

**THE EVOLUTION OF ENVIRONMENTAL LAW IN LATIN AMERICA:
THE CASES OF BRAZIL, COLOMBIA AND PERU AND
THE EFFORT TO PROTECT FOREST RESOURCES**

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1. INTRODUCTION

The purpose of this text is to provide an overview of how environmental law is being developed in three countries of Latin America, with particular focus on protection and management of forest resources.

1.1 The Threat of Forest Resources

Forests cover more than one quarter of the world's total land and are not just simple trees placed on an specific geographic area. Trees take part of a general and complex ecological system that works under the condition of balance produced by the interconnection of its parts.¹ As part of that main system forests have some functions, for example, forests Law as a water reservoir, providing a steady supply for humans, plants and animals, purify water and air, modify climate, serves in soil formation, control soil erosion and sustained many species that cannot survive in any other habitat than forests.²

At the same time forests are also a commercial resource. A quick revision of the annual commercial value of wood and wood products may result in billions or trillions of dollars. Actually, the international trade of wood products is more than \$100 billion, production that comes most from developing countries.³

In the past three decades the loss of forests, particularly topical rainforest has become part of the global environmental concerns. The estate of forests has declined in the last years, it is apparent that the rate of deforestation has increased radically, by about a 50 percent during the last decade. " Almost half of the forests that once blanketed the Earth are gone. Each year another 16 million hectares of forest disappear as land is cleared by timber operations or converted by other uses."⁴ Until recent decades most loss of forest occurred in Europe, North Africa, Middle East or in the temperate latitudes in the United States. Now these areas had stabilized this process, in contrast, the vast amount of deforestation has appeared in the tropics.⁵ Deforestation of tropical rainforest become a serious environmental threat in the forest context. Most rainforest are located in the developing countries of Latin America, Africa or Asia, in which the deforestation rates has increases since 1984.⁶

The development needs of the rain forest nations and the demand of forest products accelerated the degradation of tropical rain forest, as well as, cultivation patterns, commercial logging, cattle ranching, road building, mining, or dam construction. Destruction that may cause the disappearance of rain forest within the next thirty or fifty years⁷, as the deforestation of large areas is irreversible: " the

¹ Elain L. Hughes, *Forest, Forestry Practices and the Living Environment*, in *Global Forest and International Environmental Law* (Canadian Council on International Law, eds., International Environmental Law & Policies Series, 1996)

² H. Hammond, *Seeing The Forests Among Trees*. (Vancouver , Polestar Books, 1991) at 15-20

³ David Hunter, James Salzman, Durwood Zaelke, *International Environmental Law and Policy*. (Foundation Press, University Casebook Series, 1998) at 1108-1109

⁴ Janet N. Abramovitz, *State of the World*. 1998 at 22

⁵ Ibid.

⁶ United Nations Report Environment Programme, *Environmental Data Report, 1990*,(New York: Oxford Press, 1990) at 234

⁷ N. Myers, "The future of Forests" in L. Friday & R.A. Laskey, eds., *The Fragile Environment* -

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original forest cannot regenerate due to distance from seed sources, breaking of coevolved relationships, and other ecological changes."⁸

2. THE INTERNATIONAL CONTEXT: INTERNATIONAL PROTECTION OF FORESTS

2.1 Historical Evolution

2.1.1 General Overview

The period between the 1972 UN Stockholm Conference on the Human Environment⁹ and the 1992 UN World Conference on Environment and Development (UNCED)¹⁰ was marked by significant enhancement of public concern and understanding of the nature and extent of the global environmental problems.¹¹ The adoption of many environmental legislation and international treaties in specific subjects areas such as atmosphere, water, biodiversity, among others, marked the difference with previous decades of permanent and unconscious devastation of the global environment. However, it will be unrealistic to affirm that global degradation has reversed or slow down, just a quick look over current economic, social and political situations, shows patterns of unsustainable consumption, economic imbalance, growing poverty in many countries and many other issues that create obstacles for reversing the rate for environmental degradation.

In the field of global forest management, progress was slow and except for sporadic attempts to generate particular forest strategies¹² no global schemes were elaborated to address the main issues of forests concerns and its protection. The evolution of large tensions among North-South characterized the international efforts to develop a world treaty on forests. There still no internationally-binding agreement on forest conservation. Some soft law instruments, international programs and global environmental conventions that cover issues related with forest, conform the international legal instruments for forest protection.¹³

The Darwin College Lectures, (Cambridge, Cambridge University Press, 1989) *supra* note 1 at 45

⁸ Fearnside, Phillip, *Human Carrying Capacity of the Brazilian Rain Forest*. (New York, Columbia University Press 1986) at 7

⁹ The Stockholm Conference was one of the most successful UN Conferences ever held up to 1972. One hundred and thirteen countries attended. The Conference had three main products: The action Plan to protect the global environment; the United Nations Environment Program and the related Environment Fund; and the Stockholm Declaration on the Human Environment. *See* Alexandre S. Timoshenko, *Sustainable Development and International Law*, (International Environmental Law & Policy Series, Graham & Trotman ed., 1995) at 143-166

¹⁰ The United Nations Conference on Environment and Development, took place in Rio de Janeiro, Brazil in June 1992. With 115 heads of state and government attending it was, as one participant quipped, "the mother of all summits". *See* Patricia W. Birnie & Alan Boyle, *International Law and the Environment* (Oxford University Press, New York, 1995) at 9-10; *See also* Hunter, Salzman, Zaelke *supra* note 3 at 294-310

¹¹ Ved P. Nanda, *International Environmental law and Policy*, (Transnational Publishers Inc., Irvington-Hudson, New York, 1995)

¹² Food and Agriculture Organization of the UN (FAO) and the Tropical Timber Organization initiatives.

¹³ *See* Hunter, Salzman, Zaelke, *supra* note 3 at 1116-1117

In 1990, the G-7 proposed the need for an instrument to "curb deforestation, protect biodiversity, stimulate positive forestry actions and address threats to the world's forests."¹⁴ However, when countries started negotiations for an instrument, in preparation for UNCED, divisions between North and South appeared, interfering and defeating the possibility of consensus on a binding instrument. In 1992, at Rio, the attention was centered in a non binding statement of " Forest Principles" and a chapter in Agenda 21, both under the idea of achieving sustainable development.¹⁵ Rio could have been the best chance for a global consensus on forest management, instead, it showed the governments are very far from giving relevance to international environmental concerns preferring their national economic interests over "common concerns".

2.1.2 International Arrangements Specific to Forest

There have been some particular initiatives for promoting sustainability of forest resources. Some of them are: the Tropical Forest Action Program, The International Timber Agreement, UNCED Forest Principles, Agenda 21 and some other initiative independent or from the United Nations.¹⁶

The Tropical Forest Action Program, was a product of many fragmented international initiatives on forests up to 1991. Initially was called the Tropical Forestry Action Plan , and it resulted of a conference convened by the World Resources Institute (WRI) in May 1984, which join 75 leaders in science, governments and citizens from 20 countries, that afterwards changed its name for Tropical Forest Action Program. In general the program has focused in the development of National Forestry Action Plans with flexible processes, that include an initial plan, a discussion of draft, implementation and funding plans and periodic reviews.¹⁷ The Program has achieved broadened international participation, as more than 53 countries originally designated for donor investment have become part of the process and 125 countries with forest resources have joined the program; increased development assistance for forestry, accounting to US \$400-500 million annually in the decades of the seventies and eighties and almost doubled afterwards; and improved natural resources management.¹⁸

On the other hand, the International Timber Agreement, only convention addressing tropical deforestation, although it is facilitating international trade in tropical timber, was negotiated in 1983 and come into force in 1985. The agreement had many limitations like: narrow scope, imbalance of objectives, soft obligations, weak monitoring and enforcement, and funding constraints.¹⁹ For these reasons in 1994 an International Timber Agreement successor agreement was concluded. The agreement was very close to the one of 1983 but with a few progressive points. The objectives are more balanced, sustainable development became a main target,²⁰ promote the necessity of new financial resources²¹ and promotion of technology.²² The agreement remains limited to tropical timber

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Some initiatives are: Intergovernmental panel on Sustainable Development and management, UN Conference on Sustainable Forest Development and Management. *See supra note 1* at 20-26

¹⁷ R. Winterbottom, Taking Stock: The Tropical Forestry Action Plan After Five Year (Washington, DC WRI, 1990) *supra note 1* at 7

¹⁸ Ibid.

¹⁹ David Vander Zwaag & Douglas MacKinlay *supra note 1* at 11

²⁰ *International Tropical Timber Agreement*, 1994, January 26, 1994, (1994)24(2/3)Env. Pol'y &L. 124; Article 1(c)(d)

²¹ *Ibid.* Article 1 (g)

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with consumer nations pledging in a separate statement²³ to commit themselves to the sustainable management of their forests by the year 2000.

Finally,²⁴ another important initiative Agenda 21,²⁵ opened some possibilities towards regional cooperation and a global forest convention. Chapter 38 on International Institutional Agreements promotes: governmental follow-up to the Conference process to be within the framework of the United Nations system²⁶, monitoring progress of Agenda 21 implementation, addressed in deforestation as required in chapter 11²⁷; promotion of international agreements, in particular conventions²⁸ and promotion of regional and sub-regional cooperation through mechanisms as regional commissions and closer cooperation between UNEP and UNDP.²⁹

In 1997, an Intergovernmental Forum on Forests(IFF) was created by the UN Commission on Sustainable Development with the "mandate to build consensus for new international mechanisms for the protection of forests, which might include a legally binding international instrument".

2.2 Forest Principles

These principles are embodied in the "*Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests*", adopted in the United Nations Conference on Environment and Development (the Rio Conference) and commonly known as the Forest Principles or Forest Declaration.

The Forest Principles are the first global consensus statement on forests, conforming the best step in order to find international cooperation and global agreement in terms of forest management and conservation. Forest principles address the goal of sustainable development, recognize forest benefits in managing forests, address the importance of forests in ecosystems stability, confirm the need of financial assistance in forest management and acknowledge the participation of communities and minority groups³⁰ in forest management.³¹

The "guiding objective of these principles is to contribute to the management, conservation and sustainable development of forests and to promote their multiple and complementary functions and uses.³² The Declaration is emphasizing the rational use of natural resources, as it is stating the idea of

²² *Ibid.* Article 1 (m)

²³ Formal statement by Consumer Members, reprinted in (1994) 24 (2/3) Env. Pol'y & L. 124

²⁴ UNCED Forest Principles will be discussed in the next section.

²⁵ A Non-Legally Binding Authoritative Statements of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, reprinted in S.P. Johnson (ed.), *The Earth Summit: The United Nations Conference on Environment and Development(UNCED)* (London: Graham & Trotman, 1993) at 125-508

²⁶ *Ibid.*, par. 38.1, at 490

²⁷ *Ibid.* par. 38.11-38.14, at 492-493

²⁸ *Ibid.* par. 38.22 (h), at 494

²⁹ *Ibid.* par. 38.29-38.32, at 496

³⁰ Women, indigenous groups.

³¹ See Hunter, Salzman, Zaelke *supra* note 3 at 1119

³² A Non-Legally Binding Authoritative Statements of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, A/CONF.151/26

conservation while using all type of forests for its intrinsically multiple purposes.

It is important to note that the preamble of the Forest Declaration recognizes the complexity and unique process that forests represent, giving a strong importance not only in what they can offer for the satisfaction of human needs, but also in terms of environmental values. Accordingly, forests become a management and conservation concern for Governments and a "value for local communities and to the environment as a whole".³³

In addition, the Declaration gives to each of the States the possibility to implement and pursue these principles according to their own constitution and national legislation. However, it is important to note that it is recognizing that States have sub-national levels that may be involved in the joint work of managing the State and may also be in charge of forest management and sustainable development, therefore, they can be responsible of their actions in this regards.³⁴ This criteria means a considerable effort in opening the possibility to sovereign states to distribute responsibilities to the sub-national levels, issue that implies a development of international law principles.³⁵

The Declaration emphasizes the importance of international cooperation, when establishes that for "achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitable shared by the international community".³⁶

Under the recognition of the forest's environmental value, the Declaration recognizes the role of "all types of forests in maintaining the ecological processes and balance" at all local, regional and national levels and its "role in protecting fragile ecosystems, watersheds and freshwater resources and as rich storehouses of biodiversity and biological resources and sources of genetic materials for biotechnology products."³⁷

This principle is lighting on one side, the importance of forests in the ecological balance but on the other hand is showing the interconnection between forests and other natural resources as water or biodiversity, all issues that might be integrated at the moment of creating environmental management policies.

Furthermore,, the Forest Declaration pursuing the same knowledge line of the United Nations Conference on Environment and Development, in which the topic of environmental protection and the role of minority groups had some relevance, established that " National forest policies should recognize and duly support identity, culture and the rights of indigenous people" and its capacity for conservation and management of forests. On the other hand it also lights the role of women in "all

(Vol. III) 14 August 1992, preamble (a)

³³ *Ibid.* preamble (f)

³⁴ *Ibid.* preamble (h)

³⁵ Under international law principles the only responsible for international damages is the sovereign state involved in the harmful action and within the compliance of some other requirements. *See also* Francisco Orrego Vicuña *State responsibility, liability, and remedial measures under international environmental law: New criteria for environmental protection. In Environmental Change and International Law* (Brown Weiss ed., United Nations University Press, 1992) at 124-158

³⁶ *See supra note* 20, principle 1 (b)

³⁷ *Ibid.* principle 4

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aspects of forest management."³⁸

As stated in one of its principles, the Declaration is considering linkages between forest production, conservation and trade aspects. It determines the necessity of an economical climate that supports a sustainable forest's production and consumption that allows "the eradication of poverty and the promotion of food security." For this purpose it emphasized the necessity to generate "financial resources for developing countries with significant forest areas (...), resources that should be directed notably to economic sectors which would stimulate economic and social substitution activities."³⁹ It is relevant to note that in the same idea the "effort of developing countries in the intent of strengthen the management, conservation and sustainable development of their forest should be supported by the international community" and new financial resources and transfer of technologies must be promoted.⁴⁰ In terms of trade, is clear that the "trade of forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and policies."⁴¹

Many international instruments states the duty of an Environmental Impact Assessment.⁴² as a main tool for the protection of the environment. In this sense, under the Forest Principles, "national policies and legislation should ensure that environmental impact assessments should be carried out when actions are likely to have significant adverse impacts on important forest resources."⁴³

Another important aspect is related with how, customary international law had addressed that every state can freely exploit its natural resources, into the extent that exploitation will not interfere with rights of other countries.⁴⁴ Principle 21 of the Stockholm Declaration on the Human Environment⁴⁵ and Principle 2 of Rio Declaration⁴⁶ stated that states have the right to utilize its natural resources with the obligation of not causing any serious damage to the environment of other states or to areas beyond the limits of its national jurisdiction.⁴⁷ In the same idea, the Forest Declaration recognized the same right to states⁴⁸, creating an important role for this principle in the forest management context. Is clear that is giving the management of state's forests to their exclusive domain. This particular principle is linked to some other international environmental principles: states, cannot use their territories to produce environmental harm to other states, duty to prevent harm, equitable utilization of shared resources, common concern of human kind and the precautionary principle.

³⁸ *Ibid.* principle 5 (a) (b), 12 (d)

³⁹ *Ibid.* principle 7 (a), (b)

⁴⁰ *Ibid.* principle 9, 10 and 11

⁴¹ *Ibid.* principle 13 (a)

⁴² Process for examining, analyzing assessing proposed activities, policies or programs to integrate environmental issues into development planning and maximize the potential for environmentally sound and sustainable development

⁴³ *See supra note 20* principle 8 (h)

⁴⁴ Jutta Brunnee *supra note 1* at 48

⁴⁵ *Stockholm Declaration On the Human Environment*, 16 June 1972, reprinted in David Hunter, James Salzman, Durwood Zaelke, *International Environmental Law and Policy, Treaty Supplement*, . (Foundation Press, University Casebook Series, 1998) at 25

⁴⁶ *Ibid.* Rio Declaration, 13 June 1992, at 31

⁴⁷ *See supra notes 34, 35* at 25, 31

⁴⁸ *See supra note 20* principle 1

Most of these principles create in some way obstacles to the exercise of State sovereignty, as they propose conducts that immediately evoke common concern, international cooperation, probable limitations in the use of natural resources and duties in order to prevent and avoid international harm. Dealing with sovereignty and environmental problem is not an easy issue, particularly when is clear that environmental problems do not have frontiers and may not be considered as simple particular problems of a singular State. Currently, there is consensus in the idea that the planet is ecologically interdependent, generating in humanity an specific collective interest in the activities that may cause imbalance over natural resources. Indeed, international law and international environmental law has recognized the right of each state to manage their natural resources but at the same time has generated duties, that avoid harm to other States and to the global environment.

The principles discussed conform the framework for the required international legal approach to the forest issue. Depending on their development in the future, these principles may do more than that and spell out legal obligations of States and create a more complex and effective forest regime.

2.3 Sustainable Forest Management

After all the international negotiations there is a consensus that sustainable forest management must feed the goals of forest policies in the states. The implementation of sustainable management is not an easy issue, however there are some initiatives and activities that intent its promotion under the idea of stabilizing deforestation and protecting forest resources.⁴⁹ In general terms what sustainable forest management implies is "that forests must be managed as a ecosystem complex to supply a wide array of goods and services for current and future generation."⁵⁰

There have been some intents to define the sustainable forest management. Intents that generally involve the idea of conceiving forest as ecological systems that must feed the social, economical and ecological needs of current generations.⁵¹ Under this idea forest must maintain its quality while maintaining its ecological and biodiversity processes.

States have not been successful to establish a definite concept of sustainable forest management at an international level, although, there has been some international instruments that contemplate this principle. For example, the Forest Declaration in its Principle 1 (b) establishes that:

"forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual human needs of present and future generations. These needs are for forest products and services, such as wood and wood products, water, food folder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks reservoirs, and other forest products. Appropriate measure should be taken to protect forests against harmful effects of pollution, including air-borne pollution, fires, pests and diseases in order to maintain their full multiple value"

In the same criteria the International Tropical Timber Organization (ITTO) defines forest sustainability, however, it stills more concentrated in timber production. In the Sustainable Forest Management, Decision 6(XI) of the International Tropical Council, of the ITTO sustainable forest management is the :

⁴⁹ Hunter, Salzman, Zaelke *supra* note 3 at 1126

⁵⁰ Ibid.

⁵¹ Ibid.

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"process of managing permanent forest land to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment"

These definitions are broad in order to implement a sustainable forest management. Indeed, there is a need of creating some indicators and criteria that can assess whether products come from a sustainable forest management procedure or not. During the last decades there have appeared some intents to generate those indicators. For example the Helsinki Process, which adopted four resolutions including general criteria for sustainable forest management. The result was the adoption of six criteria and associated indicators that mention: appropriate enhancement of forest resources, maintenance of forest ecosystems, maintenance of productive production of forests, maintenance of biodiversity in forests ecosystems, appropriate enhancement of protective functions in forest management and the maintenance of other socio-economic functions and conditions.⁵²

There are some other efforts to identify criteria and indicators like: "the Montreal Process " in 1993 that pretended to define criteria and indicator to evaluate temperate and boreal forest management, and the "Tarapoto Proposal of the Regional Workshop on the Definition on Criteria and Indicators for Sustainability of Amazonian Forests", which contained twelve criteria and eighty-one qualitative and quantitative indicators to promote sustainable forest management in the Amazonian rain forest.⁵³

2.4 Regional Perspective

Regional or even bilateral treaties when they are partly or wholly devoted to environmental protection frequently establish permanent agencies, to assure equitable sharing and efficient utilization of resources.⁵⁴ In other words, international regional agreements are consequence of the State's necessity to issue cooperative arrangements to deal with environmental problems in certain geographic areas.⁵⁵

In regards to the Latin American region and mainly the South American countries like Brazil, Colombia and Peru, target of the present paper, there are no concrete and specific agreements concerning forest protection. These three countries share one of the more bigger extension of tropical rain forest in the world: The Amazon Region, area that have been object of main environmental devastation. However, the initiatives for protecting forest resources in the region are limited to those global or regional instruments for the protection of the environment in the points that concern to forest resources.

The most important agreement that establish some provisions for the protection of the Amazonian environment is the Amazon Cooperation Treaty (*Tratado de Cooperación Amazónica*)⁵⁶ which intents

⁵² *Ibid.* at 1126-1128

⁵³ *Ibid.* at 1128

⁵⁴ Alexandre Kiss & Dinah Shelton, *International Environmental Law*, (Transnational Publishers, Inc. Ney York, graham & Trotman, London ed., 1991) at 91

⁵⁵ Lynton Keith Caldwell, *International Environmental Policy*, (Duke University press, London ed., 1996) at 158

⁵⁶ *Tratado de Cooperación Amazónica*, 3 de Julio on July 3, 1978, between Bolivia, Brazil, Colombia,

to promote the development of the Amazonian territory, share equitable benefits from development and achieve the incorporation of the Amazonian territories to the national economies of each of the parties in the treaty.⁵⁷

The Amazon Cooperation Treaty recognized the necessity of exploitation of flora and fauna of the region, but under rational conditions in order to maintain the ecological balance and preserve the species of the region.⁵⁸ Under these premises the treaty promotes the scientific research, exchange of information related with conservation of natural resources among the countries parties of the agreement, all considerations in the idea to improve the knowledge on the natural resources of the area.⁵⁹

Under this framework, the conservation and management of the Amazon natural resources is concentrated in the Special Commission for the Amazon Environment (*Comisión Especial de Medio Ambiente de la Amazonía (CEMAA)*).⁶⁰, created in Quito of 1989. This commission is in charge of the promotion of joint actions for environmental management, that favor the realization of sustainable development projects for the Amazon natural resources. The Commission has created some programs particularly concentrated in forest protection. With these programs the Commission had tried to protect deforested and abandoned areas, in order to promote natural regeneration of forest, prevent forest fires, and improve the forest vigilance and control systems in order to guide the colonization processes in a way that avoid deforestation and irrational use of forests.⁶¹ Some of the programs are related with forest products, forest industry, forest and agriculture, forest actions, management of humid tropical forests among others.

In addition, Brazil, Colombia and Peru, as well as some other countries in the region had ratified the main international agreements concerned with environmental protection as the Biodiversity Convention, the Convention of Climate Changes, the International Tropical Timber Agreement, Vienna Convention for the Protection of the Ozone Layer, Rio Declaration on the Environment and Development, Agenda 21, the Forest Declaration, and many other instruments regarding with air pollution, biodiversity, water hazardous substances, nuclear safety among other environmental issues. Accordingly, the environmental principles for the promotion of the environment and those centered in forest protection have been recognized by these countries and incorporated to their particular environmental policies and legislation and environmental management plans and conform the major international environmental instruments in Latin America and the Caribbean Region.

Ecuador, Guyana, Peru, Suriname and Venezuela has seen fruitful undertakings in the quest for attaining its prime objective, the promotion of conservation and sustainable development of the Amazon basin..

⁵⁷ Amazon Cooperation Treaty, Preamble

⁵⁸ *Ibid.* Article 7

⁵⁹ *Ibid.* Article 7(a) (b)

⁶⁰ *Ibid.* Article 24 The commission is a permanent mechanism to promote environmental conservation in the region.

⁶¹ Secretaría Pro-Tempore del Tratado de Cooperación Amazónica. *Informe de Gestión 1994-1997*. Lima, Perú. (hereinafter Management Report 1994-1997. Amazon Cooperation Treaty)

3. ENVIRONMENTAL POLICY IN BRAZIL, COLOMBIA AND PERU

3.1 The Legal Framework

3.1.1 An overview of the Current Environmental Legislation in Brazil, Colombia and Peru

3.1.1.1 Constitutional Framework

The constitutions of Brazil, Colombia and Peru contain provisions relevant to the environmental protection. These provisions constitute the legal framework in which the legal structures for the environmental protection develop.⁶²

The three countries have experienced different moments in terms of environmental protection evolution. Changes that have been linked with international develop in the area. There are some constitutional provisions that were issued before 1972, like the Colombian Constitution of 1886, in which the environmental topic had no importance and the rules were just limited for broader interpretation in the hands of the doctrine regarding to certain environmental issues. Some other constitutional provisions were issued after that time, which coincide with the United Nations Conference on Human Environment held in Stockholm in 1972. However, these provisions were also more centered in the protection of certain natural resources. Under this conception these provisions prescribed that "resources must be conserved and used rationally. They often took the form of precepts dealing with ownership of natural resources, bringing them under public domain."⁶³ These kind of regulations are found in the Constitutions of Brazil of 1988, Colombia of 1886 and Peru of 1979.

It is important to notice that the three countries did not maintain such static conception of environmental protection and created norms that deal with environmental protection as a whole giving space to important modern principles which create the constitutional basis for a modern environmental legislation.⁶⁴

Brazil Federal Constitution of 1988 contains a special chapter on environmental issues, establishing: "the right of an ecologically-balanced environment, public amenities, and those things essentially to a healthy quality of life."⁶⁵ The Constitution gives everybody the right to enjoy a healthy environment while oblige nationals and government to preserve it⁶⁶. The Federal Constitution defined some principles that informed the environmental legislation. On one side, emphasizes the conservation and protection of natural resources, imposing to the Public Power the duty to "conserve and restore the essential ecological processes" and the necessity to establish and ecological management of ecosystems and species.⁶⁷ On another sense, the Federal Constitution guaranties the

⁶² Raúl Brañes, Institutional And legal Aspects of the Environment in Latin America, Including the Participation of Non-governmental Organizations in Environmental Management,(Interamerican Development Bank, Washington, DC 1991) at 19

⁶³ *Ibid.* at 21

⁶⁴ Raul Brañes, *supra note* 62 at 21

⁶⁵ Constitucao Federal da Republica Do Brasil, 1988 Hereinafter Brazil Federal Constitution) Article 225

⁶⁶ *Ibid.* at Article 225

⁶⁷ *Ibid.* at Article 225 par. 1 (I)

access and diffusion of environmental information. Under this criteria the government has the possibility to "require for any activity that may cause environmental harm, an environmental impact assessment that will be published and diffused"⁶⁸

In terms of environmental liability, the Brazilian Federal Constitution creates and objective liability to those who explore mineral resources. If the exploration activity cause any environmental degradation the responsible must realize all the activities necessary to restitute the damage.⁶⁹ In addition, the Federal constitution determines that those activities that cause damage to the environment will make their actors subject of the respective fines and criminal or administrative sanctions.⁷⁰

Colombia was one of the first Latin American countries to issue legislation protecting the environment. Although the Constitution in effect in Colombia from 1886 and 1991 made no reference to the environment. The National Constitution adopted in 1991 is considered one of the more Green Constitutions in the World. It contains more than 30 provisions which directly or indirectly refers to the environment. Some of the most important provisions are related with: the right to a healthy environment,⁷¹ the general obligation of the state to protect the cultural and natural resources of the nation,⁷² the general obligation for individuals to protect the natural and cultural resources of the nation and the duty to conserve a healthy environment,⁷³ the obligation of the state to improve and maintain welfare and life quality of the Colombian population⁷⁴, and the necessity of international cooperation for conservation of boundary ecosystems⁷⁵ among others. There are also some provisions related with education, ownership of natural resources and sustainable development. There is no doubt that the principle of sustainable development is the essence of the fundamental principles that inform this ecological constitution.

Peru Constitution of 1979 established that "everybody has the right to a healthy environment ecologically-balanced and adequate for life development and the natural resources protection. Everybody must protect the environment."⁷⁶ Under the Constitution of 1993, the Peruvian state, continue to recognize the right to "peace, tranquility, joy of free time and the possibility to enjoy a balanced environment and adequate for life development."⁷⁷ The new constitution dedicated one chapter for the environment and natural resources, section that is part of the economic regime of the state. In this section, the constitution provides that natural resources are of public domain, that individual can use and possess natural resources under some legal requirements⁷⁸, that the state is the one who defines the environmental policy of the state while promotes sustainable development⁷⁹, that

⁶⁸ *Ibid.* at Article 225 par. 1 (IV)

⁶⁹ *Ibid.* at Article 225 par. 2

⁷⁰ *Ibid.* at Article 225 par. 3

⁷¹ Constitución Política de Colombia de 1991, (Hereinafter Colombian Constitution), Article 79

⁷² *Ibid.* at Article 8

⁷³ *Ibid.* Article 95

⁷⁴ *Ibid.* at 49, 366

⁷⁵ *Ibid.* at Article 289

⁷⁶ Constitución Peruana de 1979, (Hereinafter Constitution of Peru), Article 123

⁷⁷ Constitución Peruana *supra note* 76, Article 2 par. 22

⁷⁸ *Ibid.* at Article 66

⁷⁹ *Ibid.* at Article 67

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the state is responsible to promote conservation of biodiversity and natural protected areas⁸⁰ and that the state must promote sustainable development in the amazon region.⁸¹

All the principles enshrined by these three different but similar constitutional regimes are very important, as they insist in giving the state a duty to protect the environment, giving legitimacy to the actions governments have been taking.⁸² At the same time giving the citizens a duty to protect the environment open the possibility to establish some restrictions and duties on the exercise of their rights over the environment. And the necessity of an environmentally development allows governments to modify their style of development to some more sustainable structures that help to attack the real causes of environmental devastation.

3.1.1.2 Environmental Legislation

This is an attempt to afford a more concrete idea of how the systems are structured and their main rules are about.

Brazil environmental legislation recognizes that natural resources are scarce and in this sense intents to generate different defense measures to control activities that may threat natural resources. This measures tents to refer to the different sectors of life and in that sense the different environmental aspects are regulated by law in a divisible way. This means that the environmental legislation touches another branches of law that are also necessary to incorporate in the mission of protecting the environment.⁸³

Brazil has had a body of rule that systematically regulates environmental protection since 1981. Law 6938 establishes the national environmental policy, its purposes and mechanisms for formulating and applying it.⁸⁴ Law 6938 determines that the environmental policy in Brazil has as its main objective" the preservation, improvement and restitution of environmental qualities(...) assuring socioeconomic, national security conditions as well as, the protection of the human dignity."⁸⁵

Alongside the general Law 6398, there are others laws that refer to many other topics: land use (Law No. 4504, which constitutes the Land Statute), water resources (Law No. 6662, which creates the national irrigation policy), flora (Law No. 4771 and other regulations that constitutes the Forest Code), fauna (Law No. 5197, which regulates wildlife protection) nonrenewable resources (Decree Law No. 227, which constitutes then Mine Code) marine environment (Law No. 5357, which deals with marine pollution) and many others.

Colombia counts with environmental legislation since 1974 Different types of norms have conformed the Colombian environmental legislation. There are legal norms and principles established by different laws and decrees Accordingly, the Colombian environmental legal system is conformed by administrative norms, which regulates the use and management of natural resources and allows the

⁸⁰ *Ibid.* at Article 68

⁸¹ *Ibid.* at Article 69

⁸² Raul Brañes *supra note* 62 at 21

⁸³ Andre Tostes, *Sistema de Legislacao Ambiental*, 1994 at 57

⁸⁴ Raul Brañes, *supra note* 62 at 23

⁸⁵ Law 6398 of December 31, 1981 at Article 2

government to impose administrative fines and sanctions, criminal norms which regulate the punitive actions against the environment and civil norms and special norms applicable to damaged cause to the environment.⁸⁶ The basic environmental statutes are: Law 99 of 1993 which created the national Environmental System as a "group of policies, institutions norms and resources for the Colombian environmental policy"⁸⁷ and constitutes the framework for the evolution of environmental policies in the country, the Code of Renewable Natural Resources and Environment Protection of 1974 which determine the general principles that must guide the environmental management of the nation and the rights and duties regarding to the environment, the Sanitation Code (Law 9 of 1979) which contains a legal regime in three basic areas: environmental sanitation, sanitation control and people's attention. There are many other legal precepts, related to particular natural resources like: Decree 1541 Of 1978 on non-maritime waters, Decree 1681 of 1978 on wildlife, Decree 1877 Of 1979 on use of marine resources, Decree 948 of 1995 on protection and control of air quality, among others.

Peru issued in September of 1990 the Environment and Natural Resources Code, under the idea of providing a complete legislation in this concern. The Code addresses the constitutional principle of the right that every citizen has to enjoy a healthy environment⁸⁸, determines that conservation and protection of the environment and natural resources in order to achieve a good life quality is the objective of the environmental policy.⁸⁹ In addition, the Code establishes norms regarding with environmental planning,⁹⁰ control and vigilance,⁹¹ protected areas,⁹² some provisions related with certain natural resources like non renewable resources and water⁹³ and some other related with administrative sanctions for the environmental violations.⁹⁴ The Code has not derogated some other norms that refers to certain environmental components or activities that may cause environmental impact.⁹⁵ Provisions that include: the Law of Agrarian Reform, the Law of Forestry and Wildlife, The Law of General Industry, The Law of Water, The Law of General Fisheries, The Health Code and many others. It is important to refer that the Code mandates to issue the update of the Forest Code and other special provisions. Under this idea there is a discussion process for the creation of a new Forest Law, process that has been taking place since 1991 with the participation of the public and private sector, academy and NGOs This forest reform still pendent.

3.2 The Institutional Framework

The environmental problems are characterized by the difficulty of allocating rights and obligations regarding natural resources use and environmental conservation among different actors.⁹⁶ In this duty environmental agencies are very useful, as they can clarify, establish, enforce, trade and in general

⁸⁶ Baker & McKenzie, *Environmental Law and Policy in Latin America*, Federico M. Ruanove ed. 1998) at

⁸⁷ Law No. 99 of December 22, 1993

⁸⁸ Environment and Natural Resources Code, approved by Decree 637 of 1990, Article I

⁸⁹ *Ibid.* at Chapter I, Article 1

⁹⁰ *Ibid.* at Article 3-7

⁹¹ Environment and Natural Resources Code, *supra note* 88 at Article 20-24

⁹² *Ibid.* at Article 50-58

⁹³ *Ibid.* at Articles 62-77 and 107-112

⁹⁴ *Ibid.* at Article 113-118

⁹⁵ Raul Brañes *supra note* 62 at 25

⁹⁶ Laura Tlaiye & Dan Biller, *Successful Environmental Institutions: Lessons from Colombia and Curitiba, Brazil*, (World Bank, Latin America Technical Department, Environment Unit ed., 1994) at 2

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efficiently allocate rights and obligations over natural resources while curtailing the causes of environmental degradation.

Environmental government institutions need at minimum certain elements in terms of its placement and functions within the government structure.⁹⁷ With a correct definition of jurisdiction, a well defined group of functions that include a part of development planning and being entitled with the sufficient resources to achieve goals, environmental institutions can be very useful for enforcing an implementing environmental policy and legislation.

Creating environmental government institutions has been difficult in Latin America as in many other parts of the world. Almost all the countries in region has established environmental government institutions at a central level that pretend to bring in together the interests of the different entities in charged of environmental management at a national and local levels.

In 1973, Brazil created the Special Secretary of Environment (*Secretaria Especial de Medio Ambiente*) by the Federal Decree 73.030. Then the Law of Environmental Policy (Law 6.938) established that the national Environmental System must be compose with a superior, consultative, central and local organs. Under these structure the organs that conform the National Environmental System are: a superior organ that is the Government Council, under the presidential authority, a consultative organ, the National Environmental Council (CONAMA) a central organ, Secretariat of the Environment, and executive organ called the Brazilian Institute of the Environment and Natural Renewable Resources (IBAMA), some organs of the federal administration with functions related to the protection of the environment, other state organs responsible for environmental programs and local organs responsible of environmental programs and fiscalization of those activities that require natural resources.⁹⁸ The National and Environmental Council (*Consejo Nacional de Medio Ambiente (CONAMA)*) advises the government in study, propose and create environmental policies.⁹⁹ The IBAMA was placed under the Ministry of Interior, acts as the secretariat of the CONAMA, assists the president in shaping environmental policies, regulate and evaluates policies, create state agencies and control of activities harmful for the environment.¹⁰⁰ These two agencies are the more active agencies in terms of environmental protection.

In general Brazil environmental protection agencies at the state and federal levels have concurrent jurisdiction to control quality of natural resources, establish environmental standards, and discharge limitations governing pollution of natural resources, issuing operating licenses, monitoring polluting activities, and finding violators.¹⁰¹ Agencies have similar competencies that generate confusions as one agency can act in the field or jurisdiction of the other, generating an inefficient use of financial resources as resources are spent for the same purpose.¹⁰²

In Colombia the National Environmental System was implemented by Law 99 of 1993 which refers the basic environmental institutions that have the responsibility of the environmental management in

⁹⁷ Ibid.

⁹⁸ Paolo de Bessa Antunes, *Direito Ambiental*, (Lumen Juris ed. Rio de Janeiro 1998)

⁹⁹ Andre Tostes *supra note* 83 at 70

¹⁰⁰ Raul Brañes *supra note* 62 at 30

¹⁰¹ Baker & McKenzie *supra note* 86 at 29

¹⁰² Andre Tostes *supra note* 83 at 69

Colombia. The institutional structure is formed by mainly four kind of agencies: the Minister of the Environment, director and coordinator of the environmental policy; scientific and technological entities which inform and help the Minister of Environment in technological and scientific aspects;¹⁰³ advisers entities conformed by the National Environmental Council which was created to ensure the cross-sector coordination of environmental policies and conformed by people from the agricultural sector, mine sector, industrial sector, indigenous, exporter, NGOs and universities among others;¹⁰⁴ and finally, the Environmental Management and Regional Development Corporations (*Corporaciones Autonomas Regionales*) that are public entities with administrative and financial authority. Colombia was divided in environmental jurisdictions and each of them has its own entity en charged of the management of the natural resources of the region and the promotion of sustainable development.¹⁰⁵

Regarding institutional aspects in Peru it can be mention that this country just until the last decade did not count with an organized institutional structure that protect the environment. Just few institutions did efforts in order to assure environmental protection. Some of those institutions were the General Directorate for Forests and Fauna (Dirección General Forestal y de Fauna), the Peru Institute of the Sea(Instituto del Mar del Perú) and the National Office of Natural Resources Evaluation (Oficina Nacional de Evaluación de Recursos Naturales).¹⁰⁶ During the last years the tendency has changed and an institutional organization has been emerged. When the Environment and Natural Resource Code was issued it introduced a National Environment System "composed of all government institutions engaged in research , assessment, monitoring and control of natural resources and the environment, and some other offices of the ministries and public authorities at the national and local levels have the same responsibilities. In addition, the executive Power is in charge of determining the organ that must be coordinating the whole system."¹⁰⁷ This provision was modified by the Law 26410 of 1994 which created the National and Environmental Council (CONAM), as an " decentralized organism with legal entity, functional, administrative, financial, technical and economic autonomy."¹⁰⁸ The CONAM is the coordinator of the national environmental policy and has as its main functions: promote, coordinate, control and protect the natural environment of the nation,¹⁰⁹ however, the different sector still managing and executing the environmental policy.

3.3 Legal Instruments for the Protection of the Environment

3.3.1 Legal Actions for the Protection of the Environment

Brazil counts with different kinds of mechanisms for the protection of the environment, that can be classified in constitutional, administrative, and procedural instruments. First, the Federal Constitution gives the citizens the right to present popular initiatives in order to present legislative projects of any nature that can be debated and approved by the National Congress.¹¹⁰ Second, there are some administrative instruments like the right to receive information from public agencies about issues of

¹⁰³ Law 99 of December 22,1993 art 16-20

¹⁰⁴ *Ibid.* at Articles 11-15

¹⁰⁵ *Ibid.* at Articles 23-41

¹⁰⁶ ONERA, *Perfil Ambiental del Peru*, (hereinafter Peruvian Environment) 1986 at 274

¹⁰⁷ Environment and Natural Resource Code, Article 128

¹⁰⁸ Law 26410 of December 22, 1994 Article 1

¹⁰⁹ *Ibid.* at Article 2

¹¹⁰ Brazil Federal Constitution, *supra note* 65 at Articles 14 (III) and 61 (2)

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collective or general interest,¹¹¹ the right to petition before the different Public Powers of the state in the defense of rights or against illegal actions or power abuse., the civil claim (Inquérito Civil) for the protection of the public and social equity and the protection of the environment or other diffused interests, the definition of territorial areas that are considered the special importance for the environment, therefore as an area of special protection,¹¹² and there is a power of environmental police that pretends to protect cultural, arqeological and natural treasures of the nation.¹¹³ Finally regarding the procedural instruments there are some that deserve a special mention. The public action, that was already mentioned above, the Community Claim or *Acción Popular* which can be exercised by any person in order to nullify those actions against the historical, economic, esthetic or tourist equity of the Federation.¹¹⁴ And the expropriation alternative instrument that gives to the state the possibility to expropriate individual properties under a public interest concern.¹¹⁵ It is also important to comment that there are some criminal procedures that involve sanctions for illegal actions against the environment.

The Colombian environmental legislation gives instruments to the people for claiming their environmental rights. There are eleven different procedures for the purposes that seek for the detention of environmental problems. The more used and debated actions are the Guardianship Claim Action (*Acción de Tutela*) or the Community Claim or *Acción Popular*.¹¹⁶ The "*Acción the Tutela*" is a mechanism to protect fundamental rights of the individuals against abuse of state. One of the problems to exercise this action for the protection of the environment is that the right to a healthy environment is not listed as one of the fundamental rights stipulated under the Colombian Constitution. However, the Constitutional Court established some criteria around this issue. In the first decision about the topic, the right to a healthy environment was considered as a fundamental right based in its relation with the health and life of the people.¹¹⁷ After the latter decision the Constitutional Court modified its criteria and establishes a uniform solution for the interpretation of this issue. It established that the right to a healthy environment is a collective right, therefore the *Acción de Tutela* cannot be used to obtain its protection as it is just to protect fundamental rights, so the correct action will be the People's Action.¹¹⁸ It seems to be a correct interpretation as the right to a healthy environment in the Colombian Constitution is classified under the section of "Collective Rights" or a "third generation" right and who is entitled to use this action is not an individual but all the community. On the other hand the People's Action is used to protect the elements that constitute the public space and the environment and it can be exercised against a natural or legal person in order to protect the right to a healthy environment. There are other actions that pretend to obtain remedies from the responsible of environmental harm. Some other actions involve criminal or administrative decisions in regards to sanctions.

In Peru the instrument for environmental protection are basically of constitutional nature. The

¹¹¹ *Ibid.* at Article 5 (XXXIII)

¹¹² *Ibid.* at Article 129 (III)

¹¹³ *Ibid.* at Article 23 (II, IV, VI)

¹¹⁴ Law 4.717 of June 29, 1965, Article 1

¹¹⁵ Brazil Federal Constitution *supra note* 65 at 5 (XXIV)

¹¹⁶ Sandra Rodriguez & Naryan Alonso, *Mecanismos Jurídicos de la Protección Ambiental* (hereinafter *Legal Instruments for the protection of the Environment*) at 61

¹¹⁷ Constitutional Court T-92/93, T-411/92, T-415/92, T-428/92, T-437/92, T-451/92

¹¹⁸ Constitutional Court SU-67/93

Constitution of 1993 established within the fundamental rights of a person the right to a balance environment and adequate life development,¹¹⁹ giving this right the category of a fundamental right. In this sense, the Constitution establishes as a mechanism of defense of fundamental rights the "*Acción de Amparo*" which "proceeds against any action or omission of any authority or agent of the state, that threatens or violates the rights recognized under the Constitution."¹²⁰ becoming the first instrument for the protection of environmental rights. On the other hand the Constitution determines that citizens have the fundamental right to ask for information and receive it from the governmental agencies, unless they affect personal intimate or that because of national security reasons it cannot be disclosed. This right can be exercised with the "*Acción de Habeas Data*" that "proceeds against the omission or action of any governmental authority that violates or threatens this constitutional right."¹²¹ It is also possible to exercise in case that a governmental agency deny the application of an environmental regulation, the *Acción the Cumplimiento*" , in order to oblige the government to apply and act according the effect environmental legislation.¹²² In addition, there are some other administrative and civil instruments that applies for environmental protection and there is a complete catalog of ecological crimes enforced by different kinds of sanctions¹²³, and implemented by special requirements and procedures¹²⁴ conforming the whole group of instruments for the protection of the environment.

3.3.2 Public participation As An Instrument to Protect the Environment

The public participation can be considered as an instrument that clearly contributes for the environmental management, premise that allows to say that it can also be considered as an instrument that promotes environmental protection. There is no doubt that the community in general is the one that may have a better and concrete approach of its environment, therefore, it can help in defining the correct strategies and necessities for protecting it. This means that the society must be informed in a truthful, full and timely manner about the matters in which it should intervene.

Under international environmental principles to "defend and improve the human environment for present and future generations has become a imperative goal for man kind", objective that will "demand the acceptance of responsibility by citizens and the communities and by enterprises and institutions at every level, all sharing equitably in common efforts".¹²⁵ This means that society's action will shape the environment of the future, and that its participation is not just duties but also rights to participate in public decisions that can have an environmental impact.. Concept that applies to citizens as individuals, or no joiners, or citizens as organizations for environmental protection or any other expression of civil society.¹²⁶

Normally, citizens participate in public affairs within the existing constitutional principles. In Latin America those constitutional principles are based on systems with representative or indirect

¹¹⁹ Peru Constitution, *supra note* 76 at Article 2 (22)

¹²⁰ *Ibid.* Article 200 (2)

¹²¹ Peru Constitution *supra note* 76 at Article 200 (3)

¹²² *Ibid.* at Article 200 (6)

¹²³ Código Penal del Peru, (hereinafter Peru Criminal Code), Article 304-314

¹²⁴ Law 26631 of June 21, 1996

¹²⁵ Declaration of the United Nations Conference on the Human Environment, Stockholm ,1972 in *supra note* 45 at Article 1 (6), (7)

¹²⁶ Raul Brañes, *supra note* 62 at 83

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democracy and in some other cases of direct democracy like referenda or popular initiatives.¹²⁷ This means that people exercise sovereignty through the public powers of their state, which delegate this sovereignty under certain cases expressly defined by their legal system, Therefore, the general rule will be the absence of direct participation, unless the existence of express provisions.

Regarding environmental legislation, the common idea in the region will be not to give citizens or group of citizens the right to participate in government environmental management, unlike certain legislation in some of the countries. In addition, public participation has been exercised by group of citizens, basically NGOs, involved in environmental protection than by individual citizens.

In Brazil, Decree 99.274 which regulates some aspects of the national environmental policy, provides that the National Environment Council. (CONAMA), will include representatives from non-governmental organizations that promotes environmental protection¹²⁸. In the particular regulations of the Amazon states is possible to find some legal norms that emphasize the role of public participation. There are state constitutions like the Amazon Constitution that establishes that in the case of " activities that may altered in a significant way the environment, it is possible to initiate a process to obtain an environmental license that evaluate the correspondent study of environmental impact, through plebiscite or consultation of the affected communities convoked by two of the powers of the state.¹²⁹ In addition, Decree 10.028 of 1987 establishes the system of public hearings and the duty of citizens to collaborate with the public authorities in the application of environmental laws.¹³⁰

In Colombia, the right of every person to participate in the decisions that can affect the environment is a basic constitutional principle, that is developed under the mechanisms created by Law 99 of 1993. An example of those mechanisms are: right to intervene which gives to every person the right to participate in the administrative procedures initiated for issuing a new permit, license or any related procedure regarding activities that can impact the environment.¹³¹, the right to ask for public hearings related to environmental decisions pending and the obligatory consultants with the black and indigenous communities. Regarding the latter aspect and to ensure the subsistence of ethnical groups, the law has created the public participation mechanism on the decisions that involved the exploitation of natural resources in indigenous territories. In this sense, the fundamental right of the indigenous communities to their integrity will not be affected and will be guaranteed by another fundamental right which is the public participation in the referred decisions.¹³²

The character and nature of these instruments should pretend not only the concentration of those communities affected by the project or activity that can produce environmental impact, but it should also condition the decision making process of the governmental agency which is the one responsible of the protection of the constitutional precepts.

In Peru, the Code of Environment and Natural resources states that all citizens have the right to participate in defining policy and adopting national, regional and local measures related to the

¹²⁷ *Ibid.* at 84

¹²⁸ Decree 99.274 of June 6, 1990 at Article 5 (IV)

¹²⁹ Constitution of the State of Amazon, Articles 234, 239, 240

¹³⁰ Decree 10.028 of 1987 at Articles 3 (VII), 26

¹³¹ Law 99 of 1993 at Article 69

¹³² Decree 1320 of 1998 at Articles 1-22

environment, and to be informed of those activities that affect negatively the environment or natural resources or the human health.¹³³ The citizens are in the possibility to formulate individual or collective petitions to the correspondent authority in order to obtain environmental information.¹³⁴

4. FOREST MANAGEMENT

4.1 Overview of Latin American Forest Resources: Amazonian Case Study

The Latin American tropics and subtropics contain many unique ecosystems of high biological diversity, a great amount of renewable natural resources are present and tropical ecosystems predominate.¹³⁵ Tropical forests cover about 85 per cent of the total surface of the region, including dense forest (55 percent), open forests and savannas (33 per cent), and deserts and semi-deserts (12 per cent).¹³⁶ It conforms the 46 per cent of the tropical forest of the world, containing and estimated 40 per cent of the tropical plants and animals species. The area is also an important reserve of fresh water and minerals and the highest untapped hydroelectric potential of the world. Some of their lands (30%) are suitable for agriculture and ranching and some other for agroforestry¹³⁷. However, inappropriate management of agricultural and pastures lands associated with soil erosion and desertification plus degradation of productive lands and deforestation, which is the most pressing environmental problem in the region, in terms of land use and loss of renewable natural resources have increased in enormous rates.¹³⁸

As part of these scenario appears the Amazon, vast region that conforms the main ecosystem of the area. Amazon as probably the first ecosystem of the region, has been object of the same environmental problems, however, is recognized as an important part of the global ecology and many concerned with these environmental issues, are now trying to impede the overexploitation and destruction of its natural resources.¹³⁹

4.2 Environmental Issues

4.2.1 Importance of the Amazon Rain Forest

The Amazon is the larger hydrographic basin (7,48 millions of Km²), with longest river in the world and one of the major biodiversity of the planet.¹⁴⁰ For developed countries the Amazon Region should remain without exploitation, in order to achieve the ecological balance of the world. For developing

¹³³ Environment and Natural resources Code *supra note* 88 at Preliminary Title (1)

¹³⁴ Law 26821 of June of 1997 at Article 5

¹³⁵ Gilberto C. Gallopin & Manuel Winograd, *Ecological Prospective for Tropical Latin America*, in *The Fragile Tropics of Latin America: Sustainable Management of Changing Environment*, (United Nations University Press, 1995) at 15

¹³⁶ Gilberto C. Gallopin & Manuel Winograd, *supra note* 132 at 15

¹³⁷ Gómez I& G.C. Gallopin, *Potencial Agrícola de América Latina*, in *El Futuro Ecológico de un Continente. Un Análisis Prospectivo para América Latina*. Final Report United Nations, University, Tokyo. 1989

¹³⁸ Gilberto C. Gallopin & Manuel Winograd, *supra note* 132 at 15

¹³⁹ Gilberto C. Gallopin & Manuel Winograd, *supra note* 132 at 1

¹⁴⁰ Antonio Brack Egg, *La Amazonía Problemas y Posibilidades*, in *El Peru, El Medio Ambiente y el Desarrollo*, (Eduardo Ferrero ed., Lima- Peru, 1992 at 173

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countries, the region presents the most important natural resources which constitute the hope for their development.

The Amazon is important basically for its biodiversity and genetic resources. Accordingly, it may help in order to promote and generate the most diversified pharmaceutical industry and other economical activities that start from the point of view of the management and rational use of its natural resources.¹⁴¹ In addition, the Amazon is crucial for the world in terms of water resources, logging and may produce important amounts of tropical products with an implied *sin-qua-non* condition of an integral sustainable development, that implies the preservation and conservation of natural resources.

The Amazon is the bigger challenge of mediation between sustainable development and environmental conservation with economic development. Idea that must be concretized in an environment full of complex and differentiated elements. There is no doubt that is a region complicated to delimitate, as it is shared by different geographic conditions.¹⁴² The heterogeneity of its climate, biodiversity, economical conditions, migrate conditions, population and different social organizations that create environmental, social and economic problems are some of the aspects to deal with, when generating an environmental policy for the region.

4.2.2 Environmental Concerns of Rainforest Use

The rain forest use has created a long list of environmental problems. Soil erosion problems, consequence of deforestation, inappropriate agricultural techniques, overgrazing, and overexploitation are just an example of the main environmental concerns around the region but particularly in the Amazon. Watershed degradation due to deforestation and damming will affect the tropical rainforests.¹⁴³ Desertification associated with overgrazing, excessive extraction of fuelwood, dry tropical forest, the tropical shrublands and agricultural pollution are a constant in the region. Accordingly to scientific opinions the results of the implemented models may create that land scarce by the year 2030 in tropical Latin America, including the Amazon.¹⁴⁴ A total of "710 million of people (90 per cent of the projected total population of Latin America) will be living in the tropical areas."¹⁴⁵ This means, that to produce enough food for the entire population agriculture inputs need to increase substantially. Finally, species extinction could range from 100,000 to 350,000 in the next forty to fifty years, considering just those that are part of the tropical forests.¹⁴⁶

¹⁴¹ Enrique Amaya Zevallos, *La importancia de la Amazonía Sudamericana: El Caso del Proyecto Carretero de la Amazonía al Pacífico Cruzando los Andes* (hereinafter *The importance of the Amazon*), in *What Future of the Amazon Region*, 48th Congress of Americanist, (Institute of Latin American Studies, Stockholm, 1994) at 36

¹⁴² Antonio Brack Egg, *supra* note 132 at 178

¹⁴³ Gilberto C. Gallopin & Manuel Winograd, *supra* note 132 at 28

¹⁴⁴ *Ibid.* at 29

¹⁴⁵ *Ibid.*

¹⁴⁶ Lugo, A.E. , *Uso de las Zonas Boscosas de América Latina Tropical*(hereinafter *Use of Forest Zones in Latin America*).Reunión " Nuevas Tecnologías y el Futuro Ecológico de América Latina" Grupo Análisis de Sistemas Ecológicos (FB)United Nations University S.C. Bariloche, Argentina, 9-12 Noviembre, 1987)

4.3 Forest Destruction And Selected Economic Activities

The economic activities of humanity have had a profound impact on the environment. Fast destruction of the world's forest resources, fish stocks, fossil fuels and mine deposits has raised many concerns regarding present and future generations.

In terms of economic activities causing environmental destruction in the Amazon, the process takes many forms. Some of them are deforestation, loss of biodiversity, pollution from mining, flooding by hydroelectric dams and the elimination of many indigenous communities and their culture.¹⁴⁷ These different kinds of destruction are all linked with the vast process of deforestation along the region, but mainly concentrated in those areas that are closer to the sources of population flows of the countries sharing the Amazon Region.¹⁴⁸ Several economic activities are the main source of environmental destruction around the region, some of them are as following.

4.3.1 Cattle Ranching and Agriculture Expansion

Although the countries in study have tried to create measures regarding agricultural management, the attempt at agricultural development in the Amazon have not improved, but have produced severe concerns about its environmental consequences. The flood of migrants to the region, implies systems that mines the soil and is not sustainable in long term. There are related problems like managing crops that being economically profitable will be ecologically sustainable, the use of pastures on forests for cattle, which are the main source of deforestation, and the use of smoke from forest cut for agriculture and ranching which generates the loss of many soil properties and climatic disturbance.¹⁴⁹

One of the main agricultural activities is cattle. Cattle pasture dominates land use in deforested areas in the Amazon, magnifying the impact of small human groups on the forest. Some of that pasture are well managed and are quite productive, some others are weed infected and capable of supporting light stocking rates.¹⁵⁰ Cattle production is heterogeneous. There are different levels in the production, management systems and motivations from farmers can vary, however quite often it has dual purpose producing milk and beef, reality that is true in Brazil, Colombia, and Peru.¹⁵¹ It is an important economic activity in the region but the role played can differ. For example, so called "investment ranchers" are "urban entrepreneurs with little tradition in cattle ranching, that utilize cattle as a financial investment selected from their available alternatives."¹⁵² At the end they take the decisions according to the prospects for financial returns: profits from beef production, subsidies, tax benefits.

Cattle raising in the Amazon has been a source of controversy because it is considered a primary

¹⁴⁷ Philip M. Fearnside, *Environmental Destruction in the Amazon*, in *The Future of the Amazon* (David Goodman & Anthony Hall ed., St. Martin Press, New York, 1990) at 179

¹⁴⁸ Those countries are: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Surinam and Venezuela, however the major area is shared by Brazil, Colombia and Peru

¹⁴⁹ M.D. Faminow, *Cattle Deforestation and Development in the Amazon*, (CAB International, 1998) at 58

¹⁵⁰ *Ibid.* at 2

¹⁵¹ *Ibid.* at 121

¹⁵² D. Kaimovitz, *Land, Tenure, Land Markets and natural resources Management by Large Landowners*, in the Petén and the Northern Transversal of Guatemala. Paper Presented at the 1995 Meeting of Latin American Studies Association, The Sheraton, Washington, D.C. 28-30 September.

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source of deforestation. Factors underlying the role of cattle in deforestation are: governments subsidies for livestock, favorable markets for livestock, cattle as production input for other farming activities, land tenure policies that promote deforestation to establish property rights and some others.¹⁵³ Among these factors one of major category are financial incentives. Governments subsidies provided to large-scale ranchers was a cause for increasing cattle herd of the Amazon.¹⁵⁴

An example was the subsidies policy in Brazil around the 70s. Brazil through the Superintendent for the Development of the Amazon (SUDAM) managed the financial incentives for large-scale cattle ranchers. In the 80s there was a rapid expansion of project approvals combined with a decrease of the resources for fiscal incentives, creating the absence of money for promoting the projects plus a great number of administrative problems.¹⁵⁵ At the same time small cattle producers which never received the large-scale benefits, however they were eligible for other kind of subsidies. The promotion of financial incentives varied throughout the years, however at that point almost the 10 per cent of the Legal Amazon in Brazil was already deforested and much of the land are now used for cattle pasture.¹⁵⁶

Unquestionably the rain forest produce a range of ecological services and potential economic products that are lost when converted in pasture. Therefore, the protection of the remaining forest from cattle effects will depend upon the: "identification and promotion of income-generating alternatives for households, the technology of raising cattle used by the large, medium and small landholders already in the Amazon, the extent to which regional integration and migration to forest in the Amazon continues and the capacity of governments as managers and owners of the Amazon to preserve it."¹⁵⁷

The options to evaluate the use of forest for agriculture purposes and primarily cattle must be done in terms of the full costs and benefits of forests use and possible payoffs from investing in agricultural development, where the environmental implications might not be so complex and extreme.¹⁵⁸

4.3.2 Lumbering

Most of the lumbering in the Amazon has been centered along rivers where access to timber is easier. However, has been logged out of much of the flood -plain forests.¹⁵⁹ When highways started slicing across the uplands in the 1960s, loggers penetrated the forest. The timber extraction continued to increase as the network of roads expanded, therefore, the number of licensed sawmills, specially in the Brazilian Amazon increased substantially during the period of 1952 to 1982.¹⁶⁰

¹⁵³ S.B. Hecht, *The Logic of Livestock and Deforestation Amazonia* . BioScience 43 (10), 687-695, 1993

¹⁵⁴ M.D. Faminow, *supra note 146* at 133

¹⁵⁵ C. Yocomizo, *Financial and Fiscal Incentives in the Amazon*, in Sao Jose Dos Campos ,Amazonia Facts Problems and Solutions (Univesidade de Sao Paulo ed. , Sao Paulo) at 93-136

¹⁵⁶ M.D. Faminow *supra note 146* at 205

¹⁵⁷ M.D. Faminow *supra note 146* at 231

¹⁵⁸ M.D. Famoniw *supra note 146* at 58

¹⁵⁹ Nigel Serrao, Alvin & Folesi, *Amazonia* (United Nations University, Press, 1995) at 93

¹⁶⁰ JO Browder. Lumber production and Economic Development on the Brazilian Amazon *in* Journal of World Forest Resource Management 4:1-19, 1998

In the same way, during the late 80s the number of sawmills operating doubled and log production quadrupled, mainly in the Brazilian Amazon.¹⁶¹ This pace of the timber trade has raised questions of sustainability of logging practices, as a consequence of these practices one-quarter of trees with a diameter at breast weight of at least 10cms. Were killed or damaged¹⁶² and the amounts of damage increased.

A common perception about logging in Amazon is that it is done primarily to export trade to industrial countries. However, the reality is that most of the tropical timber is used for domestic consumption and just one-third of tropical roundwood and processed is exported.¹⁶³ In addition, the timber production is related with land use, issue that has become a great disincentive to manage forest for timber production as the other land uses are more profitable.¹⁶⁴ The proliferation of roads during the past decades has made cheaper to obtain timber along the agricultural frontier rather than manage the forest. Few landholders want to invest in sustainable harvesting of timber.¹⁶⁵

But the problem is not just an economic question it is also a policy issue, as it is possible to say that many of the times the economic activity of logging itself may not always damage the trees or destroy half of the canopy,¹⁶⁶ the problem is that loggers largely ignore the right technology and the regulation designed to conserved timber resources and protect valuable fruit trees. There still a not clear well forest management. In theory, blocks of forest are harvested in a rotational way and care to avoid damage. In addition, some sawmills are supposed to be concerned and harvest trees in a rotational manner, however, the rates of timber destruction arises to not so favorable results.¹⁶⁷

It is unquestionable that Brazil, but specially Colombia and Peru, have few models to guide the policies of forest management and particularly of timber production, eventhough they try to implement the international criteria of sustainable timber harvesting. It is necessary to research on timber trees and rational harvesting methods that that at the same time offer reasonable economic benefits.¹⁶⁸

An example can be the Yanasha Forestry Cooperative at Palcazu in the Peruvian Amazon which has provided some useful insights into sustainable timber harvesting in tropical forests. Yanasha, in combination with the Tropical Science Center in San José- Costa Rica, the Peruvian Foundation for the Conservation of Nature and the world Life Fund is implementing techniques to minimize disturbance of to soil and damage to remaining trees.¹⁶⁹ These types of initiatives may or not serve as a model but are start-ups in order to promote pilot projects in sustainable forests management.

¹⁶¹ Ibid.

¹⁶² C. Uhl & C.G. Vieira, Ecological Impacts of Selective Logging in the Brazilian Amazon *in* Biotropica 21 (2): 98-106, 1989

¹⁶³ J. Atkin, Tropical Timber in Economist, 1993 at 8

¹⁶⁴ Nigel *supra* note 156 at 102

¹⁶⁵ Nigel *supra* note 156 at 103

¹⁶⁶ Nigel *supra* note 156 at 95

¹⁶⁷ Nigel *supra* note 156 at 99

¹⁶⁸ Nigel *supra* note 156 at 103

¹⁶⁹ MA Perl & Others, Views from the Forests: Natural Forest Management Initiatives in Latin America, (World Life Fund, Washington DC, 1991) The process implies: use cattle to extract timber, a 40 years rotation and financial assistance.

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4.3.4 Mining

Mining has become a major economic activity in the Amazon and the environmental impacts of mining operations are of many different kinds. On one side, mining requires the removal of large quantities of overlying soil and without precaution sediments can be washed into watercourses.¹⁷⁰ On the other side, taking gold mining, that is one of the principal mining operations, is causing mercury pollution, as the substance used to precipitate the gold when washing gravel.¹⁷¹ In addition, there are also some air pollution, noise and sound effects and the construction of roads to mining areas increases deforestation.

The issue become that small-scale mining and prospectry conducted by small miners or local individuals are an important factor in mineral industry development,¹⁷² small-scale miners do not have the tools to prepare sustainable plans or afford specialists or acquire or operate or sophisticated pollution preventing equipment that assure environmental protection.¹⁷³

Indeed, environmental impacts or exploration, extraction and processing of the plenty mineral resources of the region are considerable and there is a need of guidelines, however, those guidelines must be clear and effective and not just general approaches of whole mining regulations without considering the particular conditions of the Amazon region.

4.3.4 Infrastructure Projects

The different kind of infrastructure projects in the Amazon generate environmental effects concerning the forest but the general environment. The main projects are related with gas, product of the necessary access to the gas and oil reserves. On the other hand the hydroelectric projects. A big number of projects has been developed in the Amazon during the present decade.¹⁷⁴ Amount that tents to improve for the 2010. An example is how the Brazilian government has published a 2010 plan, outlining the possible construction of 68 dams by the year 2010.¹⁷⁵ Percentage that even appearing as small will cause a lot of environmental disturbance. These programs may generate a positive social impact as it generates use of electricity for the people improving their quality of life and some times increasing their agriculture activities but there is no doubt that these kind of projects are source of water pollution, biodiversity destruction, specially in aquatic fauna and deforestation.

5. CONCLUSION

5.1 SHARING A VALUABLE RESOURCE: FOREST POLICY AND THE AMAZON REGION

The forest policy in the Amazon can be seen according to two different points of view. On one

¹⁷⁰ Nigel *supra note* 146 at 30

¹⁷¹ D. Malm & Others, Mercury Pollution Due to Gold Mining in the Madeira River Basin in *Ambio* 19 (1): 11-15, 1990

¹⁷² UN Department of Technical Cooperation and Development, and German Foundation for International Development, *Mining and the Environment*, 1992 at 57

¹⁷³ *Ibid.* at 59

¹⁷⁴ David Clearly, *The Brazilian Rain Forest*, (Economist Intelligence Unit, 1991) at 41

¹⁷⁵ Philip M. Fearnside *supra note* 144 at 202

side the angle of the international cooperation product of the Amazon Cooperation Treaty of which Brazil, Colombia and Peru are parties and which is executed through the General Secretary of the Treaty (*Secretaría Pro- Tempore of the Treaty*). Under this international framework the debate around forest in the world must be included in the local concerns and criteria. It is clear in the regional perspective that the economic activity in forest areas can be compatible with the sustainable management of natural resources, according to national development strategies.¹⁷⁶ The countries agree that to build policies to achieve a sustainable forest management the policies must include the concept of balance of costs and benefits, including social equilibrium, major technological effectiveness in the productive processes, natural resources conservation, respect to cultural values of the local populations and for the traditional knowledge of the forests.¹⁷⁷ In addition, there is a necessary stimulation of developing harmonic forest policies among the countries subscribers of the Amazon Cooperation Treaty in order to define a consensus strategy that permits the creation of principles, ruling the common interests and the common concern in protecting the Amazon rain forest. As part of these postulates that conforms the regional policy for forest management there are also some indicators that should inform the systems that the countries will use in their internal mechanisms in order to achieve the common forests goals in the Amazon: socio-economic benefits related with indicator of incomes, production, investment and consumption, policies and institutional and legal framework for forest management, forest sustainable production, biodiversity conservation, integral management of water and forests, science and technological develop, institutional capacity and some other management indicator.¹⁷⁸

On the other hand, there is an individual appreciation that every country has for forest management policies. Affirming that Brazil, Colombia and Peru has created an specific forest policy for their Amazon region will not be absolutely precise. Each of these countries has created in side their boarders a set of environmental norms conforming their own environmental policies. Among these policies there are some particularly related with forest management.

Brazil has created an environmental policy for the Amazon region, approved by resolution No. 4 of July 14 of 1995 of the National Council for the Legal Amazon. The general idea of this policy is to increase the quality of life of the people of the region through economic sustainable development result of the rational use of natural and cultural resources, internationalization and better incomes distribution.¹⁷⁹ Indeed, the policy is articulating the economical dimension with the social environmental dimension. This general policy does not consider the forest issue in an specific way, accordingly, is necessary to take into consideration the general policies in terms of environment and forest management in the country and apply those general principles to the Amazon Region without prejudice of the particular conditions involved in the Amazon. This means, that the Brazilian government should manage forests in a way which maximize the environmental benefits of Brazilian tropical forests through a sustainable approach that contributes with the reduction of deforestation and the general development policies of the country. An example result of all these principles is the Pilot Program for the Protection of Topical Forests in Brazil (PPG-7). This project is an initiative to

¹⁷⁶ Tratado de Cooperación Amazónica-Secretaría Pro Tempore del Tratado de Cooperación Amazónica, *Propuesta de Tarapoto Sobre Criterios e Indicadores de Sostenibilidad en el Bosque Amazónico*, (hereinafter Tarapoto Proposal for Sustainable Forests in the Amazon) (Memorias del Taller Regional Realizado en Tarapoto, Peru, 23-25 Febrero de 1995) at 1

¹⁷⁷ *Ibid.* at 3

¹⁷⁸ *Ibid.* at 7-9

¹⁷⁹ Resolution No. 4 of July 14, 1995 at Basic Conception 1

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promote forest protection, developing some subprograms related with the encouraged of the regulatory capacity of the entities involved in the environmental management at the different levels of the state and the access of communities and organization in new environmental projects.¹⁸⁰

Colombia has given some general guidelines on what should be the policy for development and conservation of the Amazon, insisting in the necessity of designing that policy considering that Colombia is part of a specific region and one of the countries sharing the Amazon region.¹⁸¹ There must exist an ecological acceptable framework that starts under the principles of sustainable development. In the Amazonian region is impossible to divide the protection of the environment from the zoning of ecological areas, in order to achieve social goals while avoiding the loss of environmental values. This statements demands the classification of the different uses and activities that may be realized in the region, that can only be done under the construction of an ecological development plan that serves as a framework and gives the structure for the legislative development in the Amazon. This guidelines as in the Brazilian case are not emphasizing the role of forest, therefore it is important to complement those precepts with the national forest policy, that even if its not just centered in the Amazon it gives the strategies and define the principles under which forest management must be done in Colombia. The Policy of forests was issue the Ministry of the Environment and The Planning National Department, Document No. 2834 of 1996.

The national forest policy is oriented by some principles that recognize the strategic importance of forest as integral part of the Colombian biodiversity, characteristic that implies that knowledge and management of forests are essential to the State.¹⁸² Following the general directories of the Constitution the use and management of forests must be done accordingly to the principle of sustainable development and all the actions designated to achieve the sustainable development of forests must be done in a join and coordinated work between the State, the community and the private sector.¹⁸³ In general terms the objective of the forest policy is the sustainable use of forests in order to be preserved and consolidate the incorporation of the forest sector in the national economy and improve the quality of life of the population.¹⁸⁴ Objective linked with more specific goals like reduction of deforestation through the harmonization of the sectorial policies, promotion of reforestation, restoration and conservation of forests and "rationalization of administrative processes for the sustainable use of forests, not just in forest products but also other products and services."¹⁸⁵ All these principles and objectives might be done with the modernization of the forest management system, conservation of forests, promotion of research, education and public participation and consolidation of the international position regarding forests.

In Peru the environmental topic has been developed in first term, with a major importance, just until the beginning of this decade and second on a sectorial way. This means, that eventhough, the existence of certain central environmental policies of the state and the intent of a central institutional

¹⁸⁰ Programa Piloto Para la Protección de Bosques Tropicales en Brasil.(hereinafter the Pilot Program for the Protection of Topical Forests in Brazil (PPG-7)) in <<http://www.ibama.gov.br>>

¹⁸¹ Maria Cristina Dourado, *Direito Ambiental E A Questao Amazonica*, (hereinafter Environmental Law in the Amazon) (UNAMAZ, Brazil, 1991) at 75-76

¹⁸² Document No. 2834, January of 1996 at Principle 1

¹⁸³ *Ibid.* at Principle 2

¹⁸⁴ *Ibid.* at Objective

¹⁸⁵ *Ibid.*

governmental management of natural resources at the end the policies and actions are product of the different sectors of the state, that in this particular issue of forests will be the Ministry of Agriculture and some other decentralized organizations. For the theme of forests in the country can be mentioned that since the appearance of the Forest Law in 1975, the intention of the government was to generate some general guidelines that acted as a base for the management of this natural resource. With the expedition of the Peruvian Environmental Code in 1990, immediately was pointed the necessity of a new legal frame for forest management, considering new horizons for forest policy. This forest policy does not seem to be so expressly defined in a unique text but the approach to a forest policy in Peru can be the result from the analysis of the regulations that includes the issue. Accordingly, the Peruvian state in relation with forest resources pretends and promotes the sustainable development and conservation of its national forests in accordance with the social and economic interests of the nation.¹⁸⁶

It is clear that in environmental matters Peru intends to recognize the integral character of natural resources and its insertion in the social and economic context.¹⁸⁷ In this sense, all the actions of the State in relation with forest resources will promote the conservation, restoration and sustainable use of forests, the definition of a proper forest legal framework which allows the definition of use categories that establish the conditions of access and use of forests, definition of an institutional framework well differentiated, definition of management plans and the promotion of public participation.¹⁸⁸ Finally, there is no specific forest policy for the Amazon Region, just some particular aspects for investment and protected areas, that will be discussed afterwards in the present paper, therefore, the general guidelines of forest policy are applied to the region.

5.2 Institutional Management

5.2.1 Institutional Governmental Presence in the Amazon Region

In Brazil as it has said before the Ministry of the Environment, Water Resources and Legal Amazon is in charge of the application of the environmental policy. The National Environment Council (CONAMA), in charge of fixing the regulations and standards applicable to the country. A federal agency, the Brazilian Institute for the Environment and the Natural Renewable Resources (IBAMA) is the main executor of the federal policy and actions. Each state replicates the federal institutional structure.¹⁸⁹ But apart from these federal competencies for the conservation of the environment there are state competencies concentrated in state entities. Under this criteria the municipalities work in harmony with the federal policies and complement the necessary parameters for environmental conservation. The Brazilian legal order gives to the states the main responsibility in controlling the compliance of the environmental federal and state criteria.¹⁹⁰ It is important to notice the important role

¹⁸⁶ See Forest Code (Decree-Law 21147 May 13 of 1975), Peruvian Environmental Code (Decree-Law 613 of 1990), The Organic Law for the Sustainable Use Natural Resources (Law 26821, June of 1997)

¹⁸⁷ *Ibid.*, See also Constitution of Peru Articles 66,67.

¹⁸⁸ Sociedad Peruana de Derecho Ambiental, (*Comentarios y Sugerencias con Respecto a la Propuesta de la Ley Forestal y Fauna Silvestre*, (Hereinafter Comments to the Proposal of Forest Law), Lima, 1999

¹⁸⁹ Inter American development Bank, *Ecotourism in the Amazon. Environmental and Social Impacts*. Brazil, 1998

¹⁹⁰ Roberto dos Santos & Jose Roque Nunes, *Análisis da Legislação Ambiental Dos estados Da Amazonia* Legal (hereinafter Analysis of the Environmental Legislation of the Amazon States),

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that IBAMA has in relation to the preservation of tropical forest in Brazil.¹⁹¹ The government through IBAMA and other governmental agencies manage the environmental matters in the Amazon, however is important to consider that as a federal political organization the particular states share a special role in the preservation of the Brazilian Amazon and have their own environmental institutions in charge of the environmental management of the region.

The Colombian Constitution of 1991 tried to give a face to the country defining for it a more democratic framework with constitutional freedoms and pluralism perspectives that give a new political and social context to the citizens. The regulation of the constitution has been directly referred to the regions, departments, municipalities and indigenous territorial entities that lack of inter-institutional coordination. Decentralization requires that institutions has their own management capacity while respecting and implementing the national policies. With the expedition of Law 99 of 1993 and the consequently creation of the Minister of Environment the public sector in charge of the conservation and environmental management was reorganized. As a result form the creation of this new environmental system there were created the Environmental Management and Regional Development Corporations in the Amazon Region (*Corporaciones Autónomas Regionales en la Región Amazónica*) with functions related to the knowledge of natural resources and environment of the Amazon.¹⁹² This institutions are: The Corporation for the Sustainable Development of the North and East Amazon (*Corporación Para el Desarrollo Sostenible del Norte y Oriente Amazónico*) and the Corporation for the Sustainable Development of the South Amazon (*Corporación Para el Desarrollo Sostenible del Sur Amazónico*). In addition, there was created an special institution, the Amazon Institute for Scientific Research (*Instituto Amazónico de Investigaciones Científicas (SINCHI)*), for the realization, promotion of scientific research in the region.¹⁹³

The representation of the State in the region has been delegated to other agents, as missionaries who has had a more important role in the regional spaces. Even if it has existed a presence of the governmental agencies, its action has been centered in the urban centers or in the places with major economic or geopolitical interest. The level of institutional representation and the number of executable projects in relation with the rest of the country are very low.¹⁹⁴ There are approximately 209 institutions present in the Colombian Amazon from which 133 are governmental agencies¹⁹⁵, however the results in projects and policies executed still a minority with lack of intercommunication, coordination, information and public access.

In the case of Peru, a Commission in charge of developing the National Strategy for Conservation was created, with the participation of public administration and non-governmental agencies. The Commission is divided in sub-commissions one of them in charge of the Amazon Region.¹⁹⁶ In that

(Ministerio Do Meio Ambiente E Da Amazonia Lagal, Brasilia, 1994) at 249

¹⁹¹ *Ibid.* at Annex 4

¹⁹² Law 99 of 1993 at Articles 34,35

¹⁹³ Decree 1603 of 1994 at Articles 24-34

¹⁹⁴ Tratado de Cooperación Amazónica Secretaría Pro Tempore del Tratado de Cooperación Amazónica, *Inventario de Proyectos y Presencia Institucional en la Región Amazónica Colombiana*, 1995 at 15

¹⁹⁵ *bid.* at 18

¹⁹⁶ Tratado de Cooperación Amazónica Secretaría Pro Tempore del Tratado de Cooperación Amazónica, *Base Jurídica del Tratado de Cooperación Amazónica*, (hereinafter Legal basis for the Amazon Cooperation Treaty) 1996 at 1

idea the special Sub-commission for the Amazon according with the main lines of the General Commission has the responsibility of defining the fundamental policies of the region. The administrative entities directly or indirectly involved with environmental matters are joint by a main direction, issue that has caused some inconvenience. The country has improved in terms of institutional management in the region, however there still a lack of governmental presence that enforce the forest policies and regulation in the region.

5.2.2 Non-Governmental Presence in the Region

There are different types of non-governmental institutions that have some presence in the region. There are indigenous organizations, peasants organizations, NGO's and ecclesiastic organizations represented by missionaries. The inconvenient is the difficulty to have a precise definition of the activity and grade of presence of these institutions. It is important to mention that as a result of the actions and programs of the General Secretary of the Amazon Cooperation Treaty (*Secretaría Pro-Tempore del Tratado de Cooperación Amazónica*), the main actions of these organizations are the promotion of the conservation of the region plus a great research development. It has been a goal for the region to mobilize institutions and research centers related with the conservation of the Amazon in order to obtain a unique and joint action that allows interchange of information.¹⁹⁷ The major problems for this organizations to have success in their projects are the lack of financial support and an inadequate organization of the communities.¹⁹⁸ However, their participation in environmental preservation is even more effective than the action of governmental institutions. In the Brazilian case is particularly evident the presence of NGO's that works in defense of the preservation of the Amazon rain forest and the defense of indigenous people in the zone. In the case of Colombia there are a total of 20 NGO's which have a continues presence in the region that are consolidated now in a recent non-governmental organization that associates all the organizations that work in the area and that created some programs in the fields of education and health, information network and research of natural resources in the Amazon.¹⁹⁹ Finally in Peru there are around 60 NGO's which promote environmental conservation and community awareness of environmental problems in the region.²⁰⁰

¹⁹⁷ Tratado de Cooperación Amazónica Secretaría Pro Tempore del Tratado de Cooperación Amazónica, *Comisión Especial del Medio Ambiente de la Amazonía*, (hereinafter Special Commission for the Amazon Environment) 1996

¹⁹⁸ Tratado de Cooperación Amazónica Secretaría Pro Tempore del Tratado de Cooperación Amazónica, *supra note 197*

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

