

PART FIFTH
HUMAN RIGHTS, ENVIRONMENT
AND CLIMATE CHANGE

THE MEXICAN OIL & GAS SECTOR: BETWEEN ENVIRONMENTAL PROGRESSIVITY AND REGRESSION

Marisol ANGLÉS HERNÁNDEZ*

SUMMARY: I. *Introduction*. II. *Human rights and sustainability in the context of energy development*. III. *From environmental concurrency to exclusivity*. IV. *The paradigm of the human right to good governance*. V. *The principle of progressivity and environmental regression*. VI. *Concluding remarks*. VII. *Bibliography*.

I. INTRODUCTION

To speak of subsoil resources, especially oil & gas, is to speak of the most widely used sources of energy around the world: natural gas (21.4%), coal (28.9%) and oil (31.1%).¹ Mexico is no exception since the history of its modern development is supported by these resources, particularly crude oil and natural gas, which are also one of the main sources of foreign exchange and tax revenues for the country. Therefore, they have been a fundamental element of public finances.

The country's main supply of energy came from oil & gas and amounted to 82% in 2013, a much higher figure than that of other sources. That same year, the use of coal represented 7.7% of the energy supply, nuclear 1.7%, geothermal 1.8% and hydraulic 1.8%.² Therefore, its regulation is very important because it ties in with national development planning objectives, which seek to rationally and systematically organize economic, social, political and cultural activities, as well as environmental protection and the

* Full-time researcher at the Legal Research Institute at the UNAM, Doctor in Environmental Law, mangles@unam.mx.

¹ Organisation for Economic Co-operation and Development, *Key World Energy Statistics 2015*, Paris, OECD-International Energy Agency, 2015, p. 6.

² Aguilera Gómez, Manuel *et al.*, "Contenido y alcance de la reforma energética", *Economía UNAM*, vol. 13, No. 37, January-April 2016, pp. 5 and 6.

rational use of natural resources, in order to achieve the transformation of the country's reality, based on the norms, principles and objectives established by the federal Constitution and the various applicable laws.³

In Mexico, ownership of fossil resources has passed from private to exclusively national ownership. However, even though the country still has great potential for such resources, the Peña Nieto administration argued there was insufficient financial availability and technical resources to efficiently operate exploration and production projects.⁴ Hence, on December 20, 2013, the Political Constitution of the United Mexican States —*Constitución Política de los Estados Unidos Mexicanos*— (hereinafter, federal Constitution) underwent a series of energy reforms, including the one related to the seventh paragraph of Article 27, which led to a system that, although reserving the ownership of hydrocarbons to the Nation when found in the subsoil, allows private parties to have access to them by entering into contracts. Therefore, once oil & gas have been extracted, they become the property of whoever extracted them. This situation is not trivial since they are non-renewable natural resources of a strategic nature that guarantee the country's development and its national sovereignty.⁵

On top of this, the abovementioned reforms have had an impact on the administrative organization of the State. The creation of the stipulated new bodies, which led to far-reaching regulatory changes as evidenced in this study, did not uphold the principles of the division of powers, regularity, legality, and legal reservations, as well as those related human rights, like progressiveness, which directly affect sustainable development and the guarantee of human rights to a healthy environment, water and development, to mention a few, thus giving rise to international responsibility.

II. HUMAN RIGHTS AND SUSTAINABILITY IN THE CONTEXT OF ENERGY DEVELOPMENT

Human rights were first recognized with the inclusion of the Bill of Rights in the Constitution of the United States of America in 1787 and the proclama-

³ Tesis P./J. 76/2009, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XXX, July 2009, p. 1543, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/166883>.

⁴ Secretaría de Energía, "Programa Sectorial de Energía 2013-2018", *Diario Oficial de la Federación*, México, December 13, 2013.

⁵ Anglés Hernández, Marisol, "El artículo 27 en materia de energía", *Derechos del Pueblo Mexicano. México a través de sus Constituciones*, Exégesis constitucional, vol. VII, 9th ed., México, Cámara de Diputados, H. Congreso de la Unión, LXIII Legislatura, UNAM, Instituto de Investigaciones Jurídicas, Porrúa, Instituto Nacional Electoral, 2016, p. 498.

tion of the Declaration of the Rights of Man and of the Citizen in France in 1789.⁶ Years later, because of the atrocities committed during World War II, countries reached a consensus to work together to prevent international conflicts and attain peace and justice. In this scenario, the United Nations was founded on October 24, 1945, and three years later, the Universal Declaration of Human Rights was adopted.⁷

Since then, international human rights law began to develop and has come to practically enjoy universal acceptance since it is made up of human beings' essential and inalienable guarantees, which must govern the actions of the States members of the UN. This universal effort is complemented by the regional systems protecting human rights: the African, Asian, European and Inter-American systems, which autonomously and independently establish an international legal order of protection at a regional level and set a catalog of international responsibilities for the member States of each system.

In the American region, the Organization of American States (hereafter, OAS) was created in 1948 with the mandate to achieve peace and justice and to build solidarity, as well as to defend sovereignty, territorial integrity and independence.⁸ The constitutive instruments of this Organization include the OAS Charter, the American Declaration of the Rights and Duties of Man, the American Convention on Human Rights, the Statutes and Rules of Procedure of the Inter-American Court of Human Rights (IACtHR) and the Inter-American Commission on Human Rights (IACHR), as well as various protocols and conventions.⁹ This is the legal basis that obligates OAS members to guarantee human rights in each of the undertakings carried out on their own or allowed to be carried out in their territories.

On June 10, 2011, Mexico amended the first paragraph of Article 1 of the federal Constitution to read: In the United Mexican States, all persons shall enjoy the human rights recognized in this Constitution and in the international treaties to which the Mexican State is a party, as well as the guarantees for the protection of these rights, the exercise of which may not be

⁶ *Declaration of the Rights of Man and of the Citizen*, French National Constituent Assembly, August 29, 1789.

⁷ United Nations, *Universal Declaration of Human Rights*, New York, General Assembly, A/RES/217(III), adopted on December 10, 1948.

⁸ Jiménez de Aréchaga, Eduardo, *La Convención Interamericana de Derechos Humanos como derecho interno*, Montevideo, Fundación de Cultura Universitaria, 1988, p. 55.

⁹ Organization of American States, *Basic Documents in the Inter-American System*, Washington, D. C., OAS, 2001; Inter-American Commission of Human Rights, *Petition and Case System. Informational brochure*, Washington, D. C., OAS, 2010, p. 12.

restricted or suspended, except in the cases and under the conditions established in this Constitution.

Furthermore, in its Dissenting Opinion 293/2011, the Plenary of the Mexican Supreme Court of Justice (hereafter, Supreme Court) ruled that all provisions including a human right and those contained in international treaties have constitutional rank; that IACtHR judgments are binding for judges in Mexico, even in the case of decisions regarding disputes to which Mexico is not a party; and that if the federal Constitution contains any restriction to the exercise of a right, it shall be enforced.¹⁰

On the other hand, although it has different meanings, the block of constitutionality as a legal category starts from the assumption that, in addition to the provisions inserted in constitutions, there are others of the same rank that do not expressly appear in the constitutional text. Thus, the block of constitutionality makes it possible to incorporate rights from international sources into the constitutional framework.¹¹

As to the concept of sustainability, it is at the beginning of the 20th century when the relationship between the environment and development was established and this pairing was fully adopted and accepted.¹² Its confluence leads us to the heart of sustainable development defined as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”.¹³ It is a different approach to development that incorporates economic, social and environmental factors at the same level, and constitutes, at least in discourse, the point of reference for global international cooperation.

The clearest example of such cooperation is found in the adoption of the 2030 Agenda for Sustainable Development, approved in September 2015 by the UN General Assembly with the aim of reaching its goals in 2030. This instrument establishes a transformative approach towards economic, social, and environmental sustainability.

¹⁰ Tesis P./J. 20/2014, *Gaceta del Semanario Judicial de la Federación*, Décima Época, vol. I, April 2014, p. 202, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2006224>. Tesis P./J. 21/2014, *Gaceta del Semanario Judicial de la Federación*, Décima Época, April 2014, p. 204, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2006225>.

¹¹ Rodríguez Manzo, Graciela *et al.*, *Bloque de constitucionalidad en México*, México, SCJN-Oficina en México del Alto Comisionado de las Naciones Unidas para los Derechos Humanos-Comisión de Derechos Humanos del Distrito Federal, 2013, p. 18.

¹² Jiménez-Herrero, L. M., “Cooperación mundial para el desarrollo sostenible”, *Revista Española de Desarrollo y Cooperación*, No. 9, Madrid, Autumn-Winter 2002, p. 10.

¹³ United Nations, *Our common future*, New York, United Nations, World Commission for Environment and Development, 1987, p. 67.

The Agenda includes 17 Sustainable Development Goals (SDGs) and 169 targets. Target 9.4 aims to upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries acting in accordance with their respective capacities. This target complements Target 7.a, which refers to enhancing international cooperation to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology. Meanwhile, Target 3.9 aims to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.¹⁴

As to the synergy between human rights and the environment, the General Assembly of the OAS has stated:

That the effective enjoyment of all human rights..., could foster better environmental protection by creating conditions conducive to modification of behavior patterns that lead to environmental degradation, reduction of the environmental impact of poverty and of patterns of unsustainable development, more effective dissemination of information on this issue, and more active participation in political processes by groups affected by the problem.¹⁵

Therefore, the connection between human rights, the environment and sustainable development is undeniable since all human rights are vulnerable to environmental degradation in the sense that the full enjoyment of these rights depends on the adequate environment.¹⁶ Consequently, inadequate management and disposal of hazardous waste and residue pose a serious threat to human rights, including the right to life and to health.¹⁷

It is important to bear in mind that the oil & gas industry is one of the most polluting industries, both in its processes and its emergencies (explo-

¹⁴ United Nations, *Transforming our world: The 2030 Agenda for sustainable development*, New York, General Assembly, A/RES/70/1, 21 October 2015, pp. 15, 19.

¹⁵ Organization of American States, *Human Rights and the Environment*. Resolution adopted at the third plenary session, held on June 5. AG/RES 1819 (XXXI-O/01), Washington, D. C., Organization of American States, 2001.

¹⁶ United Nations, *Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, John H. Knox, Doc. ONU A/HRC/22/43, Human Rights Council, December 24, 2012, para. 19.

¹⁷ United Nations, *Adverse Effects of the Illicit Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, New York, United Nations, Commission on Human Rights, E/CN.4/RES/2005/15, adopted on April 14, 2005.

sions, spills, etc.) since oil & gas are persistent pollutants in the environment, able to cause toxic effects on ecosystems and their elements (soil, water, air and biodiversity),¹⁸ as well as on human beings as some hydrocarbons, such as polycyclic aromatic hydrocarbons are carcinogenic.¹⁹ However, in accordance with Article 96 of the Hydrocarbons Law, the industry in this sector is of public utility and exploration and extraction activities are considered to be of social interest and public order. Hence, they are given preference over any other activity involving the use of the surface or the subsoil of the land.

It should be recalled that public utility is an abstract and relative concept determined by the political, social, and economic conditions prevalent at a given time and place, for the purpose of satisfying the needs of the community. Generically, it encompasses three causes: a) public causes, i.e., when the expropriated property is directly intended for a public service or work; b) social causes, which immediately and directly satisfy a specific social class and indirectly the entire community, and c) national causes, which satisfy the country's need to adopt measures to address situations that affect it as a political or international entity.²⁰

In terms of social interest, we have that it refers to aspects related to the general needs of society that the State protects directly and permanently. Hence, if a specific situation affects or benefits the community, there is social interest.²¹ While the provisions of public order are those issued to regulate aspects in which the State is the interested party, such as its public performance or the regulation of a given social branch of transcendence for the advancement of society and whose application is of interest to the State.²²

Within the framework of the energy reform, the axiological and teleological content of concepts of public use, social interest and public order is lost since it seeks to modify its essence and scope aimed at the general in-

¹⁸ Edwards, N. T., "Polycyclic Aromatic Hydrocarbons (PAHs) in the Terrestrial Environment. A Review", *Journal of Environmental Quality*, vol. 12, No. 4, 1983, pp. 427-441; Haritash, A. K. y Kaushik, C. P., "Biodegradation Aspects of Polycyclic Aromatic Hydrocarbons (PAHs): A Review", *Journal of Hazardous Materials*, vol. 169, Nos. 1-3, 2009, pp. 1-5.

¹⁹ Amador-Hernández, J. *et al.*, "Determinación simultánea de seis hidrocarburos policíclicos aromáticos en medio micelar por regresión de mínimos cuadrados parciales (pls-1) utilizando espectros de fluorescencia de ángulo variable lineal", *Boletín de la Sociedad Chilena de Química*, vol. 44, No. 3, 1999, p. 299.

²⁰ Tesis P./J. 39/2006, *Semanario Judicial de la Federación y su Gaceta*, Novena Época. t. XXIII, March 2006, p. 1412, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/175593>.

²¹ Tesis aislada I.14o.C.24C, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XIX, January 2004, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/182292>.

²² *Idem.*

terest and collective well-being to benefit a few, members of the neoliberal elite holding economic power, which is the group that can access the oil & gas sector.

In addition to the above, the Hydrocarbons Law limits the sovereign exercise of the different levels of government and oversteps the principle of regulatory hierarchy by stipulating in Article 96, that the states, Mexico City, municipalities and delegations will contribute to carrying out exploration and extraction projects, as well as pipeline transportation and distribution and storage, through procedures and bases for coordination that expedite and guarantee the granting of permits and authorizations in the scope of their jurisdiction. However, the law does indicate the modality to be used to prevent and repair environmental damage, as well as to address any health problems that may arise.

In strict adherence to the law, all development polity that involves any activity, including that regarding oil & gas, must aim at the proposals of the federal Constitution, that is, to guaranteeing human rights, including a healthy environment, to water, to repair, to health, and to sustainable development. This last one implies setting objectives and targets, as well as implementing short-, medium- and long-term strategic sector programs at the different levels of government, which often face problems due to different interests, lags and resistance.²³ There is therefore no justification for the implementation of legal mechanisms (general administrative provisions, regulations, guidelines, etc.) allowing a certain sector —oil & gas— to operate under a more permissive regulatory framework than others.

III. FROM ENVIRONMENTAL CONCURRENCY TO EXCLUSIVITY

According to Bandeira de Mello, competency is the comprehensive circle of a set of public duties to be fulfilled through the exercise of related and delimited instrumental powers, legally conferred to satisfy public interests.²⁴

This goal is taken up by Article 25 of the federal Constitution, in stating that: “Under criteria of social equity, productivity and sustainability, [the State] shall support and stimulate social and private enterprises, subject to

²³ Labrador Sánchez, A., “Desmitologizar el concepto de Desarrollo Sustentable”, in Guerrero del Castillo, E. & Márquez Muñoz, J. F. (coords.), *Visión social del desarrollo sustentable*, México, UNAM, Facultad de Ciencias Políticas y Sociales, 2014, p. 43.

²⁴ Bandeira de Mello, C. A., *Curso de derecho administrativo*, México, UNAM-Porrúa, 2006, p. 109.

the conditions dictated by public interest and to the use of the productive resources... while safeguarding their conservation and the environment”.²⁵

The competencies translate into duties attributed to the State, its bodies and agents placed therein for certain public purposes enshrined in the law.²⁶ In conclusion, competency is the set of powers and attributions expressly established by the legal system for an entity or body to be exercised for the benefit of the public²⁷ and, therefore, determines the limits within which a body may act towards third parties.²⁸

According to the Supreme Court, the competency of the authorities is one of the essential elements of administrative acts, of which the following stand out: a) it always requires having a specific text for it to exist; b) it is binding for the body to which it is attributed, and c) it shares the same nature of legal and abstract acts. Such characteristics are based on the principle of legality, according to which State authorities may only act in the manner and under the terms of the law.²⁹

Even then, in clear violation of the constitutional principle established in Article 73, Section XXIX, subsection g, which refers to environment matters as concurrent, the 2013 energy reform gave way to the creation of the National Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector [*Agencia de Seguridad, Energía y Ambiente*] (hereinafter, ASEA), as a decentralized administrative agency of the Ministry of the Environment and Natural Resources [*Secretaría de Medio Ambiente y Recursos Naturales*] (hereinafter, Semarnat). The purpose of ASEA is to protect the people, environment, and oil & gas sector facilities by regulating and supervising: i) industrial safety and operational safety; ii) dismantling activities and facility closures; and iii) waste and polluting emissions.³⁰

²⁵ Constitución Política de los Estados Unidos Mexicanos, *Diario Oficial de la Federación*, México, February 5, 1917. Amended on December 20, 2013.

²⁶ Bandeira de Mello, C. A, *Curso de derecho...*, *op. cit.*, p. 108.

²⁷ López Olvera, Miguel Alejandro, “La delimitación de competencias en el derecho turístico mexicano”, *Régimen jurídico del turismo y de la zona marítimo-terrestre*, México, UNAM, Instituto de Investigaciones Jurídicas, 2009, p. 297.

²⁸ Amparo directo 2093/88, Tribunales Colegiados de Circuito, *Semanario Judicial de la Federación*, Octava Época, t. III, México, January-June 1989, p. 390.

²⁹ Tesis aislada 2a. CXCVI/2001, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XIV, October 2001, p. 429, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/188678>.

³⁰ Transitory Article Nineteenth, Decreto por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía, *Diario Oficial de la Federación*, México, February 5, 1917. Amendments on 20 December 2013, available at: <http://www.diputados.gob.mx/LeyesBiblio/ref/cpeum.htm>.

In our opinion, upon opening the oil & gas sector to private investment, it was necessary to strengthen the General Office of Environmental Impact and Risk, as well as the Federal Environmental Protection Agency [*Procuraduría Federal de Protección al Ambiente*] (hereinafter, PROFEPA). Since their creation and until the mentioned reform, these Semarnat agencies were authorized to carry out, in the first case, environmental impact and risk assessments and, in the second case, inspection, surveillance and sanctions in oil & gas sector. Such activities were carried out exclusively by the State-owned company Petróleos Mexicanos (hereinafter, Pemex).

In addition, the reference standards (technical regulations) that were in force for Pemex at the time, as the exclusive entity in the oil & gas sector, should have been incorporated into the ASEA standardization process and become Official Mexican Standards [*Normas Oficiales Mexicanas*], i.e., binding for both Pemex and private companies in the hydrocarbons sector. However, this did not happen.

IV. THE PARADIGM OF THE HUMAN RIGHT TO GOOD GOVERNANCE

Since the Enlightenment, the principle of the division of powers in State organization and operation has been advocated as a fundamental element of democratic States. In Mexico, this principle is found in Article 49 of the federal Constitution. However, given the complex reality of contemporary States, there is a need to perfect the ways public bodies act and the distribution of the duties among them. Therefore, there are usually functions or tasks within a State that are performed by different bodies other than the traditional ones,³¹ although always in the public interest. The principle of the division of powers is clearly essential for organizing government structures as it serves to establish checks and balances between the various State bodies.³² It also gives support to national institutions and is linked to other constitutional principles that give order and coherence to the legal system.

In this context and according to the United Nations,

...[t]he future of public administration... lies in the institution of measures aimed not only at reaffirming the developmental role of public administra-

³¹ Carbonell, Miguel, “Órganos constitucionales autónomos”, *Enciclopedia Jurídica Mexicana*, 2a. ed., México, UNAM, Instituto de Investigaciones Jurídicas, Porrúa, 2004, pp. 378 and ss.

³² Cueva, Mario de la, *Teoría de la Constitución*, México, Porrúa, 1982, pp. 185-194.

tion and upholding its core values, but also at reconfiguring public service organizations into open, participative, knowledge-sharing, innovating and results-oriented service-delivery systems.³³

In this sense, the public administration establishes the procedures for its activities, which must be in line with human rights and the guarantees arising from the case law of both the Federal Judiciary and by the IACtHR.

It should be stressed that the Inter-American Human Rights System has established the States' obligation to have clear rules for the behavior of their agents so as to avoid inadequate margins of discretion in the administrative sphere and which could lead to arbitrary or discriminatory practices.³⁴

Accordingly, the rules on the control undertaken by public administration take on special significance. As Valadés argues, the essence of the rule of law lies in the application of effective forms of control, which constitutes a guarantee for citizens. Thus, a cornerstone of modern constitutionalism has been the defense of freedom and, as a result, the limitation of power. This implies establishing a wide range of control instruments,³⁵ a control that "is not restricted only to supervising the activities of others or its own, but simultaneously establishing methods that prevent abusive exercise of power, *i. e.*, that the established restrictions are observed".³⁶

Along these lines, the International Court of Justice (ICJ) held that: "[...] in] the field of environmental protection, vigilance and prevention are required on account of the often-irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage".³⁷

Meanwhile, the European Court of Human Rights determined that States must govern the licensing, setting up, operation, security and supervision of the activity and must make it compulsory for all those concerned to take practical measures to ensure the effective protection of citizens whose lives might be endangered by the inherent risks. In any event, the relevant

³³ United Nations, *Report of public administration and development*, A/60/114, New York, General Assembly, July 12, 2005, p. 1.

³⁴ Inter-American Commission of Human Rights, *Access to justice as a guarantee of economic, social, and cultural rights. A review of the standards adopted by the Inter-American System of human rights*, Washington, D. C., Organization of American States, 2007, p. 97.

³⁵ Valadés, Diego, "El poder de controlar", *Liber ad honorem Sergio García Ramírez*, México, UNAM, Instituto de Investigaciones Jurídicas, 1998, vol. I, p. 664.

³⁶ Huerta Ochoa, Carla, *Mecanismos constitucionales para el control del poder político*, 3rd ed., México, UNAM, Instituto de Investigaciones Jurídicas, 2010, p. 27.

³⁷ International Court of Justice, *Case concerning The Gabčíkovo-Nagymaros (Hungary vs. Slovakia)* Judgment, 25 September 1997, para. 140.

regulations must also provide for appropriate procedures, considering the technical aspects of the activity in question, for identifying shortcomings in the processes concerned and any errors committed by those responsible at different levels.³⁸

In the framework of environmental protection, the State's international responsibility stemming from the behavior of third parties may be the result of a lack of regulation, supervision or oversight of the activities of these third parties that cause damage to the environment.³⁹ Along this vein, the IACtHR has pointed out that States have the obligation to establish adequate mechanisms to supervise and oversee certain activities so as to guarantee human rights, protecting them from actions of both public and private entities.⁴⁰

Even then, the ASEA law regulates that its powers include: to regulate, supervise and sanction in matters of industrial safety, operational safety and environmental protection for the activities of the sector,⁴¹ as well as to authorize the management systems of the regulated parties and to issue, suspend, revoke or deny licenses, authorizations, permits and registrations related to environmental matters.⁴² This situation jeopardizes the impartiality of the mentioned administrative control since the same body is empowered to authorize, inspect and sanction. As indicated above, prior to the energy reform, the body in charge of inspecting, overseeing and sanctioning environmental matters, which included the oil & gas sector, was the PROFEPA, which is now excluded from this sector.

On the other hand, Article 7 of the United Nations Convention against Corruption stipulates that each State Party shall: "...endeavour to adopt,

³⁸ European Court of Human Rights, *Case Önerildiz v. Turkey*, Application No. 48939/99, Strasbourg, Judgment, 30 November 2004, para. 90; European Court of Human Right, *Case Budayeva & others v. Russia*, Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, Strasbourg, Judgment, 20 March 2008, para. 130 and 132.

³⁹ Inter-American Court of Human Rights, *Advisory Opinion OC-23/17 Requested by the Republic of Colombia: The Environment and Human Rights*, November 15, 2017, para. 119.

⁴⁰ Inter-American Court of Human Rights, *Case Ximenes Lopes v. Brazil*, (Merits, Reparations and Costs), Judgment of July 4, 2006, paragraphs 89-90; Inter-American Court of Human Rights, *Case of the Kichwa Indigenous People of Sarayaku v. Ecuador*, (Merits and reparations), Judgment of June 27, 2012, para. 167, and Inter-American Court of Human Rights, *Case I.V. v. Bolivia*. (Preliminary objections, merits, reparations and costs), Judgment of November 30, 2016, para. 154 and 208.

⁴¹ Article 5, Section III, Ley de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos, *Diario Oficial de la Federación*, México, August 11, 2014.

⁴² *Ibidem*, Sections XVII and XVIII.

maintain and strengthen systems for the recruitment, hiring, retention, promotion, and retirement of civil servants... that are based on principles of efficiency, transparency and objective criteria such as merit, equity and aptitude...”.

This failed to materialize in the energy reform laws. One example is the appointment and possible removal of the Executive Director of the ASEA, which are exclusive powers of the head of the Federal Executive branch, which affects the impartiality of the actions of officials with decision-making power and opens the door to a high level of submission, discretion, arbitrariness, and control.

Additionally, the ASEA has a Technical Council, which supports the performance of its activities and serve as a coordinating body among Federal Public Administration agencies, bodies and entities. The Council's functions include issues related to industrial safety, operational safety and environmental protection; knowledge of exercise of the resources trust; formulating national oil & gas policies. However, neither the law nor its regulations mention the qualities required of Council members, nor how they are appointed, which gives rise to discretionary power and, above all, uncertainty. But it also serves as an instrument of control since the decisions made by this collegiate body will depend on the profile and selection process of its members.

From the perspective of the right to development, it is considered essential to incorporate basic human rights principles, including accountability, and participation,⁴³ which are central to determining and consolidating good governance practices.⁴⁴ In addition to this, it is important to consider that the guarantee of the right to a healthy environment is intertwined with a series of procedural rights that make it possible.⁴⁵ These are the rights of access to information, participation and justice in matters of environmental interest, which find protection in the Regional Agreement on Access to Information, Public Participation and Access to Justice in Environmental Matters in Latin America and the Caribbean, a legally binding instrument,

⁴³ Kirkemann Hansen, J. & Sano, H. O., “The Implications and Value Added of a Rights- Based Approach”, *Development as a Human Rights. Legal, Political and Economic Dimensions*, Cambridge, Intersentia, 2010, pp. 40 and ss.

⁴⁴ United Nations, *The right to development*, A/RES/69/181, New York, General Assembly, February 6, 2015, p. 8.

⁴⁵ Anglés Hernández, Marisol, “El derecho a disfrutar de un medio ambiente sin riesgos, limpio, saludable y sostenible en el Convenio de Aarhus y Escazú”, en Aguilar Cavallo, G. (coord.), *El Acuerdo de Escazú. Perspectiva Latinoamericana y Comparada*, Valencia, Tirant lo Blanch, 2021, pp. 154.

adopted by the Mexican State, which is expected to contribute to environmental governance.

Therefore, since its creation, ASEA should have included a mechanism to carry out popular complaints, as established in Article 190 of the LGEE-PA. However, seven years elapsed for it to develop and put into operation the Public Complaint System on the agency's internet portal, to thus allow the registration, reception, prevention, service, and investigation of the complaints presented in the matters within the Agency's competence.

In view of the above, we agree with Márquez, who holds that at present:

Authoritarian vertical structures should be discarded, and progress should be made towards more democratic horizontal structures with the presence of four major administrative areas: human, scientific-technical, conciliation and control, without this classification implying any disassociation between them.⁴⁶

This must go hand in hand with the cooperation of the industrial sector in order to attain sustainable development that responds to global challenges and difficulties, such as the efficient use of resources and energy, the reduction of pollution and climate change.⁴⁷

V. THE PRINCIPLE OF PROGRESSIVITY AND ENVIRONMENTAL REGRESSION

In addition to having means of control, State action must be governed by the principle of progressivity,⁴⁸ which is broken down into two obligations incumbent upon States. The first, which is positive in nature, refers to the duty to constantly enhance the enjoyment of human rights, and the second, which has a negative component, implies the State's duty to refrain from taking deliberately regressive measures that reduce the levels of protection of existing rights or suppress existing ones. Under these parameters, a violation of the obligations arising from the concept of progressivity may occur when

⁴⁶ Márquez Gómez, Daniel, "Un nuevo paradigma en administración pública: El derecho humano a la buena administración pública", in Fernández Ruiz, Jorge (coord.), *Estudios jurídicos sobre administración pública*, México, UNAM, Instituto de Investigaciones Jurídicas, 2012, p. 92.

⁴⁷ United Nations, *Industrial development cooperation*, A/RES/67/225, New York, General Assembly, April 9, 2013, p. 2.

⁴⁸ Article 2.1, *International Covenant on Economic, Social and Cultural Rights*, New York, United Nations, 1966.

States do not take any measures to further the enjoyment of rights (omissions) or when they take deliberately regressive measures (actions).⁴⁹

In the environmental context, a rule is regressive when the effectiveness achieved upon its implementation is lower than it previously was, to the extent in which the new law/regulation limits, restricts, reduces or annuls the level of previously acquired environmental protection and as long as there is no justification or technical-scientific support that allows it to determine, with a certain degree of certainty, the non-affectation of the protected legal right. The omission of State powers to exercise their regulatory capacity, especially by enacting environmental laws and their respective regulations is also considered regression, or when this power is exercised partially, incompletely or erroneously from a scientific, technical and legal perspective, rendering the law inapplicable or ineffective for environmental purposes.⁵⁰

In the case of Mexico, there is evidence of a failure to apply the principle of progressivity in the amendments to Regulation of the General Law of Ecological Balance and Environmental Protection in matters of Ecological Planning, which also violates the principles of legality, legal reserve, and hierarchical subordination. This is because its enactment contradicts the prevalence of the hierarchically superior law, the General Law of Ecological Balance and Environmental Protection [*Ley General del Equilibrio Ecológico y la Protección al Ambiente*] (hereinafter, LGEEPA), which regulates the provisions of the federal Constitution concerning the conservation and restoration of the ecological balance, as well as environmental protection, with the aim of encouraging sustainable development and establishing the bases to:

- I. Ensure the right of all persons to live in a healthy environment for their development, health, and well-being;
- II. Define the principles of environmental policy and the instruments for their application;
- III. The conservation, restoration and improvement of the environment;
- IV. The conservation and protection of biodiversity, as well as the establishment and management of protected natural areas;
- V. The sustainable use, conservation and, where appropriate, the restoration of soil, water and other natural resources, in such a way that obtaining

⁴⁹ Anglés Hernández, Marisol *et al.*, *Manual de derecho ambiental mexicano*, México, UNAM, Instituto de Investigaciones Jurídicas, 2021, available at: <https://archivos.juridicas.unam.mx/www/bjv/libros/13/6429/13.pdf>.

⁵⁰ Peña Chacón, Mario, *Derecho ambiental efectivo*, San José, Universidad de Costa Rica, 2016, p. 57.

economic benefits and the activities of society are compatible with the preservation of ecosystems;

VI. The prevention and control of air, water, and soil pollution...⁵¹

Also apparent is the lack of effective mechanisms for citizens to participate in the control of regularity, which consists of determining whether the regulations were drafted in compliance with the provisions of the hierarchically superior laws. Thus, the correlation between a lower law and a more superior one reflects the concept of regularity.⁵²

In addition to the above, the Supreme Court has argued that, given the principle of legality, independent regulations cannot exist in the legal system because a pre-existing law is necessary. Therefore, regulations may not contain issues which are exclusively reserved to the law, thereby giving importance to the concept of legal reserve: The principle of hierarchical subordination to which regulatory power is subject consists of the requirement that the regulation must necessarily be preceded by a law, the provisions of which are further developed, complemented or elaborated wherein it finds justification and scope.⁵³

As explained below, this change violates the principles mentioned in this section since ecological management is defined as an instrument designed to regulate or manage land use and productive activities through the analysis of deterioration trends and the potential uses of natural resources that will lead to the protection of the environment and the preservation and sustainable use of these resources.⁵⁴

As a result of the energy reform, however, changes were made to Articles 38, 42, 43, 44, 48 and 58 of said regulation to exclude activities that allow the development of the oil & gas sector from being applied. These include a) reconnaissance and surface exploration, and the exploration and extraction of oil & gas; b) the treatment, refining, sale, marketing, transportation and storage of oil; c) the processing, compression, liquefaction, decompression and regasification, as well as the transportation, storage, distribution and retail sale of natural gas; d) the transportation, storage, dis-

⁵¹ Article 1, Ley General del Equilibrio Ecológico y la Protección al Ambiente, *Diario Oficial de la Federación*, México, January 28, 1988. Amended on November 5, 2013.

⁵² Casarín León, Manlio Fabio, “Control de la administración pública”, en Cisneros Fariás, Germán *et al.* (coords.), *Creación de normas infralegales para el control de la administración*, México, UNAM, Instituto de Investigaciones Jurídicas, 2007, p. 120.

⁵³ Tesis 2a. I/2015, *Gaceta del Semanario Judicial de la Federación*, Décima Época, t. II, February 2015, p. 1770, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2008434>.

⁵⁴ Article 3, Section XXIV, Ley General del Equilibrio Ecológico..., *cit.*

tribution and retail sale of liquefied petroleum gas; e) the transportation, storage, distribution and retail sale of oil products; and f) pipeline transportation and storage linked to pipelines. On top of that, it even provides for changes to regional ecological management programs when these include environmental management units, criteria, guidelines, strategies, directives or any other provision related to activities that allow the development of the oil & gas industry, creating exceptions for an economic sector, thereby contravening the principle of sustainability, as well as the principle of good governance.

Environmental regression is also evidenced in pushing for an energy model based on fossil fuels, which compromises the obligations the Mexican State has undertaken in signing the United Nations Framework Convention on Climate Change and the Paris Agreement.⁵⁵

The first aims at stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. This translates into an obligation to formulate, implement, publish, and regularly update national and regional programs containing measures to mitigate climate change; to promote and cooperate in the development, application and diffusion, including the transfer of technologies, practices and processes that control, reduce or prevent anthropogenic Greenhouse Gases (GHG) emissions.

Under the Paris Agreement, the signatory countries pledge to avoid global temperature increases exceeding 2°C and ideally 1.5°C. As one of the signatories to the agreement, Mexico has committed to decarbonize its economy during the second half of the century and increase its climate resilience. It has voluntarily agreed to reduce 22% of its GHG emissions by 2030 and 51% of its black carbon emissions by 2020. However, at the same time, the Mexican government is encouraging the use of fracking—hydraulic fracturing—which emits significant amounts of methane into the atmosphere, the second most common greenhouse gas with an atmospheric life of approximately 12 years and a global warming potential 25 times greater than that of carbon dioxide.⁵⁶ This situation is compounded by the fact the Mexico is especially vulnerable to the effects of climate change

⁵⁵ Anglés Hernández, Marisol, “Reforma energética y cambio climático. Algunos puntos de desencuentro”, in Cárdenas Gracia, Jaime (coord.), *Reforma energética. Análisis y consecuencias*, México, UNAM, Instituto de Investigaciones Jurídicas-Tirant lo Blanch, 2015, p. 119.

⁵⁶ Howarth, Robert W. *et al.*, “Methane and the Greenhouse-gas Footprint of Natural Gas from Shale Formations: A Letter”, *Climatic Change*, Dordrecht, 2011; Castillo Rodríguez, Francisco, *Biotecnología ambiental*, Madrid, Editorial Tébar, 2005, vol. 106, No. 4, p. 128.

due to its geographic location, its topography and socioeconomic characteristics.⁵⁷

The behavior of the Mexican State is replicated throughout the world since in terms of governance, the greatest difficulty lies in the lack of government leadership because the States receiving capital do not fulfill their obligation to protect human rights.⁵⁸ Instead, they prefer to privilege economic investment, without realizing that in the long run, omissions in the area of environmental rights (degradation, pollution) will become liabilities that they themselves will have to take on.

VI. CONCLUDING REMARKS

The Mexican government's commitment to face the energy crisis by pursuing a model centered on the exploration and extraction of fossil resources contradicts the commitments undertaken to reduce GHGs under the United Nations Framework Convention on Climate Change and the Paris Agreement. Furthermore, global warming exacerbates the vulnerability of populations and ecosystems, the consequences of which could be devastating for the country.

The oil & gas reform is based on a vertical model, in which the head of the Federal Executive branch controls most of the bodies created for its implementation since he has the power to appoint and remove actors with important decision-making powers. There are no rules for these procedures, which violates the principle of the human right to good governance.

The ASEA-derived regulations are not in line with the obligations acquired through international human rights and sustainability instruments to which the Mexican State is party as they facilitate the extraction and sale of fossil resources instead of decisively advancing the development and implementation of clean technologies.

In the framework of the Inter-American and national human rights systems, the exploration and extraction of oil & gas must be carried out in such a way that it guarantees the rights of the people living where these resources are located. Moreover, exploration and extraction activities must be carried

⁵⁷ Secretaría de Medio Ambiente y Recursos Naturales, *Sexta Comunicación Nacional y Segundo Informe Bienal de Actualización ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático*, México, Instituto Nacional de Ecología y Cambio Climático, 2018, p. 429.

⁵⁸ United Nations, *Working Group on the issue of human rights and transnational corporations and other business enterprises*, A/73/163, New York, General Assembly, 16 July 2018, para. 31.

out with a sustainable approach; otherwise, the Mexican State might incur international liability.

Regulations stemming from the oil & gas reform is regressive as it omits the principle of progressivity as can be noted in the amendment to the Regulation of the General Law of Ecological Balance and Environmental Protection in matters of Ecological Planning. This also violates the principles of legality, legal reserve and hierarchical subordination since its enactment contradicts the prevalence of the hierarchical superior law, which is the LGEEPA, the federal Constitution provision dictating that national development must be comprehensive and sustainable.

One success has been the development and implementation of the Public Complaint System, which can be accessed on the ASEA internet portal, with a view to allowing access to public participation in matters of environmental interest involved in the oil & gas sector, which, in turn, contributes to environmental governance and the democratic rule of law.

VII. BIBLIOGRAPHY

- AGUILERA, Manuel *et al.*, “Contenido y alcance de la reforma energética”, *Economía UNAM*, vol. 13, No. 37, January-April, 2016.
- AMADOR-HERNÁNDEZ, J. *et al.*, “Determinación simultánea de seis hidrocarburos policíclicos aromáticos en medio micelar por regresión de mínimos cuadrados parciales (pls-1) utilizando espectros de fluorescencia de ángulo variable lineal”, *Boletín de la Sociedad Chilena de Química*, vol. 44, No. 3, 1999.
- AMPARO directo 2093/88, Tribunales Colegiados de Circuito, *Semanario Judicial de la Federación*, Octava Época, t. III, Mexico, January-June 1989.
- ANGLÉS HERNÁNDEZ, M. *et al.*, *Manual de derecho ambiental mexicano*, México, UNAM, Instituto de Investigaciones Jurídicas, 2021, available at: <https://archivos.juridicas.unam.mx/www/bjv/libros/13/6429/13.pdf>.
- ANGLÉS HERNÁNDEZ, Marisol, “Denuncia popular, ¿ejercicio de la participación pública en la protección ambiental?”, *Lex-Difusión y Análisis*, Mexico, Third Period, Year IX, No. 120, June 2005. available at: http://paginaspersonales.unam.mx/app/webroot/files/346/Publica_20110325143243.pdf.
- ANGLÉS HERNÁNDEZ, Marisol, “El artículo 27 en materia de energía”, en *Derechos del Pueblo Mexicano. México a través de sus Constituciones*, T. VII: Mexico, Cámara de Diputados, H. Congreso de la Unión, LXIII Legislatura, Porrúa, UNAM, Instituto de Investigaciones Jurídicas, Instituto Nacional

- Electoral, 2016, available at: <http://biblioteca.diputados.gob.mx/janium/bv/lxiii/DerPM/VOL7.pdf>.
- ANGLÉS HERNÁNDEZ, Marisol, “El derecho a disfrutar de un medio ambiente sin riesgos, limpio, saludable y sostenible en el Convenio de Aarhus y Escazú”, in AGUILAR CAVALLO, G. (coord.), *El Acuerdo de Escazú. Perspectiva latinoamericana y comparada*, Valencia, Tirant lo Blanch, 2021.
- ANGLÉS HERNÁNDEZ, Marisol, “Reforma energética y cambio climático. Algunos puntos de desencuentro”, in CÁRDENAS GRACIA, Jaime (coord.), *Reforma energética. Análisis y consecuencias*, Mexico, UNAM, Instituto de Investigaciones Jurídicas-Tirant lo Blanch, 2015.
- BANDEIRA DE MELLO, C. A., *Curso de derecho administrativo*, Mexico, UNAM, Porrúa, 2006.
- CARBONELL, Miguel, “Órganos constitucionales autónomos”, *Enciclopedia Jurídica Mexicana*, 2nd ed., Mexico, UNAM, Instituto de Investigaciones Jurídicas, Porrúa, 2004.
- CASARÍN LEÓN, Manlio Fabio, *Control de la administración pública, Creación de normas infralegales para el control de la administración*, in CISNEROS FARIAS, Germán *et al.* (coords.), Mexico, UNAM, Instituto de Investigaciones Jurídicas, 2007.
- CASTILLO RODRÍGUEZ, Francisco, *Biotecnología ambiental*, Madrid, Tébar, 2005.
- Constitución Política de los Estados Unidos Mexicanos, Diario Oficial de la Federación*, Mexico, February 5, 1917. Amendments on 20 December 2013, available at: <http://www.diputados.gob.mx/LeyesBiblio/ref/cpeum.htm>.
- CUEVA, Mario de la, *Teoría de la Constitución*, Mexico, Porrúa, 1982.
- Declaration of the Rights of Man and of the Citizen*, French National Constituent Assembly, August 29, 1789.
- Decreto por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía, *Diario Oficial de la Federación*, Mexico, February 5, 1917, amendments on 20 December 2013, available at: <http://www.diputados.gob.mx/LeyesBiblio/ref/cpeum.htm>.
- EDWARDS, N. T., “Polycyclic Aromatic Hydrocarbons (PAHs) in the Terrestrial Environment. A Review”, *Journal of Environmental Quality*, vol. 12, No. 4, 1983.
- EUROPEAN COURT OF HUMAN RIGHT, *Case Budayeva & others v. Russia*, Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, Strasbourg, Judgment, 20 March 2008.

- EUROPEAN COURT OF HUMAN RIGHTS, *Case Öneriyildiz v. Turkey*, Application No. 48939/99, Strasbourg, Judgment, 30 November 2004.
- HARITASH, A. K. y KAUSHIK, C. P., “Biodegradation Aspects of Polycyclic Aromatic Hydrocarbons (PAHs): A Review”, *Journal of Hazardous Materials*, vol. 169, No. 1-3, 2009.
- HOWARTH, Robert W. *et al.*, “Methane and the Greenhouse-gas Footprint of Natural Gas from Shale Formations: A Letter”, *Climatic Change*, Dordrecht, vol. 106, No. 4, 2011.
- HUERTA OCHOA, Carla, *Mecanismos constitucionales para el control del poder político*, 3rd ed., Mexico, UNAM, Instituto de Investigaciones Jurídicas, 2010.
- INTER-AMERICAN COMMISSION OF HUMAN RIGHTS, *Access to justice as a guarantee of economic, social, and cultural rights. A review of the standards adopted by the Inter-American System of human rights*, Washington, D. C., Organization of American States, 2007.
- INTER-AMERICAN COMMISSION OF HUMAN RIGHTS, *Petition and Case System. Informational brochure*, Washington, D. C., OAS, 2010.
- INTER-AMERICAN COURT OF HUMAN RIGHTS, *Advisory Opinion OC-23/17* requested by the Republic of Colombia: The Environment and Human Rights, November 15, 2017.
- INTER-AMERICAN COURT OF HUMAN RIGHTS, *Case I.V. v. Bolivia* (Preliminary objections, merits, reparations and costs), Judgment of November 30, 2016.
- INTER-AMERICAN COURT OF HUMAN RIGHTS, *Case of the Kichwa Indigenous People of Sarayaku v. Ecuador* (Merits and reparations), Judgment of June 27, 2012.
- INTER-AMERICAN COURT OF HUMAN RIGHTS, *Case Ximenes Lopes v. Brazil* (Merits, Reparations and Costs), Judgment of July 4, 2006.
- INTERNATIONAL COURT OF JUSTICE, *Case concerning The Gabčíkovo-Nagymaros (Hungary vs. Slovakia)* Judgment, 25 September 1997.
- International Covenant on Economic, Social and Cultural Rights*, New York, United Nations, 1966.
- JIMÉNEZ DE ARÉCHAGA, Eduardo, *La Convención Interamericana de Derechos Humanos como derecho interno*, Montevideo, Fundación de Cultura Universitaria, 1988.
- JIMÉNEZ-HERRERO, L. M., “Cooperación mundial para el desarrollo sostenible”, *Revista Española de Desarrollo y Cooperación*, Madrid, No. 9, Autumn-Winter 2002.

- KIRKEMANN-HANSEN, J. and SANO, H. O., “The Implications and Value Added of a Rights-Based Approach”, in ANDREASSEN, B. A. & MARKS, S. P., *Development as a Human Rights. Legal, Political and Economic Dimensions*, Cambridge, Intersentia, 2010.
- LABRADOR SÁNCHEZ, A., “Desmitologizar el concepto de Desarrollo Sustentable”, in GUERRERO DEL CASTILLO, E. & MÁRQUEZ MUÑOZ, J. F. (coords.), *Visión social del desarrollo sustentable*, Mexico, UNAM, Facultad de Ciencias Políticas y Sociales, 2014.
- LEY de la Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos, *Diario Oficial de la Federación*, Mexico, August 11, 2014, available at: <http://www.diputados.gob.mx/LeyesBiblio/index.htm>.
- LEY General del Equilibrio Ecológico y la Protección al Ambiente, *Diario Oficial de la Federación*, Mexico, January 28, 1988. Amended on November 5, 2013. available at: <http://www.diputados.gob.mx/LeyesBiblio/index>.
- LÓPEZ OLVERA, Miguel Alejandro, “La delimitación de competencias en el derecho turístico mexicano”, en FERNÁNDEZ RUIZ, J. and SANTIAGO SÁNCHEZ, J. *Régimen jurídico del turismo y de la zona marítimo-terrestre*, Mexico, UNAM, Instituto de Investigaciones Jurídicas, 2009.
- MÁRQUEZ GÓMEZ, Daniel, “Un nuevo paradigma en administración pública: el derecho humano a la buena administración pública”, in FERNÁNDEZ RUIZ, J. (coord.), *Estudios jurídicos sobre administración pública*, Mexico, UNAM, Instituto de Investigaciones Jurídicas, 2012.
- ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, *Key World Energy Statistics 2015*, Paris, OECD-International Energy Agency, 2015.
- ORGANIZATION OF AMERICAN STATES, *Basic Documents in the Inter-American System*, Washington, D. C., OAS, 2001.
- ORGANIZATION OF AMERICAN STATES, *Human Rights and the Environment*. Resolution adopted at the third plenary session, held on June 5. AG/RES 1819 (XXXI-O/01), Washington, D. C., Organization of American States, 2001.
- PEÑA CHACÓN, Mario, *Derecho ambiental efectivo*, San José, Universidad de Costa Rica, 2016.
- RODRÍGUEZ MANZO, Graciela *et al.*, *Bloque de constitucionalidad*, Mexico, SCJN-Oficina en México del Alto Comisionado de las Naciones Unidas para los Derechos Humanos-Comisión de Derechos Humanos del Distrito Federal, 2013.

- SECRETARÍA DE ENERGÍA, Programa Sectorial de Energía 2013-2018, *Diario Oficial de la Federación*, Mexico, December 13, 2013.
- SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES, *Sexta Comunicación Nacional y Segundo Informe Bienal de Actualización ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático*, Mexico, Instituto Nacional de Ecología y Cambio Climático, 2018.
- TESIS 2a. I/2015, *Gaceta del Semanario Judicial de la Federación*, Décima Época, t. II, February 2015, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2008434>.
- TESIS aislada 2a. CXCVI/2001, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XIV, October 2000, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/188678>.
- TESIS aislada I.14o.C.24C, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XIX, January 2004, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/182292>.
- TESIS P./J. 20/2014, *Gaceta del Semanario Judicial de la Federación*, Décima Época, vol. I, April 2014, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2006224>.
- TESIS P./J. 21/2014, *Gaceta del Semanario Judicial de la Federación*, Décima Época, April 2014, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/2006225>.
- TESIS P./J. 39/2006, *Semanario Judicial de la Federación y su Gaceta*, Novena Época. t. XXIII, March 2006, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/175593>.
- TESIS P./J. 76/2009, *Semanario Judicial de la Federación y su Gaceta*, Novena Época, t. XXX, July 2009, available at: <https://sjf2.scjn.gob.mx/detalle/tesis/166883>.
- UNITED NATIONS, *Adverse Effects of the Illicit Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, New York, United Nations, Commission on Human Rights, E/CN.4/RES/2005/15, adopted on April 14, 2005.
- UNITED NATIONS, *Industrial development cooperation*, A/RES/67/225, New York, General Assembly, April 9, 2013.
- UNITED NATIONS, *Our common future*, New York, World Commission for Environment and Development, 1987.
- UNITED NATIONS, *Report of public administration and development*, A/60/114, New York, General Assembly, July 12, 2005.
- UNITED NATIONS, *Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, John H. Knox, Doc. ONU A/HRC/22/43, Human Rights Council, December 24, 2012.

UNITED NATIONS, *The right to development*, A/RES/69/181, New York, General Assembly, February 6, 2015.

UNITED NATIONS, *Transforming our world: The 2030 Agenda for sustainable development*, New York, General Assembly, A/RES/70/1, 21 October 2015.

UNITED NATIONS, *Universal Declaration of Human Rights*, New York, General Assembly A/RES/217(III), December 10, 1948.

UNITED NATIONS, *Working Group on the issue of human rights and transnational corporations and other business enterprises*, A/73/163, New York, General Assembly, July 16, 2018.

VALADÉS, Diego, “El poder de controlar”, *Liber ad honorem Sergio García Ramírez*, Mexico, UNAM, Instituto de Investigaciones Jurídicas, t. I, 1998.