal law, without which they shall not be installed.

ARGENTINA

The Argentinean Constitution dates from 1953, although the most recent amendment happened in 1994. The preservation of the environment, and of communities' natural and cultural heritage, appears in Article 41 of the second chapter, entitled "New rights and guarantees", which states: "inhabitants shall enjoy the right to an environment which is healthy, balanced and appropriate for human development, and for productive activities to satisfy present needs without compromising future generations; they have the duty to preserve it [...]".

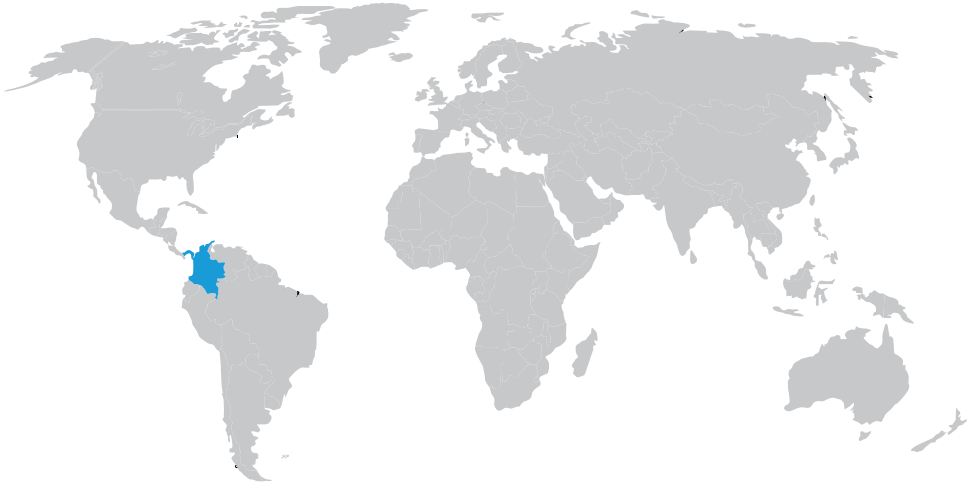
In this first part of the Article, one can perceive the idea of sustainable development, the use of the environment being linked to present needs without compromising future generations. It is the duty of Argentinean citizens to preserve nature. It is determined that damaging the environment entails the obligation of indemnification: in the terms of the law, "[...] Environmental damage shall first cause the obligation to restore, as established by law [...]"

The obligation to protect the right to a healthy environment, the rational use of natural resources, the preservation of the country's natural and cultural heritage, biological diversity, and environmental information and education are made the responsibility of the public authorities "[...] The authorities shall ensure the protection of the right to the rational use of natural resources, the preservation of natural and cultural heritage and biological diversity, and environmental information and education. It falls to the Nation to determine the standards containing the minimum standards of protection, and to the provinces, those necessary to complement them, without these altering the local jurisdiction [...]".

CHILE

The Constitution of the Republic of Chile dates from 1980, with amendments in 1989, 1991, 1997, 1999, 2000, 2003 and 2005. Only one number within one article in this refers to the environment, where it is possible to read that it is the duty of the State to guarantee to all citizens the right to an environment free of pollution and to promote the conservation of nature.

Article 19.- The Constitution ensures to all persons: The right to live in an environment free of contamination. It is the duty of the State to make efforts such that this right shall not be affected, and to promote the preservation of nature.



COLOMBIA

The Colombian Constitution dates from 1991 and has a chapter dedicated to the Environment:

CHAPTER III – ON COLLECTIVE RIGHTS AND ENVIRONMENTAL RIGHTS

ARTICLE 78. The law shall regulate the control of the quality of goods and services offered and provided to the community, as well as the information to be submitted to the public when these are commercialized.

By law, those who, when engaged in the production or commercialization of goods and services, cause harm to health, safety and the appropriate provision to consumers and users, shall be held responsible.

The State shall guarantee the participation of organizations of consumers and users in the studies of the provisions which affect them. To have this right, the organizations must be representative and observe democratic internal procedures.

ARTICLE 79. All persons shall have the right to a healthy environment. The law shall guarantee the community's participation in decisions which affect it.

It is a duty of the State to protect the integrity and diversity of the environment, to conserve areas of particular ecological importance and to encourage education to achieve this objective.

ARTICLE 80. The State shall plan the management and use of natural resources, so as to ensure their sustainable development and their conservation, restoration or supplying. In addition to this, it shall prevent and control factors of environmental deterioration, imposing legal sanctions and requiring damage caused to be put right.
In the same way, it shall cooperate with other nations in the protection of ecosystems situated in frontier zones.

ARTICLE 81. The production, importation and possession of nuclear, biological and chemical weapons are prohibited, as is the introduction onto national territory of nuclear and toxic waste.
The State shall regulate the entrance into the country, and the exit from it, of genetic resources and their use, according to the national interest.

ARTICLE 82. It is the duty of the State to make efforts for the protection of the integrity of the public space and of its allocation for common use, which shall prevail over private interest.

Public bodies shall participate in profits created through urban actions and shall regulate the use of the soil and urban airspace in defence of the common interest.
One may perceive that the Colombian Constitution ensures all Colombians the right to benefit from a healthy environment, ensuring them participation in decisions which may affect them. It falls to the State to protect the diversity and integrity of the environment, and the conservation in areas of particular ecological importance, as well as to promote the encouragement of education to achieve these ends. It also must prevent and control factors which cause environmental deterioration, impose sanctions, and cooperate with other nations in the protection of the ecosystems in frontier areas.

PARAGUAY

The Paraguayan Constitution dates from 1992, and also refers to sustainability. It is possible to reach this conclusion not only by reading Article 7, but also in conjunction with Article 6.

Article 6 “De la Calidade de Vida” (“On Quality of Life”), establishes the State’s competence to promote quality of life, by means of plans and policies which recognize conditioning factors, such as extreme poverty and obstructions caused by disabilities or age. The State shall also encourage research on populational factors and their links with economic and social development, with environmental preservation and quality of life for the inhabitants.

Article 7, contained in Section II “Del ambiente” (“On the Environment”), establishes that all persons have the right to a healthy and ecologically balanced environment, with objectives of preservation, conservation, and the conciliation of these with comprehensive human development. It may be seen that these provisions are not linked with the idea of linking economic and social development with respect for the environment. This connection is given by Article 6, which establishes the State’s competence to encourage research on populational factors and the links of these with economic and social development with environmental preservation and quality of life for the inhabitants.

Furthermore, Article 116 of the Paraguayan Constitution refers to the principle of sustainability, in establishing that unproductive large farming estates shall be progressively eliminated, linked "with sustainable use of natural resources and the preservation of ecological balance" ("al aprovechamiento sostenible de los recursos naturales y de la preservación del equilibrio ecológico").

URUGUAY

The Uruguayan Constitution dates from 1967, although changes were made in 1989, 1994 and 1996. The constitutional reform of 1996, for the first time, includes Article 47, which treats protection of the environment as a value of general interest, this provision being regulated only in 2000, in Law 17,283.

Article 47.- The protection of the environment is of general interest. People must refrain from any act which causes depletion, destruction or serious contamination of the environment. This Law shall regulate this provision and shall provide sanctions against transgressors.

The most recent amendment, which occurred in 2000, protects water resources in particular and determines that Uruguay's existent resources are essential, and imposes on the Government the obligation to create a strategic management policy for the use and protection of this important heritage.

5.2 Sectorial Environmental Laws of the Countries Studied

Below, a comparative table is presented with the environmental legislation of the countries surveyed.

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
AGROFORESTS Legal Reserves	According to the New Forestry Code, areas located within a rural property or asset shall have a Legal Reserve, with the aim of ensuring the sustainable economic use of natural resources, helping conservation and rehabilitation of ecological processes, promoting biodiversity conservation, and sheltering native forest flora and fauna. As a result, when a property is situated in a forested area, the following percentages have been established: 80%, if the property is situated in the Brazilian Amazonian regions and 20% if it is located in other regions of Brazil. Economic use of the Legal Reserve is permitted if it is through sustainable management, previously approved by the competent body, and if directives and guidance required by Law are observed.	The Law of Minimum Standards for the Preservation of Native Forests selects three conservation categories, including Category II (Yellow) which deals with areas of medium-value to conservation, which may have been previously degraded and whose restoration may cause them to become areas of high conservation value, and to which the following uses may be applied: sustainable use, tourism, and scientific research. Deforestation of native forests in this category is not permitted, and the authorization for sustainable management is subject to a Plan for Sustainable Management of Native Forests. Also permitted in this category are works of public interest and infrastructure.	--	The National Code of Renewable Natural Resources and the Protection of the Environment, Decree 2811/1974, contains a chapter concerning Forest Reserve Areas. According to Article 206 of this law, areas under public or private ownership, designated exclusively to the establishment or maintenance and rational use of productive, protective or productive/protective forest areas, are considered forest reserve areas. Article 207 states that these areas may only be designated for the rational use of the forests, ensuring their recovery and regeneration. Articles 208 and 210 state that works of public or social interest in forest reserve areas require prior licensing.	The Paraguayan Forest Law, Law 422 of 1973, regulated by Decree 1883 of 1986, obliges all rural proprietors possessing areas of over 20 hectares in forest zones to maintain a minimum of 25% of natural forest.	The Uruguayan Forest Law (Law 15939) establishes the prohibition of the destruction of protective forests, whether through intentional actions or not. Any person who destroys a protective forest shall be obliged to reforest it at their own cost. The planting of protective forests on public or privately-owned land which needs restoring is obligatory, at the discretion of the Executive branch of the government. If the proprietor does not undertake the work, the land shall be declared to be of public use for expropriation, becoming Forest Property of the State. Proprietors who fail to comply shall suffer monthly fines until they reforest, or shall be expropriated.

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
AGROFORESTS Protection of Water Resources	Among the functions presented by the Forestry Code (Law 12,651 of 2012) for Areas of Permanent Preservation is that of preserving water resources. To this end, Article 4 of this Law establishes as APPs the areas alongside any natural water courses; extending 30 meters from the water on both sides for water courses of less than 10 meters wide; 50 meters, if the water course is between 10 and 50 meters wide; 100 meters, for water courses between 50 and 200 meters wide; 200 meters for water courses between 200 and 600 meters wide; and 500 meters, when the water course is wider than 500 meters. For natural lakes and lagoons, the protected area alongside shall be 50 meters, or 30 meters in urban zones. The protected area shall be 50 meters for springs and waterholes	The Law of Minimum Standards for the Preservation of Native Forests classifies areas for the protection of water sources as Category I (Purple), which pass to be held in perpetuity. Exploitation of timber is not permitted in this conservation category; however, protection and maintenance activities, including tourism, are permitted, so long as they do not alter the landscape.	In accordance with Law 20,283 of 2008, the following are included in the category of Native Forest for Conservation and Protection: forest formations, whatever the area covered, located on slopes greater than or equal to 45%, on fragile soils, or within 200 meters of springs or natural bodies of water or water courses, so as to preserve the soil and the water resources. According to Article 5 of Decree 4363 of 2008, in the forest formations described above, the cutting down of trees and bushes is not permitted.	--	The Paraguayan Forest Law defines in Article 6 that one of the purposes of the Protective Forests, among others, is to regulate the water regime. When an area is declared a Protective Forest, commercial use of the forest, the cutting down, damaging, or destruction of trees and bushes is prohibited. In addition, its management shall be subject to limitations and restrictions established by law. Decree 18,831 of 1986 regulates that so as to protect rivers, streams, springs and lakes, a protected area of a minimum of 100 meters must be preserved on both banks, possibly being greater depending on the width and importance of the river.	The Uruguayan Forest Law establishes in Article 8 that forests denominated as "protective" have the purpose of conserving the soil, water and other renewable natural resources. The Law establishes rules for obligatory afforestation in Article 12. In accordance with the regulation, it is obligatory to plant protective forests on land, either publicly- or privately-owned, in which this is fundamental for the recovery of renewable natural resources and protection of the soil and water. These shall be designated by the Executive branch of the government, which shall determine deadlines and conditions for compulsory afforestation. In cases in which the proprietor is not willing to carry out the compulsory afforestation, he or she shall sell the property to a third party or to the State.

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
Compensations and constraints on protective forests	There is a mechanism for compensation of the legal reserve, which allows the owner of the rural property not to place this area in one property, but raher to compensate for it in another of the same drainage micro-basin, if equivalent in extent and ecological relevance. The Forest Code (Law N. 4771/1965) establishes that the areas of protective forest are tax-exempt.	Restoration of protective forests is undertaken with the consent of, or directly by, the owner, with the supervision of the forestry authorities, or by the State, in which case it shall be indemnified by the owner, who may be expropriated. The declaration of a forest as 'protective' entails restriction on the ownership, such as: informing the authorities of sale or changes in how it is managed; introducing rotational grazing or carrying out any work in the soil or subsoil which may affect it. Those properties with protective and permanent forests are compensated for the reduction in income from the forest resulting from the application of the forest regime and are exempted from taxation in accordance with the relevant area.	--	--	The Forest Law states that forested or wooded areas are of public use and may be expropriated if they are necessary for: the control of soil erosion; regulation and protection of drainage basins and water sources; protection of agriculture; the defense or ornamentation of means of communication, public health and tourism.	The Law exempts land with protective forest from taxation, this exemption ceasing in the event of the protective forest's destruction.

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
Energy	Resolution 001 of the National Environment Council (CONAMA) of 1986 establishes that the undertaking of an Environmental Impact Study (EIS) and respective Environmental Impact Report (EIR) is compulsory for activities such as: VI – Electricity transmission lines, over 230KV; VII – Hydraulic works for the exploitation of water resources, such as: dams for hydroelectric purposes, over 10MW […]; XI – Power plants for electricity generation, irrespective of the primary source of energy, over 10MW; Article 48 of Law N. 9,985, of 18th July 2000 – National System of Conservation Units (SNUC). – The body or company, whether public or private, which is responsible for the generation and distribution of electricity, and which benefits from the protection offered by a conservation unit, shall contribute financially to the protection and implementation of the unit, in line with the provisions of specific regulations.	The Argentinean Electrical Energy Law dates from 1960 (Law 15,336) and regulates those activities of the electrical industry aimed at the generation, transformation and transmission of electricity. In 1996, Law N. 24,065 created the National Electricity Regulation Entity (ENRE), which body issues the certification for all large-scale works, attesting the convenience and public need for this undertaking. In 1996, Resolution 0236 stated procedural criteria for environmental protection, to which shall be submitted works which aim to extend, build or expand systems for the transporting and/or distribution of electricity, considering environmental aspects, such as: effects on the landscape: the esthetic quality and partial or total visual degradation of green corridors; draining of surface or subterranean water, and the rate at which the draining affects the soil or reserves of flora and fauna.	--	Decree 2820 of 2010, of the Ministry of Environment, Housing and Territorial Development, determines which bodies shall be competent and who shall require environmental licenses. For the Electricity sector, Articles 8 and 9 of the Law establish that the Ministry of Environment, Housing and Territorial Development and the Autonomous Regional Corporations shall be competent to grant the environmental license, depending on the cases specified in the Law in accordance with the potential for energy generation and the size of the undertaking. In regard to the licensing for undertakings in the electricity sector, the Ministry for the Environment defines that in order to undertake environmental studies for energy generation projects, one needs an Alternative Environmental Diagnosis (DAA) and the EIS (Resolution 1023 of 2005).	Decree N. 14,281/96, which regulates Law 294/93 indicates that all electrical projects of: power plants, electricity transmission lines and substations with capacity equal or superior to 100,000 volts need to be submitted to a process of environmental licensing. The environmental license obliges the tenderer to comply with the mitigation measures proposed for the project in the Environmental Management Plan. The same shall be renewed every two years.	--

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
Mining	The Brazilian Federal Constitution states that mineral resources belong to the State (Article 20, IX, CF/88).	The Argentine Mining Code (Law 24,585 of 1995) concerns the environmental aspects of this activity. Article 6 notes that all activity regarding prospecting, research, exploration, development, preparation, extraction and storage of minerals shall include an Environmental Impact Report.	The Law of the General Bases of the Environment (Law 19,300 of 1994) establishes that all mining projects shall be submitted to the environmental impact evaluation system. The law which regulates the closure of mines (Law 20551 of 2012) is considered an advance as a regulatory benchmark of mining activity in the country, as it requires companies to take responsibility for their activities' consequences where these affect people and the environment.	Chapter XX of the Colombian Mining Code (Law 685 of 2001) is dedicated to environmental aspects. Article 195 emphasizes the need for a study covering environmental management and its costs for all mining work undertaken through concession contracts. In accordance with Article 201, environmental authorization is only necessary for mineral exploitation in cases in which the area is in a natural reserve required in Article 34 of the same law, altered by Article 3 of law 1382 of 2010. Article 85 institutes the compulsory character of Environmental Impact Studies for initiating mining work, while Article 204 establishes that the EIS must contain the elements of information, data and recommendations necessary for characterizing the physical, social and economic milieu of the region, and the plans for prevention, mitigation, correction and compensation for these impacts.	In Law N. 3,180 of 2007, the Mines Law, only one Article (Article 50) mentions the form of the protection for the environment, affirming that those who have permission or a concession for mining activities must comply with Environmental Protection Legislation, and that otherwise the Ministry for Public Works and Communications shall notify the environmental inspection authority, which shall impose appropriate sanctions, without affecting what is set out in the Mines Law.	Uruguay's Mining Code dates from 1982 and, originally, did not contain material relating to the environment. However, Law N. 18,813 of 2011 amended the Code and covers some provisions protecting the environment. The code stipulates, as a basic condition for implementing mining activities, the obtaining of an environmental license in accordance with the regulations currently in force (Article 7). The mine proprietor is obliged to collaborate with the National Directorate for the Environment, to restore the area within a period of 60 days and to inform the Mining and Geology National Directorate that this has been done

	Brazil	Argentina	Chile	Colombia	Paraguay	Uruguay
Impact Evaluation	Directives for the Environmental Impact Report (EIR). Resolution CONAMA N. 001/1986. Preliminary licenses, for Installation and Operation, CONAMA Res N. 237/1997.	The General Environmental Law (Law N. 25,675/2002) stipulates prior studies evaluating the impact of actions capable of degrading the environment or affecting quality of life. The works which are obligatorily to receive such studies are not specified in the Law.	With Law 19,300 of 1994, procedures for the environmental evaluation of projects began to be implemented on a voluntary basis, as a result of instructions from the presidency of the republic. The 1996 regulations formalized the process, introducing the Declaration of Environmental Impact and the Environmental Impact Study, to be presented to the competent authority, depending on the projects' potential for impact.	The average time for the issuing of the environmental license in accordance with Law 1450 of 2011 is 200 days. Resolution 1503 of 2010 defines the general methodology for elaborating the EIS for all types of projects.	Evaluation of Environmental Impacts (Law N. 294/1993) with examination of the "Administration of Environmental Management". This defines 17 types of undertakings, which depend on the EIS. Interested parties present the "Declaration of Environmental Impact" (DIA), with the respective projects.	The Law for Impact Evaluation, (regulated in Decree N. 349/2005), defines the public or private activities which must be submitted to a prior environmental impact study. The protection of biological diversity must take effect in the EIS.

5.3 Results and Discussion

Comparing the environmental legislation of the countries studied, taking into account both the Federal Constitutions and legislation applied to specific sectors, one can see that Brazil is the country with the greatest regulatory scope in this area.

In regard to the Federal Constitutions, only those of Brazil and Colombia have an entire chapter dedicated to the Environment, while the Argentinean, Chilean, Paraguayan and Uruguayan Constitutions separate a number of Articles and, sometimes, only parts of Articles, to focus on this issue.

However, in spite of Brazil's significant regulatory apparatus, the application of the regulations is not always efficient, causing companies in the country to have difficulties in complying with the legislation in force.

In Colombia, the Ministry for the Environment is the ultimate authority in environmental matters, but the competency to deal with environmental licensing is decentralized in the Autonomous Regional Corporations.

For mining activities, the licensing process is more rigorous and there are more requirements. Regarding energy, the law is very clear, establishing the need for hydroelectric power plants to prepare an environmental plan, regenerate degraded areas, obtain licenses and make good all the environmental impacts caused by their activities.

In Argentina, the competence to deal with environmental matters belongs to the provinces, these having autonomy in decision-making. In regard specifically to environmental licensing, the competency belongs to the municipalities.

The legislation for mining and energy is different from the others, being stricter, due to there being more social pressure on these sectors. This is different from the case with agriculture and the raising of livestock, where the social pressure is less due to it being understood that there is greater social relevance.

In Chile, the competence to issue environmental licenses belongs to the Environmental Evaluation Service. The Chilean government, environmentally speaking, is passing through a highly complex situation. The resolutions in relation to this issue used to be issued by the administrative authorities and, more recently, were passed to the Environmental Tribunals.

In all the environmental impact evaluation processes regulated by Law, the licensee of the project must present an environmental impact study. One of the most important parts of the EIS is to establish an Environmental Compensation Plan, which must be approved by the Environmental Evaluation Service. It is also emphasized that any citizen may take steps to block the approval of a project which causes harm to the environment, the project in question possibly being suspended as a result of this.

In Paraguay, the Mines Law, in only one Article, mentions the form of protection of the environment, affirming that those who have permission or a concession for mining activities must comply with the Environmental Protection Legislation.

For the energy sector, the legislation establishes that all electricity projects of: power plants, transmission lines and sub-stations with capacity equal or superior to 100,000 volts need to be submitted to an environmental licensing process.

The environmental license obliges the tenderer to comply with the mitigation measures proposed for the project in the Environmental Management Plan.

For the agroforestry sector, the Paraguayan Forest Law obliges all rural proprietors who own an area of over 20 hectares in forest zones to maintain a minimum of 25% of natural forest. The same law establishes the character of the "Protective Forests", the purpose of which, among others, is to regulate the water regime.

When the area is declared "Protective Forest", the commercial use of the forest, the cutting down, damaging or destruction of trees and bushes is prohibited. Its management shall be subject to limitations and restrictions established by law.

Paraguayan forestry legislation also establishes that in order to protect rivers, streams, springs and lakes, at least 100 meters on both banks must be preserved, this possibly being greater depending on the width or importance of the river.

In the case of Uruguay, the forestry legislation establishes that forests termed "protective" have the purpose of conserving the soil, the water and other renewable natural resources. In line with this regulation, it is obligatory to plant protective forests on land – whether public- or private-owned - where this is essential for the recovery of renewable natural resources, for protecting the soil and water.

The Uruguayan Mining Code includes some provisions for protection of the environment. The code requires the obtaining of an environmental license, in line with current regulations, as a basic condition for the implementation of mining activities.

The Environmental Impact Law defines the public or private activities which shall be submitted for prior study regarding environmental impact, in which the protection of biological diversity must be put into effect.

Analyzing the legislation at the federal level, it may be seen that all these countries have provisions related to environmental licenses, forest protection and environmental compensation. However, in addition to differences in relation to these regulations' contents, there are differences in how they are applied.

Principally in relation to biodiversity, the definition of what a specified company shall do, in terms of conservation actions, so as to avoid, mitigate or compensate for harm caused to the environment, depends on each case.

For example, in the case of Brazil, Law N. 9985, of 18th July 2000 – SNUC – establishes in Article 36 that it is mandatory for companies with a significant environmental impact (considered as such by the competent environmental body) to provide at least half a percent of the total costs of the implantation of the undertaking to support the implantation and maintenance of the conservation unit of the Integral Protection Group.

That is, the above-mentioned Law establishes a minimum percentage of financial resources which must be allocated to a specified purpose. However, what the resources shall be allocated to, and how they shall be used (biodiversity conservation actions) is a decision which depends, above all, on the competent environmental body's objectives and vision.

Although it is difficult to make comparisons, for reasons already given, it is possible to state that – in a general and hypothetical way – for two companies, supposedly identical in relation to sector, size and impact, the effort made in carrying out biodiversity conservation actions which are voluntary/additional to what is required by legislation would be different, depending on the country where they are located or intend to locate themselves.

Considering the sectors of agroforestry, energy and mining, and analyzing the environmental legislation of the countries which are the objects of this study, it may be inferred that the country where a specified company would have to make the greatest effort to undertake voluntary/additional actions would be Brazil, while the country in which the least effort necessary would be Chile.

6. Analysis of International Environmental Treaties ratified by Brazil

7. INTERNATIONAL TREATIES AND AGREEMENTS

According to the definition adopted by the Brazilian government , international acts are agreements concluded between countries, and governed by international law. They function as “contracts” concluded between legal entity under international law (States, international organizations, etc.) with the aim of regulating specified situations and bring together common or antagonistic interests. So as to understand this study better, it is relevant and appropriate to differentiate the various international acts. They are:

Treaty

Term used to designate those international agreements between two or various countries – that is to say, may be bilateral or multilateral. Agreements to which political importance is intended to be attributed are termed treaties.

Convention

This term refers to multilateral acts signed at international conferences, and which include matters of general interest. A convention is a sort of agreement between two or more countries on a wide variety of issues – commercial or industrial issues, or those related to human rights.

Agreement

Expression used freely and frequently in international practice. Agreements establish the institutional basis which guides cooperation between two or more countries. Agreements tend to have a smaller number of participants.

Protocol

Designates bilateral or multilateral agreements which are less formal than complementary treaties or agreements. They can be documents which interpret previous treaties or conventions, or may be used for designating the final act of an international conference. In Brazilian diplomatic practice, the term is also used as “protocol of intentions”.

7.1 RESULTS AND DISCUSSIONS

For this study, first of all a survey was undertaken to identify all the international acts adopted by Brazil, addressing or which discuss environmental matters. Once identified, those international acts which affect or are affected by the use and conservation of biodiversity were selected. After selection, they were categorized by the scope of the approach, namely:

- Flora and fauna;
- Atmospheric protection;
- Waters and oceans;
- Others dealt with.

In addition, they were classified in relation to the sector in which they may be most directly applied, these not being restricted, however, to the selected sectors:

- Mining;
- Agroforestry;
- Energy;
- Services.

The international environmental acts selected are listed below, duly categorized by the scope of the approach and classified by sector:

Agreement	Signed	Ratification	In force	Scope	Sector			
					Min	Agr	En	Ser
International Convention for the Protection of Plants	16/04/1929			Flora and Fauna				
Convention on the Inter-American Institute of Agricultural Sciences	15/02/1961	22/01/1964	25/02/1964	Flora and Fauna				
International Plant Protection Convention	06/12/1952	14/09/1961		Flora and Fauna				
International Convention for the Protection of New Varieties of Plants			23/05/1999	Flora and Fauna				
Convention on the International Hydrographic Organization		03/05/1967	22/09/1970	Waters and Oceans				
Treaty of the River Plate Basin	23/04/1969	16/10/1969	14/08/1970	Waters and Oceans				
International Convention of Civil Liability for Oil Pollution Damage	17/12/1976	17/03/1977		Other				
International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties		18/01/2008	17/04/2008	Waters and Oceans				
Ramsar Convention – Convention on Wetlands of International Importance, especially as Waterfowl Habitat		24/05/1993	24/09/1993	Waters and Oceans				
Convention concerning the Protection of the World Cultural and Natural Heritage		01/09/1977	01/11/1977	Other				
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	26/07/1982		25/08/1982	Waters and Oceans				
Convention on International Trade in Endangered Species of Wild Fauna and Flora	03/03/1973	06/08/1975	04/11/1975	Flora and Fauna				
Convention for the Conservation of Antarctic Marine Living Resources		22/05/1980	25/05/1980	Waters and Oceans				

Key:
Min: Mining
Agr: Agroforestry
En: Energy
Ser: Services

Agreement	Signed	Ratification	In force	Scope	Sector			
					Min	Agr	En	Ser
International Convention for the Prevention of Pollution from Ships		08/11/1995	29/04/1988	Waters and Oceans				
Amazon Cooperation Treaty	03/07/1978	18/12/1978	12/08/1980	Other				
United Nations Convention on the Law of the Sea	10/12/1982	22/12/1988	16/11/1994	Waters and Oceans				
The Vienna Convention for the Protection of the Ozone Layer		19/03/1990	17/06/1990	Atmospheric Protection				
The Montreal Protocol on Substances that Deplete the Ozone Layer		19/03/1990	19/06/1990	Atmospheric Protection				
Adjustments made to the Montreal Protocol on Substances that Deplete the Ozone Layer	--	--	--	Atmospheric Protection				
Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer	--	--	--	Atmospheric Protection				
Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer	--	--	--	Atmospheric Protection				
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal		01/10/1992	30/12/1992	Other				
International Convention on Oil Pollution Preparedness, Response and Co-operation		21/07/1998	21/10/1998	Other				
Convention on Biological Diversity	05/06/1992	28/02/1994	29/05/1994	Flora and Fauna				
Prevention of Major Industrial Accidents Convention		02/08/2001	02/08/2002	Other				
International Tropical Timber Agreement	13/12/1996	28/11/1997	28/11/1997	Flora and Fauna				
International Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa	14/10/1994	25/06/1997	23/09/1997	Other				

Key:
Min: Mining
Agr: Agroforestry
En: Energy
Ser: Services

Agreement	Signed	Ratification	In force	Scope	Sector			
					Min	Agr	En	Ser
Convention on Nuclear Safety	20/09/1994	04/03/1997	04/06/1997	Other				
Convention on Health and Safety in Mines		18/05/2006	18/05/2007	Other				
The Inter-American Convention for the Protection and Conservation of Sea Turtles	21/03/1997		02/05/2001	Flora and Fauna				
Joint Convention On The Safety Of Spent Fuel Management And On The Safety Of Radioactive Waste Management	31/10/1997	17/02/2006	18/05/2006	Other				
United Nations Framework Convention on Climate Change	29/04/1998	23/08/2002	16/02/2005	Atmospheric Protection				
Kyoto Protocol to the United Nations Framework Convention on Climate Change				Atmospheric Protection				
Convention On The Prior Informed Consent Procedure For Certain Hazardous Chemicals And Pesticides In International Trade	11/09/1998	16/06/2004		Other				
The Cartagena Protocol on Biosafety		22/02/2004	22/02/2004	Flora and Fauna				
Convention On Persistent Organic Pollutants	23/05/2001	16/06/2004	14/09/2004	Other				
Agreement On An Environmental Framework Of Mercosur	22/06/2001	09/10/2003	24/06/2004	Other				
Protocol of Amendments to the Convention On The International Hydrographic Organization		29/10/2009		Waters and Oceans				
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	02/02/2011			Flora and Fauna				
The Convention for the Protection of Flora, Fauna and Natural Scenic Beauty of the Americas				Flora and Fauna				

Legenda:
Min: Mining
Agr: Agroforestry
En: Energy
Ser: Services

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