

Country Systems Report 7 | **Mexico**

Policies and regulatory systems for
Environmental & social licensing and enforcement



Updated
August 2019

Acknowledgements

The author is grateful to the following individuals who have provided information, expert insights, advice, comments, and feedback to date concerning the environmental licensing process and enforcement in the countries included in the *Country Systems Reports* series:

Miguel Angel Cancino Aguilar, Environmental and Land Use Prosecutor's Office for Mexico City

Miles Scott-Brown, President, The Ciera Group

Manuel Frávega, Undersecretary of Environmental Enforcement and Assessment, Provincial Agency for Sustainable Development (OPDS), Province of Buenos Aires

Juan David Quintero, Director, EEC Environmental Consultants

Hector Villaverde, Independent consultant, Uruguay

Cheryl Wasserman, President and Founder, Environmental Governance Institute International (EGII)

Notice concerning the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International:

The *Country Systems Reports* are intended to serve as a resource for organizations, practitioners, academicians, students, and others involved in environmental governance issues and are not to be used for commercial purposes. Except where expressly stated, all data used in the preparation of these reports is drawn from publicly available documents and other sources. The author reserves attribution rights for the work product resulting from the synthesis of the information contained.

The word “environmental” is used in a broad sense throughout the *Country Systems Reports*, referring not only to the natural world, ecosystems, biodiversity, and climate change, but also **encompassing a full range of social impacts** resulting from human activities that include impacts on the livelihood of communities; human rights; access to information; public health and safety; land tenure; indigenous rights; free, prior, and informed consent; forced resettlement; gender; labor issues; cultural and religious issues; archaeological sites; and other relevant issues.

Comments, recommendations, and corrections are highly encouraged and can be submitted to the author at gunnar.baldwin@roadrunner.com.

Table of Contents

I. Constitutional and policy framework for sustainable development.....	5
A. Constitutional basis for environmental protection	5
B. National policies on the environment and sustainable development	5
Table 1: Key national policies, plans, and programs	5
II. Legislative and institutional framework for environmental licensing and enforcement	8
A. Overview	8
B. Environmental licensing and enforcement legislation at the state level	8
C. Official Mexican Standards	10
D. Competent government institutions.....	10
1. Environmental authorities at the national level.....	10
a. Environmental licensing and enforcement authorities	11
Chart 1. Organization of SEMARNAT	11
Chart 2. Organization of PROFEPA.....	12
b. Other competent federal environmental authorities.....	13
c. Federal environmental bodies that have an advisory or facilitative role	13
2. State and municipal environmental authorities	14
a. Overview	14
b. Case study: the State of Chiapas.....	14
c. Case study: the State of Mexico.....	15
Table 2: State legislation and authorities—EsIA, licensing, & enforcement.....	16
Chart 3. Federal delegations and jurisdictions of environmental authorities	17
3. Environmental authorities in the Federal District of Mexico City	18
Table 3. Inter-agency coordination mechanisms	20
III. Issuance of environmental licenses and the formulation of licensee obligations	21
A. Overview of the environmental licensing process	21
1. Activities subject to the EsIA process at the federal level.....	21
2. Procedures for applying for an environmental license	21
3. The Single Environmental License	22
Table 4: Environmental licensing instruments	23
4. Activities subject to the EsIA process at the state and municipal level	24
5. Formulation of project-specific environmental requirements and commitments	24
6. Commitment to legal environmental performance obligations by the developer	25
7. Required reporting of emissions and discharges of pollutants	25
B. Access to information, public consultation, and conflict avoidance	26
C. Prior consultation with indigenous peoples	27
1. Background	27
2. Energy sector mandate for prior consultation	29
3. Tribe-specific prior consultation protocols.....	30
4. Prior consultation for oil and gas projects.....	31
D. Integrating biodiversity into the EsIA process	32
1. Legislative requirements for the consideration of biodiversity impacts	32
2. The Mexican Commission for the Knowledge and Use of Biodiversity	33

(Continued on the following page)

3. The National Biodiversity Strategy and Action Plan 2016-2030	33
Table 5: Biodiversity: Lines of action and action items that are pertinent to the EsIA process.....	34
E. Protection of archaeological and cultural heritage	35
IV. Monitoring and enforcement of environmental license requirements	36
A. Overview.....	36
B. Inspection procedures	36
C. Verifying environmental compliance: performance indicators.....	37
D. Environmental enforcement programs and the selection of enforcement priorities	37
E. Responding to citizen environmental complaints	37
1. Overview	37
2. Procedural process for responding to citizen complaints.....	38
Chart 4. Processing citizen complaints	38
F. Monitoring by organized citizen groups	39
Table 6: CVAP responsibilities and functions	39
G. Sanctioning regime.....	40
1. Violations of the terms and conditions of environmental authorizations.....	40
2. Appealing sanctions imposed by environmental authorities: Motions for Review.....	40
H. Prosecution and environmental tribunals.....	41
I. Compliance promotion programs.....	42
J. Performance data on environmental licensing and inspections	43
1. Results of site visits carried out by PROFEPA, 2016 to 2018	43
Table 7: PROFEPA actions – 2016 to 2018	43
2. Outcomes of PROFEPA inspections	44
Table 8: Outcomes of PROFEPA inspections	44
3. Industrial inspections by area of primary area of concern.....	44
Table 9: PROFEPA industrial inspections by primary area of concern.....	44
4. Number of inspections by sector in 2016, for sectors that generate hazardous wastes	44
Table 10: Type of activity/sector.....	44
V. Information systems and technology tools for case management and project planning	45
A. The National Environmental Information System and the Natural Resources Information System (SNIARN).....	45
B. The Geographic Information System for Environmental Impact Assessment (SIGEIA)	45
C. Strategic Institutional Information System (SIIE)	45
VI. Cost recovery and funding for licensing and enforcement tasks.....	46
A. Budget allocations	46
Table 10: Budget allocations and revenues	46
B. Fees for services: processing environmental license applications	46
Table 11: Fees for EsIA review and issuance of an environmental license.....	46
C. Environmental guarantees	47
D. Dedicated environmental funds	47

Country Systems Report 7 | Mexico

Policies and regulatory systems for environmental licensing and enforcement



I. Constitutional and policy framework for sustainable development

A. Constitutional basis for environmental protection

The Political Constitution of the United Mexican States contains multiple provisions for environmental protection, which are contained in eight of the document's Articles.¹ Article 4 states that "Every person has the right to live in an environment that is adequate for his or her development and well-being."² Although it does not reference the process of environmental assessment by name, the Constitution in several instances proclaims the importance of carrying out development activities in a manner that balances economic, environmental, and social interests. Article 25 states that:

"The State shall support and stimulate social and private enterprises, under criteria of social equity, productivity and sustainability and subjected to the public interest and to the use of the productive resources, preserving them and the environment."

Article 27 goes further, asserting the State's role in ensuring the achievement of sustainable development that is equitable to all segments of society and balancing economic growth with the protection and prudent use of the environment. The Article elaborates a sweeping set of goals that integrate social justice with development objectives, completing the statement with the words "all this, while avoiding destruction of natural resources." Lastly, a 2013 decree amended Article 28 to include a mandate that all State-operated energy projects seek the protection and care of the environment by:

"incorporating criteria and best practices in the topics of efficiency in the use of energy by reducing the generation of greenhouse gases, improving efficiency in the use of natural resources, the generation of lower wastes and emissions, and the lowest carbon footprints in all its processes."³

B. National policies, plans, and programs on the environment and sustainable development

In recent years, Mexico has adopted a large number of policies, programs, plans, and strategies for protecting the environment and responding to climate change while pursuing the goals of sustainable development and equitable sharing of economic growth. These are described in the table below.

Table 1. Key national policies, plans, and programs related to sustainable development

1. **National Development Plan 2019-2024 (PND)** – This comprehensive guidance document combines aspirational goals, proposals, and lines of actions for achieving equitable economic development. The current PND has a greatly reduced environmental focus from its predecessor for the 2013-2018 period, which noted that the economic cost of environmental degradation is equal to 6.9% of Mexico's gross domestic product.

¹ The Political Constitution of Mexico was adopted in 1917 and has been subject to numerous amendments by decree, most recently in 2016. As of February 8, 2016, the Constitution had been amended through 227 amendment decrees (See León, M. A. R. (2017), *Understanding Constitutional Amendments in Mexico: Perpetuum mobile Constitution*, Mexican Law Review, BJV, Instituto de Investigaciones Jurídicas-UNAM, <https://doi.org/10.22201/ijj.24485306e.2017.18.10774>).

² As amended by decree on 8 February, 2012.

³ Reform Law of 20 December 2013, Seventeenth Article.



2. **National Strategy for Sustainable Production and Consumption** (2013) – This Strategy was adopted to foster inclusive and facilitative green growth, preserving Mexico’s natural heritage while generating wealth, competitiveness, and jobs. The Strategy’s text states that sustainable consumption and production will allow Mexico to base its development on the environment, as well as actions that reduce social differences.
3. **Special Program for Sustainable Production and Consumption 2014-2018** (PEPyCS) was implemented by Decree, echoing the National Strategy’s goal of green and inclusive growth and the imperative of sustainable use of Mexico’s natural resources. Chapter III of the PEPyCS establishes objectives, strategies, and lines of action for achieving inclusive green growth, through the adoption of patterns of production and consumption. In particular, Line of Action 2.1.2. calls for strengthening compliance with sustainable production and consumption standards.
4. **Sectoral Program for the Environment and Natural Resources 2013-2018** (PROMARNAT) This program addresses the four strategies included in Objective 4.4 of Mexico’s National Development Plan 2013-2018 (PND), "Promoting and guiding inclusive and facilitative green growth that preserves our natural heritage while generating wealth, competitiveness and employment." One of the program’s crosscutting objectives focuses on strengthening mechanisms for assuring compliance in connection with environmental legislation and industry requirements that are subject to federal jurisdiction.⁴
5. The **Transition Strategy for Promoting the Use of Cleaner Technologies and Fuels** establishes policies and actions for promoting the use of energy from renewable resources and substituting them for fossil fuels at the final consumption stage. The *Strategy* contains a medium-term (15-year) planning horizon and a long-term (30-year) horizon. The medium-term horizon must be updated every three years and contain an “exhaustive diagnosis” of the status of environmental pollution caused by the electric power industry, utilizing data provided by SEMARNAT.⁵
6. The **National Program for the Sustainable Use of Energy** (PRONASE) is a program for increasing energy efficiency across all economic sectors. It caps Mexico’s national energy intensity for 2018 at 2012 levels and prescribes additional energy efficiency improvements.⁶
7. **General Law on Climate Change** (GLCC) of 2012 – The objectives of the GLCC include guaranteeing the right to a healthy environment; regulating climate mitigation and adaptation actions, as well as the emissions of greenhouse gases; and the promotion of climate education, research, development, technology transfer, and innovative approaches to climate adaptation. In addition, the GLCC provides a foundation for coordination between national, state, and municipal authorities on climate action and reaffirms Mexico’s pledge (under the Copenhagen Accord) to a target of reducing greenhouse gas emissions by 30% below business-as-usual levels by 2020 and 50% below the 2000 level by 2050.⁷

⁴ CONAFOR, *Special Program for the Environment and Natural Resources 2013-2018*, Strategy 56, 64 Available at <http://www.conafor.gob.mx:8080/documentos/ver.aspx?articulo=5403&grupo=8>.

⁵ Ley 1715, Art 29, § II.

⁶ SENER (2014) *Programa Nacional para el Aprovechamiento Sustentable de la Energía 2014-2018*, 39.

⁷ Article 2 of the General Law on Climate Change states that Mexico’s greenhouse gas reduction goals are subject to the availability of financial resources and technology transfer.

Advancing the goals of the Special Program for Sustainable Production and Consumption 2014-2018

Although many action items contained in the *Special Program for Sustainable Production and Consumption 2014-2018* (PEPyCS) involve promoting voluntary commitments to heightened standards of environmental performance, there are a number of aspects of the program that require participation by environmental licensing and enforcement authorities. In addition to approving the viability of environmental management plans for activities included in the PEPyCS, government authorities must verify the environmental integrity of sustainable goods and production methods that qualify for sustainable public procurement programs (an element of the program), special financing options, tax incentives, and other preferential treatment. The PEPyCS envisions that compliance with environmental legislation is a *floor* for the environmental performance by the Program's participants, implicitly requiring that Mexico's ECE authorities substantiate the minimum level of compliance by the actors involved in order to build the program on this foundation.

Environmental compliance assurance and the Special Program for the Environment and Natural Resources 2013-2018 (PROMARNAT)

Strategy 5.6. of PROMARNAT, Strengthening the verification of compliance with environmental regulations regarding natural resources and industry of federal competency, contains nine lines of action that focus on enhancing government environmental monitoring and enforcement capacities. In addition to addressing core environmental compliance and enforcement functions, the strategy calls for strengthening information systems for monitoring and assessing the environmental performance of industry sectors, as well as monitoring the restoration and remediation of 100% of the affected surface areas impacted by environmental emergencies that are associated with chemical substances.⁸ In addition, PROMARNAT provides indicators and references to indicator data sources for a wide variety of topics, including rigor of environmental regulation, the valuation environmental services, and public participation.

⁸ CONAFOR, Supra note 4.

II. Legislative and institutional framework for environmental licensing and enforcement

A. Overview

The **General Law of Ecological Balance and Environmental Protection** (LGEEPA), enacted in 1988, provides the general basis for environmental governance in Mexico, in accordance with the provisions of the federal Constitution. Article 73 of Mexico's Constitution empowers the federal Congress to establish concurrent authority among federal, state, and municipal government bodies, within the scope of their respective jurisdictions, for matters relating to environmental protection and maintaining the environmental equilibrium.⁹ LGEEPA provides that the federal government is the primary authority for environmental affairs of national importance and provides a list of twenty-one types of activities for which the federal government has jurisdiction.¹⁰ In accordance with their concurrent responsibilities, Mexican states and municipalities play an auxiliary role and share responsibility with the federal government for carrying out environmental management and compliance assurance functions for activities subject to federal authority.

Under LGEEPA, Mexican states and municipalities are charged with regulating environmental matters that are not reserved to the federal government, including the EsIA and project authorization process for activities under state jurisdiction, implementing state pollution control legislation, and the enforcement of EsIA requirements.¹¹ Environmental matters that are not allocated to the federal government or the states may be regulated by municipalities, such as the issuance of construction permits and local land use ordinances. Under the system of concurrent authority, a significant body of parallel, substantive environmental legislation exists at all levels of government.

For environmental assessment issues at the federal level, detailed provisions for the administration of the EsIA process, licensing, environmental guarantees, and enforcement are defined in the **LGEEPA Regulation on the Matter of Environmental Impact Assessment** (REIA), and its subsequent amendments.¹² In addition, the **Environmental Liability Law** (*Ley Federal de Responsabilidad Ambiental*) establishes responsibility (including financial guarantees) for project and activity proponents consistent with the Polluter Pays Principle, as well as mandating the creation of a National System of Environmental Risk Insurance.¹³

B. Environmental licensing and enforcement legislation at the state level

Most Mexican states have enacted their own body of legislation that addresses environmental and sustainable growth policy, as well as defining environmental administrative functions within their jurisdictions. For example, the *Environmental Law of the State of Chiapas* (2014) provides rules for steering development within the state and granting environmental authorizations (licenses),

⁹ *Constitución Política de los Estados Unidos Mexicanos*, Art. 73(XXIX)(G). The federal Constitution was most recently amended in 2016.

¹⁰ LGEEPA, Arts. 4(I), 5, and 28; Environmental matters that fall under federal jurisdiction include the formulation of national environmental policy, criteria, and standards, as well as the oversight of activities that are complex, have high magnitude impacts, span two or more states, and other matters of federal concern. Article 28 provides a list of types of activities that are subject to the authorization process if they are under federal jurisdiction.

¹¹ LGEEPA, Art. 4(II).

¹² *Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental* (REIA) (most recently amended in 2014).

¹³ *Ley Federal de Responsabilidad Ambiental*, Arts. 8 and 10.

incorporating by reference certain aspects of the EsIA process contained in LGEEPA.¹⁴ The Law also authorizes the Ministry of the Environment and Natural History of Chiapas to carry out monitoring and enforcement functions.¹⁵ Similarly, the *State Environmental Protection Law* of the State of Veracruz-Llave (2000) elaborates a parallel body of environmental policy provisions and environmental governance functions for state environmental authorities, circumscribing functions that were under state and municipal jurisdiction.¹⁶

The framework legislation for sustainable development in each Mexican state generally contains the following elements:

- **Activities subject to an EsIA requirement** (and/or separate risk study) and under state jurisdiction.
- **Roles and responsibilities** of competent environmental authorities.
- **Ecological land use ordinance** provisions.
- **Public consultation** requirements.
- **Procedures for the issuance of Environmental Authorizations** (licenses) and permits.
- **Citizen complaint** mechanisms.
- **Inspection procedures.**
- **Security or emergency measures** if imminent or existing environmental harm is detected.
- **Rules for the imposition of sanctions.**

Land use zoning policies (*Ordenamientos ecológicos*) are overarching contextual features of environmental regulation at all levels of government in Mexico. These policies help determine allowable land uses at a macro level and recognize ecological, hydrological, geographic, socio-economic and other characteristics of land areas. In the legislation of Mexican states, the *Ordenamientos ecológicos* are intended to carry significant weight in shaping regional land use decisions and establishing a balance between productive land use and ecological conservation.¹⁷ In many states, this balance is to be determined “based on the analysis of deterioration trends and the potential of use” of natural resources.¹⁸ In cases where ecological zones straddle two or more jurisdictions, coordination agreements are used to apportion responsibilities among competent government entities.

In most Mexican states, framework legislation on sustainable development provides for economic incentives that promote compliance with environmental policies, legislation, and the obligations associated with environmental licenses and permits. Although aspirational in character, these legislative provisions reflect the commonly-shared objective of linking environmental compliance with economic growth. These laws generally state the intent of changing the behavior of persons who operate, commercial, or service activities. In many cases they express the need to incorporate reliable information on the environmental consequences, benefits, and costs of those activities, stated in economic terms (price signals), as well as the objective of encouraging a more socially

¹⁴ Decreto No. 480 (Chiapas) *Ley Ambiental para el Estado de Chiapas* (2014).

¹⁵ Decreto No. 480, Art 31.

¹⁶ Ley No. 62 (Veracruz-Llave) *Ley Estatal de Protección Ambiental* (updated in 2016).

¹⁷ This summary is synthesized from the ecological land use provisions from a cross section of legislation from a sample of twelve (over a third) of the Mexican states.

¹⁸ Identical language is included in the sustainable development legislation in Oaxaca, Sinaloa, Yucatán, and other Mexican states. Determining a balance between sustainable land use and conservation is defined differently in others.

equitable distribution of benefits and costs. Although similar in content, these legislative provisions often include state-specific provisions.

C. Official Mexican Standards

Official Mexican Standards (NOMs) are a body of mandatory technical regulations that have been established by competent government agencies. For the environmental sector, Mexico's Ministry of the Environment and Natural Resources (SEMARNAT) and its dependencies have promulgated NOMs in accordance with Article 40 of the *Federal Law on Metrology and Standardization*.¹⁹ The NOMs establish technical rules, standards, specifications, guidelines, and methodologies for undertaking a range of specific activities, processes, and methods of production.²⁰ Individual NOMs address specific issues, such as emissions and effluent limits for pollutants in connection with a sector or subsector. In conjunction with environmental laws, regulations, and license-specific obligations, they are a core component of the legal requirements with which environmental licensees must comply.



NOMs have been classified into the following subject areas: Water, Noise Pollution, (Atmospheric) Emissions from Fixed Sources, Emissions from Mobile Sources, Environmental Impact, Sludges and Biosolids, Measurement of Concentrations, Methodologies, Protection of Flora and Fauna, and Solid waste and Soils.²¹ As of 2016, 70 environmental NOMs had been issued dealing specifically with industry (production and manufacturing) processes, broken down by the following categories:

- Atmospheric emissions (fixed sources) 33
- Wastewater 7
- Solid waste 15
- Soils 3
- Environmental Impact 9
- Environmental Risk (Agreements) 3

¹⁹ *Ley Federal Sobre Metrología y Normalización* (LFMN), Most recently amended in 2015. Article 40(X) establishes the need for “characteristics and/or specifications, criteria, and procedures that permit, protect, and promote the improvement of the environment and ecosystems, as well as the preservation of natural resources.” NOMs for the hydrocarbons sector have been established separately by the Agency for Safety, Energy and Environment (ASEA), a decentralized administrative body connected to SEMARNAT.

²⁰ See, e.g., NOM-156-SEMARNAT-2012, *Establecimiento y operación de sistemas de monitoreo de la calidad del aire*, which specifies the minimum conditions that must be observed for the establishment and operation of air quality monitoring systems.

²¹ SEMARNAT, Normas Oficiales Mexicanas, <https://www.semarnat.gob.mx/leyes-y-normas/normas-oficiales-mexicanas>.

D. Competent government institutions

1. Environmental authorities at the national level

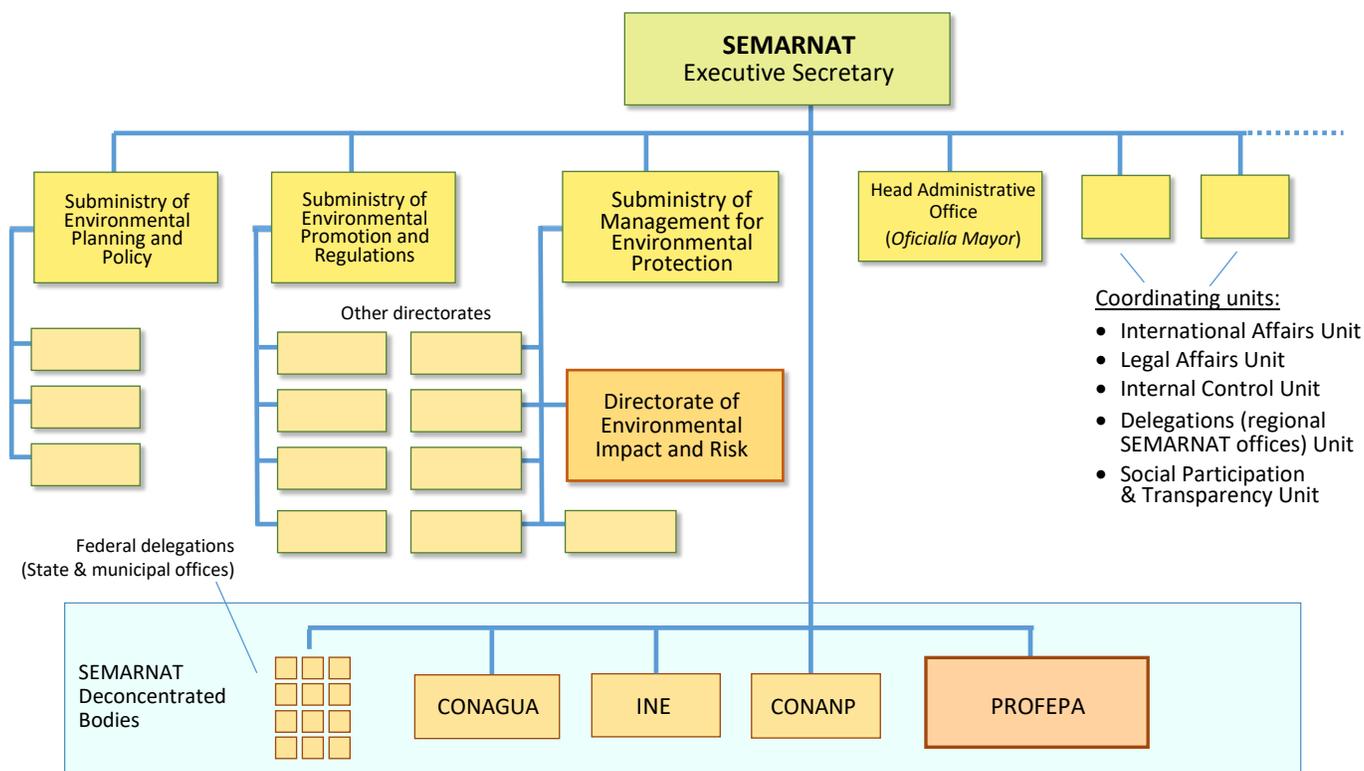
a. Environmental licensing and enforcement institutions

Ministry of the Environment and Natural Resources (SEMARNAT)

At the federal level, SEMARNAT is the primary government agency with responsibility for creating and implementing environmental policy and establishing Mexico’s environmental legislative framework. Through its **Directorate of Environmental Impact and Risk** (part of the *Subministry of Management for Environmental Protection*), SEMARNAT administers the EsIA process and grants environmental authorizations (licenses) for the implementation of approved projects and activities. In addition to its headquarters in the Federal District, SEMARNAT has branch offices in each of Mexico’s states for administering EsIA and licensing functions near the location of federally authorized activities and which perform a liaison role with state and municipal environmental authorities.

SEMARNAT works in coordination with the National Agency for Safety, Energy and Environment (ASEA); the National Water Commission (CONAGUA); the National Commission for Natural Protected Areas (CONANP) and the National Forestry Commission (CONAFOR).²² SEMARNAT’s branch offices in the states are responsible for draft Preventative Reports that elaborate the specific details or *particulares* of environmental management for certain types of projects.

Chart 1: Organization of SEMARNAT (Simplified to highlight environmental licensing and enforcement bodies)



²² OECD (2013), Mexico Environmental Performance Review; Government of Mexico web site gob.mx.

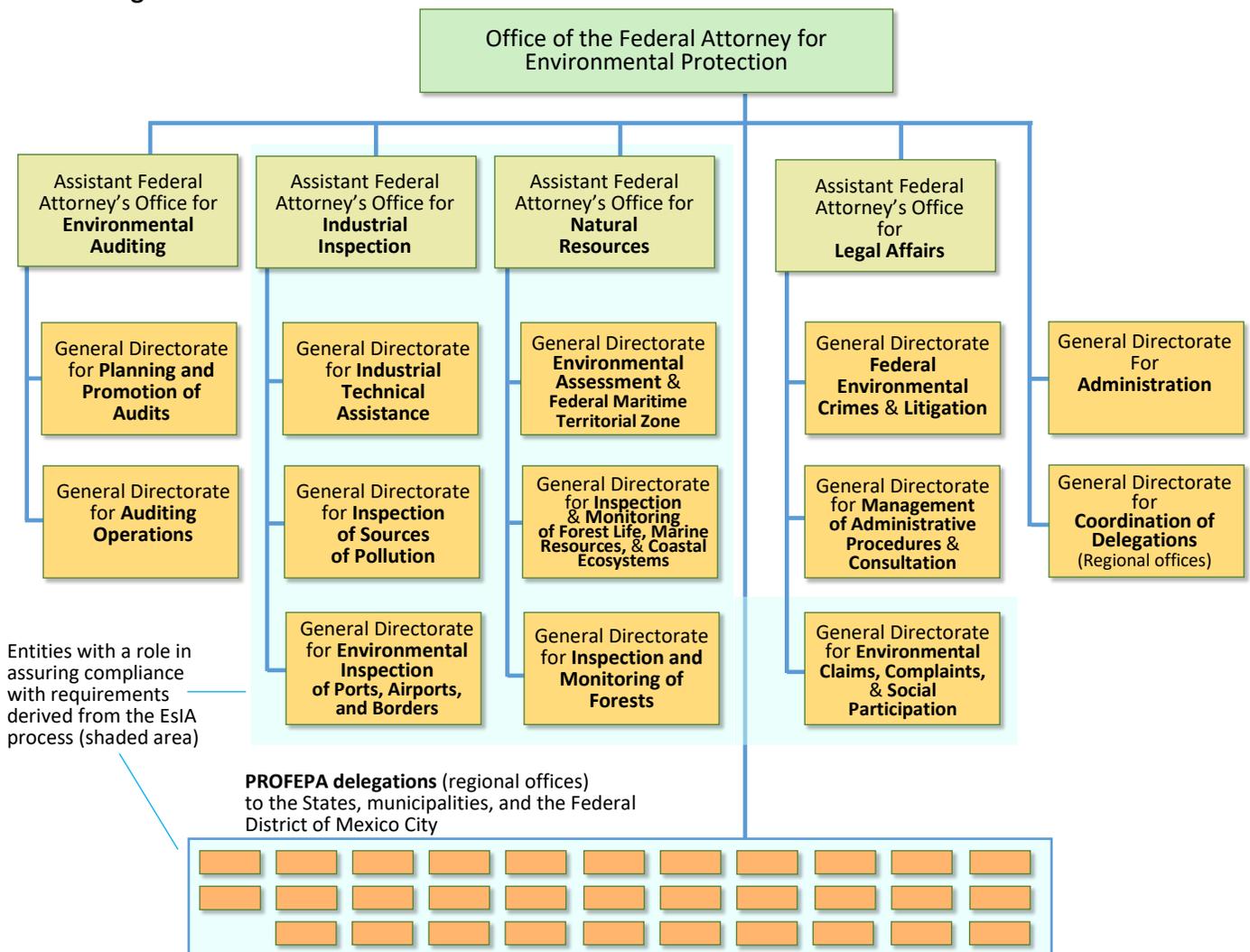
Federal Attorney for Environmental Protection (PROFEPA)

The Office of the Federal Attorney for Environmental Protection (*Procuraduría Federal de Protección al Ambiente* or **PROFEPA**) is the principal federal authority for monitoring compliance with environmental license requirements and imposing sanctions for violations. PROFEPA is the enforcement arm of SEMARNAT and is authorized under SEMARNAT's internal regulations to perform inspection visits and prosecute enterprises that fail to comply with environmental legislation.

PROFEPA's **Directorate for Environmental Monitoring and Verification** (*Dirección de Vigilancia y Verificación de Impacto Ambiental*) is the principal body within PROFEPA charged with compliance monitoring tasks in connection with licensed projects and activities.

PROFEPA has regional offices in each of the 31 Mexican states and in the Federal District, which carry out monitoring and enforcement at the local level. PROFEPA also oversees a federal program for environmental audits, through a dedicated Special Attorney's office. By entering into a voluntary agreement with PROFEPA, enterprises receive audits that evaluate their internal controls and procedures for achieving compliance with environmental legislation and licensing requirements.

Chart 2. Organization of PROFEPA



b. Other competent federal environmental authorities

- National Agency for Safety, Energy and Environment (ASEA) – ASEA is responsible for monitoring and enforcing compliance with environmental legislation and license requirements in the hydrocarbons sector.
- National Water Commission (CONAGUA) – Responsible for administering and conserving national water resources in order to ensure their sustainable use. CONAGUA grants permits and concessions for use of water resources and is responsible for monitoring and enforcing compliance with legislation concerning water consumption and wastewater discharge.
- National Commission for Natural Protected Areas (CONANP) – CONANP is a deconcentrated body within SEMARNAT that manages 173 natural areas that are under federal jurisdiction.
- National Forestry Commission (CONAFOR) – A decentralized body under SEMARNAT that is responsible for developing and implementing national policies for the forest sector. Its mission is to support and promote forest conservation and restoration, as well as to design plans and programs for sustainable forestry development.
- National Institute of Ecology and Climate Change (INECC) – is a decentralized federal body integrated within SEMARNAT, which has considerable autonomy in carrying out the objectives established in the General Law of Climate Change. INECC must plan and conduct its activities in coordination with the National Development Plan, the Sectoral Program for Environment and Natural Resources, and other policies at the national level.

c. National environmental bodies that have an advisory or facilitative role

- Advisory Councils for Sustainable Development (CCDS) – Since June 1995, these councils have provided spaces for dialogue between civil society and the government concerning the strengthening of environmental governance.²³ The CCDS were established in order to fulfill commitments arising from the Rio Earth Summit (1992) and LGEEPA's Article 159, which mandates that these bodies have advisory, evaluation, and monitoring functions in matters of environmental policy and may issue opinions and observations that they deem pertinent.
- The National Advisory Council of the Environmental Sector is a newly created (April, 2018) consultative body that was established by legislation for the purpose of promoting the participation of experts, who may issue opinions regarding the formulation and implementation of the federal environmental policy, for issues that are not already assigned to other consultative, collegiate, or social participation bodies.²⁴ The Council is responsible for analyzing specialized issues that have been assigned to its specific work programs and issuing ad hoc opinions and observations on matters where SEMARNAT has requested its intervention.

²³ UNDP (2017), *Análisis de la estructura y operación de los Consejos Consultivos para el Desarrollo Sustentable de la Secretaría de Medio Ambiente y Recursos Naturales 2011-2016*, http://www.mx.undp.org/content/mexico/es/home/library/environment_energy/analisis-de-la-estructura-y-operacion-de-los-consejos-consultivo.html.

²⁴ Acuerdo que se crea el Consejo Consultivo Nacional del Sector Ambiental (6 April 2018), http://dof.gob.mx/nota_detalle.php?codigo=5524958&fecha=04/06/2018.

2. State and municipal environmental authorities

a. Overview

Each Mexican state has its own environmental authority (environmental ministry, commission, council, agency, or institute). In addition, six states and the Federal District (Mexico City) have an environmental prosecutor's office. Under Mexico's system of concurrent authority, state and local authorities have a duty to cooperate with SEMARNAT and PROFEPA where needed. Mexican states may adopt their own environmental laws and regulations, as long as these do not contradict provisions that are established at the federal level.

b. Example: the State of Chiapas

The State of Chiapas has its own framework environmental law and environmental licensing authority. The **Environmental Law for the State of Chiapas** and its regulation echoes LGEEPA and its regulations in affirming the federal system of coordination and allocation of roles among the federative entities (national, state, and municipal).²⁵ In Chiapas, the **Ministry of the Environment and Natural History** (*Secretaría de Medio Ambiente e Historia Natural*) is the authority that administers the EsIA process and issues environmental licenses, as well as other types of permits. Immediately following project approval, the developer of a project subject to an environmental license must designate an accredited, technical environmental representative who is included in the state registry of approved practitioners and will be responsible for submitting periodic reports to the Ministry concerning the developer's compliance with licensing terms.²⁶

Specific rules for implementation of the EsIA process are established in the *Regulation for the Environmental Law for the State of Chiapas in the Matter of Environmental Impact and/or Risk Assessment*. Articles 50 and 51 of the Regulation prescribe the protocol for public participation, which contrasts in the level of detail with the robust procedures for public consultation required for the Ministry of the Environment's proposal of new ecological management programs. The provisions for public consultation for new projects include an announcement on the Ministry's website of new authorized environmental impact and/or risk studies, the name of the developer, name of the project, the relevant municipality, and the type of study. Article 51 states that once the study has advanced to the stage where it contains key details (such as a description of impacts) a summary of the content of the studies will be available in the offices of the Ministry to anyone who has a legally valid interest in them, but does not state how legal interest ("acredite el interés jurídico") is determined.²⁷

Rules for compliance verification, the imposition of urgent remedial measures, and sanctions are covered in Articles 52 through 62 of the Regulation. The Ministry's **Office of the Environmental Prosecutor** (*Procuraduría*) is responsible for monitoring and enforcing compliance with environmental licensing requirements, undertaking inspections, and prescribing emergency and/or urgent corrective measures when it discovers an imminent risk of environmental harm or serious damage to natural resources. The Regulation also provides a timetable and set of conditions under which a noncompliant party may implement corrective measures, as well as a process for proposing alternative measures and sanctions.

²⁵

²⁶ Article 92.

²⁷ Article 51 does not state how legal interest ("acredite el interés jurídico") is determined.

c. Case study: the State of Mexico

The State of Mexico, which surrounds the western, northern, and eastern sides of the federal district of Mexico City, has adopted a comprehensive legislative and institutional framework for regulating all aspects of ecological conservation and environmental protection for sustainable development. The backbone of this framework is the **Biodiversity Code of the State of Mexico**, an eight volume set of regulations. Book Two of the Biodiversity Code contains a title relating to the EsIA and licensing process, as well as titles dedicated to environmental policy, the management of Natural Protected Areas, biological diversity, the sustainable use of natural resources, environmental protection from pollution, social (public) participation, and the Environmental Projects Fund.²⁸

The Biodiversity Code designates the **Ministry of the Environment** (Secretaría del Medio Ambiente or “Secretaría”) as the top-level regulatory body for environmental matters. Within the *Secretaría*, the General Directorate of Environmental Regulation and Impact has responsibility for reviewing EsIA and/or environmental risk studies, issuing environmental licenses and pollutant emission permits.²⁹ In doing so, it is required to coordinate its actions with other state and municipal authorities in fulfilling its mandates.³⁰ The Directorate is also responsible for proposing and implementing state ecological management programs, as well as supervising and executing conservation and restoration activities. The title of the code that prescribes the procedures for the EsIA process largely mirrors those established in the LGEEPA regulation on impact assessment. If a project or activity is proposed to be carried out in the territory of the State and subject to federal jurisdiction, the Ministry may submit a technical opinion on the proposal to SEMARNAT.³¹

Requirements for public consultation are summarized briefly in Articles 146 to 153 of the Biodiversity Code. When a draft EsIA study (Manifestation of Impact) or Environmental Risk Study is received from a developer-applicant, the Ministry will publish the document on the Ministry’s website and post a copy in a visible place in the office. Interested individuals have a period of five business days from the date of publication to submit comments or concerns to the Ministry.³² Within this timeframe, any interested party may request a copy on an impact or risk study from the Ministry, specifying the type of information sought and the reasons for the request. An interested party may request an extension of up to ten business days to submit comments, as long as the request is made in writing. In order to be considered in the Ministry’s assessment of the proposed project, the comments must be based on the technical aspects of the EsIA or risk study and prepared by a qualified expert in the relevant discipline or a public or private institution with the necessary professional authority.³³ At its discretion, the Ministry has the right to deny any request that does not meet the requirements or the information is used for the “beneficial interest” of the requesting party.³⁴

²⁸ The Biodiversity Code does not focus specifically on biological diversity as the name suggests. It is a comprehensive body of regulations that encompasses all aspects of environmental protection and natural resource conservation.

²⁹ Reglamento Interior de la Secretaría del Medio Ambiente (2016), Art. 12.; Manual General de Organización de la Secretaría del Medio Ambiente; *A Procuraduría* attached to the Ministry of the Environment is responsible for monitoring and enforcing environmental compliance by developers and contractors who are implementing approved activities.

³⁰ *Id.*

³¹ Biodiversity Code, Book Two, Art. 151.

³² *Id.* at Art. 147.

³³ *Id.* at Art. 150.

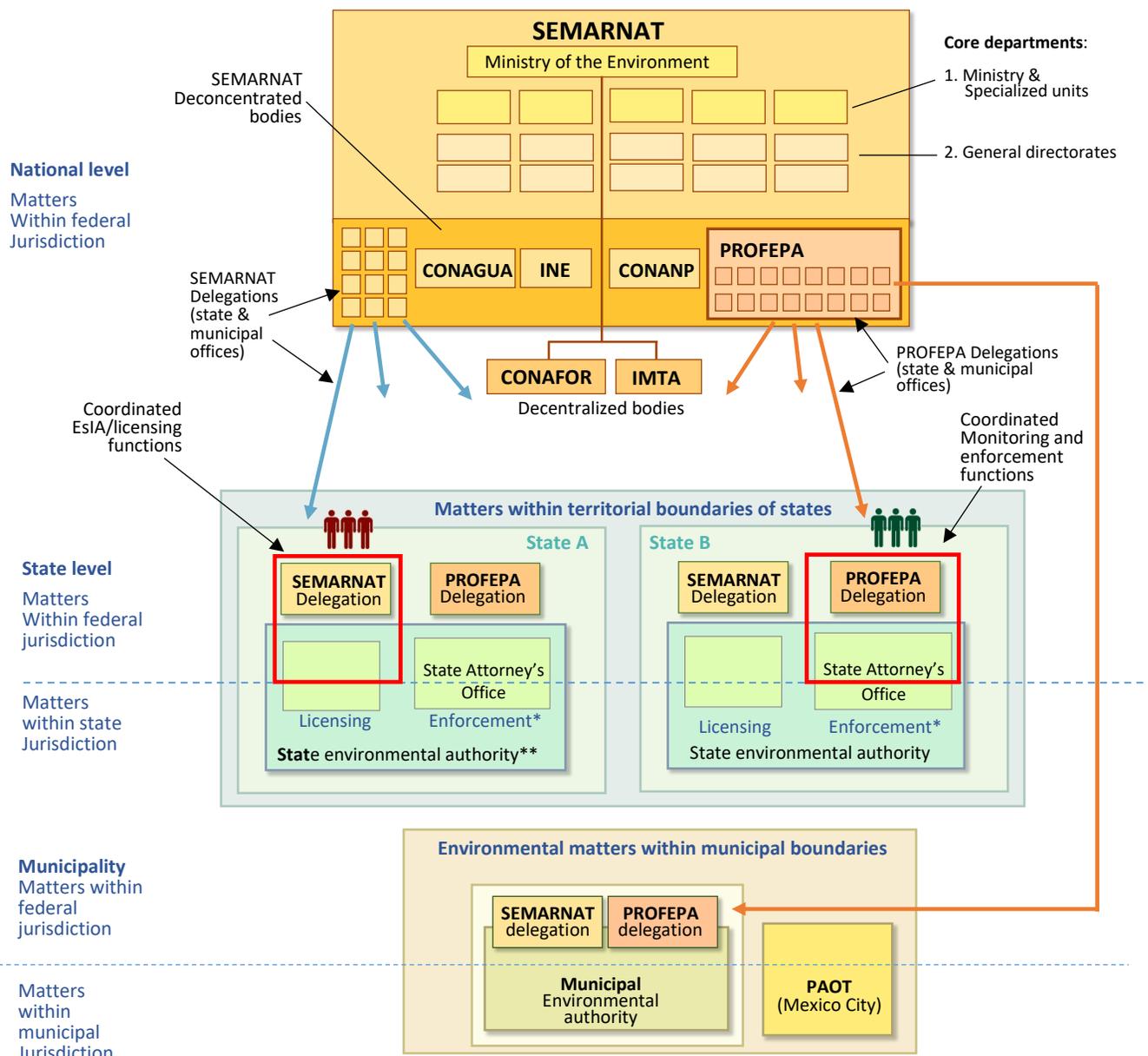
³⁴ It is not clear whether the “beneficial interest” stated in Article 150 refers to financial gain as opposed to a concern related to negative impacts.

Key state environmental legislation and authorities in selected Mexican states

Table 2. State legislation and authorities – EslA, licensing & enforcement (selected Mexican states)			
State	Key legislation / Date (Original publication, last update)	Corresponding Regulation and Last update	Principal Environmental authorities (Licensing & enforcement) ³⁵
Chiapas	Ley Ambiental para el Estado de Chiapas (18-Mar-2009, 9-May-2014)	Reglamento de la Ley Ambiental para el Estado de Chiapas (14-Feb-2014)	Department of the Environment and Natural History; Procuraduría Ambiental
Colima	Ley Ambiental para el Desarrollo Sustentable del Estado de Colima (15-Jun-2002)	Reglamento de la Ley Ambiental para el Desarrollo Sustentable del Estado de Colima, en Materia de Evaluación del Impacto Ambiental (29-Sep-2018)	Department of Urban Development
Durango	Ley de Gestión Ambiental Sustentable para el Estado de Durango (15-Jun-2010, 11-Aug-14)	Reglamento de la Ley de Gestión Ambiental Sustentable para el Estado de Durango (16-Jan-016)	Department of Natural Resources and the Environment
Guanajuato	Ley para la protección y preservación del ambiente del Estado de Guanajuato (8-Feb-2000, 7-Jun-2013)	Reglamento de la Ley para la protección y preservación del ambiente del Estado de Guanajuato (15-Jun-2012)	Institute of State Ecology; Attorney General for the Environment and Land Use
Oaxaca	Ley del Equilibrio Ecológico y Protección al Ambiente del Estado de Oaxaca (18-Nov-2018 (first/last))	(Not yet issued)	State Institute of Ecology
Mexico (State)	Código de Biodiversidad (2005-2007)	Código de Biodiversidad (2005-2007)	Ministry of the Environment; Procuraduría Ambiental
Michoacán de Ocampo	Ley Ambiental para el Desarrollo Sustentable del Estado de Michoacán de Ocampo (12-Mar-2013); Ley Ambiental y de Protección del Patrimonio Natural del Estado de Michoacán de Ocampo (20-Dec-2007)	Reglamento de la Ley Ambiental y de Protección del Patrimonio Natural del Estado de Michoacán de Ocampo (12-August-2010)	Department of Urban Planning and Environmental Protection; Attorney General for Environmental Protection
Sinaloa	Ley Ambiental para el Desarrollo Sustentable del Estado de Sinaloa (8-Apr-2013, No updates)	Ley Ambiental para el Desarrollo Sustentable del Estado de Sinaloa (3-Nov-2017)	Department of Social and Human Development;
Tamaulipas	Ley de Protección Ambiental para el Desarrollo Sustentable del Estado de Tamaulipas (24-Oct-2016, Draft amendment. 29-Dec-2014)	Reglamento de la Ley de Protección Ambiental para el Desarrollo Sustentable del Estado de Tamaulipas (4-Sep-2018, No updates)	Department of Public Works, Urban Development and Ecology
Yucatán	Ley de Protección al Medio Ambiente del Estado de Yucatán (8-Sep-2010, 24-Apr-2014)	Reglamento de la Ley de Protección al Medio Ambiente del Estado de Yucatán (26-Jan-2017)	Department of Urban Development and the Environment
Zacatecas	Ley de Equilibrio Ecológico y la Protección al Ambiente del Estado de Zacatecas (31-Mar-2007, No update)	Reglamento de la Ley de Equilibrio Ecológico y la Protección al Ambiente del Estado de Zacatecas (31-Dec-2014)	Institute of Ecology and the Environment

³⁵ In states that have weak environmental agencies, federal entities (SEMARNAT and PROFEPA delegations play an important role. In each state, additional government bodies (the Governor, Municipal Councils, Public Prosecutors, and others) have delegated environmental competencies.

Chart 3. Federal delegations and jurisdictions of environmental authorities



*Eighteen states have state attorneys for the environment (the state-level equivalent of PROFEPA), in addition to having PROFEPA delegations.

**Includes Environmental Ministries (28 states), Ecology Institutes (2 states), Institute for the Environment and Sustainable Development (1 state), and a Commission for Ecology and Sustainable Development (1 state).

3. Environmental authorities in the Federal District (Mexico City)

3.1. The Ministry of the Environment of Mexico City

Within the Federal District of Mexico City, the Ministry of the Environment (*Secretaría del Medio Ambiente* or “SEDEMA”) is responsible for carrying out a variety of environmental oversight functions. For commercial activities, construction projects, and public works that subject to municipal jurisdiction and have the potential to cause significant environmental impacts, the Ministry’s **General Directorate for Impact Assessment and Environmental Regulation** is responsible for administration of the environmental impact and risk assessment process, while the **General Directorate for Environmental Inspection and Monitoring** is charged with assuring compliance with licensing terms and conditions arising from the environmental impact and risk assessment process.³⁶

The scope of SEDEMA’s responsibilities is broader than environmental impact/risk assessment and licensing issues. Other responsibilities include establishing and enforcing environmental standards for Mexico City, the design and implementation of municipal pollution control programs, tracking data on pollutant emissions, protecting green spaces and natural areas, promoting and applying sustainability criteria, and regulating vehicular pollutants.³⁷

The Ministry of the Environment’s functions and agenda are focused on a set of priority axes (thematic lines of action) for protecting the environment and promoting the sustainable development of Mexico City:

- Air quality and climate change
- Land conservation and biodiversity
- Green urban infrastructure
- Water Supply and Quality
- Education and environmental communication

For each of these themes, a set of goals and steps have been defined for environmental governance and the efficient and comprehensive use of natural capital, which is intended to allow the public and private sectors to invest, maintain, and properly manage the City’s natural resources.

c.2. Office of the Prosecutor for Environmental and Land Use Regulations (PAOT)

The Office of the Environmental and Land Management Attorney General (*Procuraduría Ambiental y del Ordenamiento Territorial* or PAOT) is a decentralized public agency of the Government of Mexico City.³⁸ PAOT is the public agency charged with defending the rights of the city’s residents to enjoy a healthy environment and ensuring orderly land use for development, health, and well-being. Its key functions include promoting and monitoring environmental compliance, as well as responding to potential legal violations, primarily by investigating citizen complaints concerning environmentally harmful behavior and nuisances.³⁹ PAOT is also responsible for monitoring the environmental

³⁶ SEDEMA (website), *Acerca de*, <https://www.sedema.cdmx.gob.mx/secretaria/acerca-de>.

³⁷ Reglamento Interior del Poder Ejecutivo de la Administración Pública de la Ciudad de México, Section XI.

³⁸ Procuraduría Ambiental y del Ordenamiento Territorial de la Ciudad de México, *¿Qué es la PAOT?*, http://www.paot.org.mx/conocenos/que_es_paot.php.

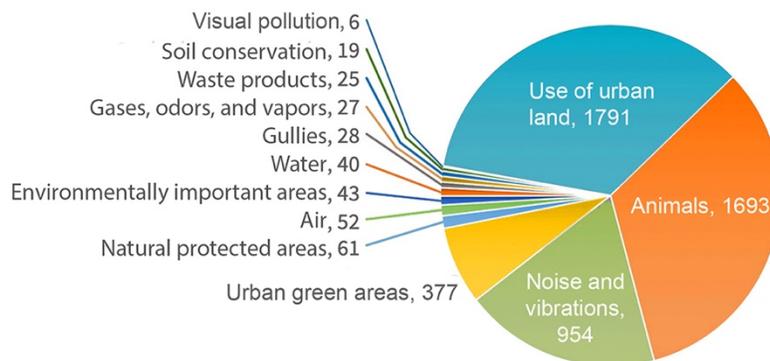
³⁹ PAOT (2018), *Informe Anual de Actividades 2018*, 14, Available at http://centro.paot.org.mx/documentos/paot/informes/informe_anual_actividades_2018.pdf; It should be noted that

performance of public works in the Federal District of Mexico City, collecting phytosanitary data, conducting studies and analysis, and measuring emissions of air pollutants.

PAOT does not have authority to prosecute environmental infractions and crimes through the court system, but must instead refer its recommendations, suggestions, administrative resolutions, and facts concerning the commission of crimes to the Public Prosecutor (*Ministerio Público*).⁴⁰ It may, however, impose precautionary measures in the case of immediate environmental threats.

In performing its investigative and referral functions, PAOT is responsible for drafting technical or forensic opinions concerning the extent of environmental damage (and measures for rehabilitating or mitigating it) or adverse impacts on the environment and natural resources caused by violations, noncompliance, or the lack of enforcement of legal requirements relating to the environment and land use.⁴¹ During 2018, PAOT drafted 1,411 technical opinions, more than half of which pertained to noise and vibrations, approximately one quarter concerning land use issues, and most of the remainder relating to the degradation of trees and green areas.⁴² Of these, 122 were drafted to provide evidence to the Procurator-General's Office (*Procuraduría General de la Justicia* in Mexico City) to support investigations of environmental crimes or issues affecting urban protection.

Citizen complaints investigated by PAOT in 2018, by topic



citizens may also lodge environmental complaints through SEDEMA. More information is needed to determine the extent to which SEDEMA and PAOT coordinate parallel complaint investigative functions.

The Annual Report states that in 2018, 11,401 complaints were submitted to PAOT, over 55% of which were outside PAOT's jurisdiction and channeled to other authorities. The remaining 5,116 cases were admitted for investigation by PAOT.

⁴⁰ Ley Orgánica de la Procuraduría Ambiental y del Ordenamiento Territorial de la Ciudad de México, 24 abril 2001 (Last amended on 20 July, 2017), Art. 10, Pars. V and VI. PAOT may refer cases involving crimes, negative environmental impacts, animal protection and welfare, or threats to its own personnel or assets.

⁴¹ *Id* at Art. 5, Par. VIII and XV.

⁴² PAOT (2018), *Supra* note 25 at 28.

Table 3: Inter-agency coordination mechanisms

1. Coordinating role and deconcentration of SEMARNAT

SEMARNAT is charged with playing a central role in coordinating federal entities and dependencies that have competency in environmental regulatory oversight. SEMARNAT has branch offices in each of Mexico's states for the purpose of administering ESI and licensing functions near to the location where authorized activities subject to federal jurisdiction take place, as well as performing a liaison role with state and municipal environmental authorities. Where appropriate, SEMARNAT coordinates its tasks with ASEA, CONAGUA, CONANP, and CONAFOR.⁴³

2. Interministerial Commissions and Intersecretarial Working Groups

Interministerial commissions are high-level bodies whose purpose is to coordinate the actions of several ministries in connection with a specific issue. Interministerial Commissions have been established for Climate Change, Sustainable Management of Oceans and Coasts, and Biosecurity and Genetically Modified Organisms.

Interdepartmental working groups are coordinating facilitative bodies that operate at a lower organizational level. Examples include the Working Group on Climate Change and the Working Group for the General Ecological Planning of the Territory.

3. Intergovernmental coordination agreements

LGEEPA provides that the federal, state, and municipal environmental authorities may jointly carry out inspection and surveillance actions in order to verify environmental compliance in matters of federal jurisdiction.⁴⁴ In order to accomplish this collaboration effectively, these authorities have entered into intergovernmental coordination agreements (*convenios de coordinación*). This mechanism has been widely used to specify the respective roles of each party involved in environmental regulatory functions.

⁴³ OECD (2013) Mexico Environmental Performance Review; SEMARNAT, *Órgano Interno de Control de la SEMARNAT*, <https://www.gob.mx/semarnat/acciones-y-programas/organo-interno-de-control-de-la-semarnat>.

⁴⁴ LGEEPA, Art. 161.

III. Issuance of environmental licenses and the formulation of licensee obligations

A. Overview of the environmental licensing process

1. Activities subject to the EsIA process at the federal level

Both LGEEPA and its regulation, the REIA, specify activities for which the EsIA process is required and are subject to federal jurisdiction. Article 29 of LGEEPA lists of seven generalized categories that include the following activities:

- I. Federal public works;
- II. Hydraulic works, general communication pathways, pipelines, gas pipelines and pipelines;
- III. Chemical industry, petrochemical, steel, paper, sugar, beverage, cement, automotive, and electricity generation and transmission;
- IV. Exploration, extraction, treatment and refining of mineral and non-mineral materials reserved for the Federation;
- V. Federal tourism development;
- VI. Facilities for the treatment, confinement or disposal of hazardous waste, as well as radioactive waste; and
- VII. Forest exploitation of tropical forests and rainforests and species that are difficult to regenerate, and in the cases provided for in the second paragraph of article 56 of the Forestry Law.

REIA elaborates and supplements the concise list presented in LGEEPA.⁴⁵ A 2014 amendment of REIA provides greatly expanded detail concerning the activities that fall into the above list, including reference to hydrocarbons by name, and adding other activities, such as agricultural projects that pose a danger to certain species or cause damage to ecosystems. Although SEMARNAT is the competent authority for the review of EsIA studies in connection with these sectors, it may act through its regional offices and/or request the participation of states and municipalities, consistent with the exercise of concurrent authority.⁴⁶

2. Procedures for applying for an environmental license

Project developers can initiate process of applying for an environmental license online or at one of SETENA's central or regional offices. For projects and activities that are subject to federal jurisdiction, the REIA establishes procedures for SEMARNAT to grant or deny an environmental authorization (license) through the issuance of a Resolution (a record of decision) resulting from a final review of the environmental impact study (*manifestación en Materia de Impacto Ambiental* or MIA) and other project documents.⁴⁷ The REIA requires that project applicants provide EsIA documents that follow either the "specific modality" or the "regional modality," based on the classification of activities into two groups, which are defined in Article 11 of the regulation. EsIAs that are classified as "regional" may, by their nature, need to involve a broader group of government participants. In addition, proposed projects involving the extraction or refinement of hydrocarbons are subject to specialized rules for EsIA development and review.

⁴⁵ Reglamento de la Ley general del equilibrio ecológico y la protección al ambiente en materia de impacto ambiental (REIA) (2000, Last updated 31 October, 2014), Art. 5.

⁴⁶ Chapter II of LGEEPA defines the operation of concurrent authority.

⁴⁷ Referred to in Mexico as a *Resolución Sobre la Evaluación de Impacto Ambiental*. An EsIA study is referred to as a *Manifestación de Evaluación de Impacto Ambiental*

3. The Single Environmental License

The project proponent may request that all other environmental authorizations and permits (e.g., sectoral, air pollutant emission permits, construction permits, water use) that have been issued by government entities be consolidated in a single authorization.⁴⁸ For new projects and activities that emit air pollutants and have a fixed location, a combined license or “**Single Environmental License**” (*Licencia Ambiental Única* or **LAU**) is mandatory. An LAU permits a single coordinated process for impact assessment, formulating a technical opinion, and monitoring an approved industrial facility’s compliance with environmental management obligations. These obligations include mitigation requirements derived from the environmental and risk assessment procedures, as well as an atmospheric emissions prevention plan and hazardous waste treatment plan.

The issuance of LAUs is jointly administered by SEMARNAT through its Subministry of Management for Environmental Protection (SGPA), and the National Water Commission (CNA), a deconcentrated SEMARNAT entity. It is issued once for the lifetime of the project, unless there is a change in the product produced, a significant change in volume, or the facility is relocated.

A SEMARNAT document specifying procedures for obtaining and complying with the requirements of an LAU provides a list of activities that require an LAU, synthesized from a number of provisions contained in LGEEPA.⁴⁹ These include the following:

- Petroleum and petrochemicals
- Chemicals
- Paints and stains
- Metallurgy (including the steel industry)
- Automotive
- Cellulose and paper
- Cement and lime
- Asbestos
- Glass
- Electric power generation
- Hazardous waste treatment

Collectively, the components of LAUs establish a set of enforceable prevention, mitigation, and reporting requirements that the proponent is legally obligated follow, as well as providing mechanisms for managing risk and securing compliance.⁵⁰ Project developers and facility operators subject to the integrated requirements of an LAU must file an Annual Operation Report (*Cédula de Operación*) once a year.

⁴⁸ LGEEPA, Articles 109 B(1) and 111; LGEEPA Regulation on prevention and control of Atmospheric Pollution, Art. 17B; A related feature of the Mexican permitting regime, particularly for authorization renewals, is the use of integrated licensing to incorporate all permits for emitting pollutants into a single environmental licensing vehicle (“Licencia Ambiental Única” or LAU). For more information, see <https://www.gob.mx/semarnat/documentos/tramite-semarnat-05-002>.

⁴⁹ SEMARNAT, Licencia Ambiental Única: Solicitud de Licencia Ambiental Única para Establecimientos Industriales de Jurisdicción Federal, FF-SEMARNAT-033-Licencia-Ambiental-Unica.docx, Available at <https://www.gob.mx/tramites/ficha/incorporacion-al-programa-de-reduccion-de-emisiones-contaminantes-a-la-atmosfera-preca/SEMARNAT453>.

⁵⁰ REIA, Art. 48 and 49. The integrated license issued by SEMARNAT may not have a longer timeframe than the activities covered by the authorization or activities covered by the Resolution or EslA.

Table 4. Environmental licensing instruments

Environmental Impact Authorization (*Autorización en Materia de Impacto Ambiental*), or **Single Environmental License** (*Licencia Ambiental Única* or LAU). This authorization integrates a federal environmental license with permits required for extraction of water, wastewater discharge, use of federal land, atmospheric emissions, and generation of hazardous waste.

Document that approves or denies a license: Administrative resolution.

Mechanism for legally-binding commitment: Proponent statement of commitment to environmental management plans (impact avoidance and mitigation) within the EslA document itself.

Term of validity: **Authorization** – Varies according to the characteristics of the individual activity. (Federal level) **Single Environmental License** – Indefinite (full life of the activity).

The process of issuing original and renewed environmental authorizations sets the stage for inspections and/or audits during the execution and operation of an activity, defining explicit performance requirements to help ensure the enforceability of the terms and conditions.

The Mexican environmental impact authorization system generally recognizes two categories of measures for controlling environmental outcomes:

1. The adoption of plans for managing *known* factors that impact the environment, such as a prevention, mitigation, and compensation measure; and
2. Measures for managing on the inherent uncertainties that exist even when best practices for environmental management are specified and implemented, including residual risk and the level of compliance by the project proponent, enterprise, or activity owner.⁵¹

The first category of measures for shaping environmental outcomes is embodied by mitigation and management measures and the Environmental Monitoring and Control Plan that are part of the MIA.⁵² The Monitoring and Control Plan defines the impacts that will be monitored, determines the parameters to be evaluated, the indicators checked, the frequency of monitoring activities, the sites to be monitored, and the characteristics of the sampling. Both elements of this category are shaped by best practices and NOMs.

The second category of measures is exemplified by three instruments that are mandated by Mexican legislation for activities with the highest level of risk impacts: Environmental Risk Studies, insurance, and financial guarantees. Instructions for undertaking Environmental Risk Studies are provided in a guide

⁵¹ SEMARNAT (2015) *Lineamientos para la Verificación del Cumplimiento de Condicionantes de Impacto Ambientales para Actividades Industriales*, Available at https://www.gob.mx/cms/uploads/attachment/file/126716/Condicionantes_de_impacto_ambiental_para_actividades_industriales__lineamientos_.pdf.

⁵² These measures are described in SEMARNAT's guidance document: *Guía para la Presentación de la Manifestación de Impacto Ambiental del Sector Industrial*, Capítulo VI, MEDIDAS PREVENTIVAS Y DE MITIGACIÓN DE LOS IMPACTOS AMBIENTALES. Available at <http://biblioteca.semarnat.gob.mx/janium/Documentos/Ciga/agenda/DOFsr/gindustrial.pdf>.

published by SEMARNAT.⁵³ Mexican federal law requires environmental insurance policies to cover the cost of remediation for unexpected harms that occurs even if prescribed mitigation requirements are followed. Finally, project proponents must supply an environmental guarantee (bond, letter of credit, or other rapidly executable financial security instrument) “when serious damage to ecosystems may occur during the execution of works,” such as the leakage of toxic chemicals, impacts to protected wetlands and species, or the type of activity is classified by legislation as posing a high level of risk.

According to SEMARNAT, during the licensing phase, the proponent should anticipate sources of information that will be needed in the future, in order to facilitate inspections and audits:⁵⁴

- Preventative Reports and NOMs
- Environmental impact studies (*Manifestaciones en Materia de Impactos Ambientales*) or MIAs
- Information on the scope of the project
- Environmental risk studies
- MIA resolutions (records of decisions)
- Financial guarantees
- The proponent’s history of compliance with authorization terms and conditions.

4. Activities subject to the EsIA process at the state and municipal level

On the state level, the types of activities subject to an EsIA requirement vary from jurisdiction to jurisdiction. Projects governed by state-level regulatory oversight generally consist of activities with more moderate impacts than those governed by federally authority, such as assembly plants, agricultural activities, and shopping centers.

On the municipal level, environmental authorizations normally include construction permits for buildings whose impacts lie within the municipality. Like the authorization process at the federal and state level, in the Federal District of Mexico City, the Single Environmental License is used as a regulatory instrument to combine the various environmental management obligations to which project developers and facility owners commit in a single, comprehensive authorization. In Mexico City, the Single Environmental License must be renewed annually.⁵⁵

5. Formulation of project-specific environmental requirements and commitments

Environmental consultants who are accredited to undertake EsIA studies must consult and integrate the applicable Official Mexican Standards (NOMs) into the development of these studies and the study documents. The NOMs are a body of technical documents developed to provide sector- and topic-specific guidelines and performance indicators applicable to a range of activities, processes, and environmental media (e.g., air, water, soil). Although the NOMs cannot provide site-specific requirements, they do provide a compilation of the most important criteria that must be considered in developing specific measures for avoiding and mitigating adverse environmental and social impacts.

⁵³ SEMARNAT, *Guía para la Elaboración del Estudio de Riesgo Ambiental para Empresas que Realizan Actividades Altamente Riesgosas (Establecimientos en Operación)* Trámite-SEMARNAT-07-008, https://www.gob.mx/cms/uploads/attachment/file/192862/Gu_a_para_la_Elaboracion_del_Estudio_de_Riesgo_Ambiental.pdf.

⁵⁴ SEMARNAT, supra note 28.

⁵⁵ SEDEMA (website), *Licencia Ambiental Única para el Distrito Federal y actualización anual*, <https://www.sedema.cdmx.gob.mx/servicios/servicio/licencia-ambiental-unica-para-el-distrito-federal-y-su-actualizacion-anual>.

6. Commitment to legal environmental performance obligations by the developer

While not clear from applicable EsIA legislation, the author's review of actual EsIA study (MIA) documents suggest that the most explicit statements of commitment by project proponents are within the EsIA (MIA) documents themselves. MIAs which state that proposed projects are likely to generate few or no additional impacts are often qualified by the following nearly uniform "boiler plate" language:

"however, the promoter is committed to carry out the mitigation, prevention and compensation measures that are necessary during all stages of the project (preparation, construction and operation."

Given that the environmental performance obligations incurred by the developer in obtaining the authorization (environmental license) from SEMARNAT are comprised by the EsIA study itself, as well as all supporting documentation, applicable laws, and official standards, the commitment language (such as that quoted above) within the MIA may be sufficient to legally bind the proponent to carrying out the terms of approved environmental management plan.

7. Required reporting for emissions and discharges of pollutants

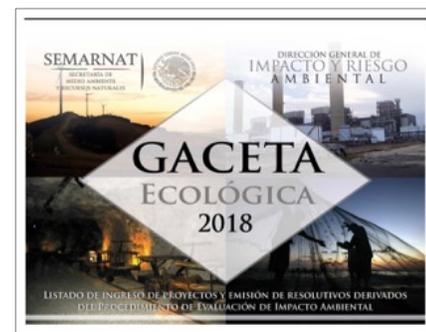
Owners and operators of establishments that are subject to federal environmental licenses must submit a report known as an **Annual Operation Document** (*Cédula de Operación Anual*) to SEMARNAT on a yearly basis.⁵⁶ Pollutants that are subject to the federal reporting requirement are listed in NOM-165-SEMARNAT-2013, an Official Mexican Standard (NOM) that also provides technical criteria and reporting thresholds.⁵⁷ SEMARNAT uses the information contained in Annual Operation Documents to update its **Emissions and Transfer of Pollutants Registry** (RETC), which compiles data on emissions, hazardous materials, and waste products that are generated and discharged into the air, water, soil, and subsoil. The RETC is publicly-accessible, providing transparency, and allows SEMARNAT to track the cumulative amounts of pollutants that have been emitted or discharged by all licensed establishments and activities. Parallel pollutant registries (*registros ambientales estatales*) and reporting systems are used by Mexican states, with requirements established in state legislation.

⁵⁶ LGEEPA Regulation in the Matter of prevention and control of atmospheric pollutants (31 October 2014), Arts. 10 and 11 (*Reglamento de la Ley general del equilibrio ecológico y la protección al ambiente en materia de prevención y control de la contaminación de la atmósfera*); the Annual Operation Document must be provided in printed and electronic form.

⁵⁷ SEMARNAT (13 January 2014), Norma Oficial Mexicana NOM-165-SEMARNAT-2013: Que establece la lista de sustancias sujetas a reporte para el registro de emisiones y transferencia de contaminantes.

B. Access to information, public consultation, and conflict avoidance

Procedural requirements for public consultation during the development of EsIA studies are established in Chapter VI of LGEEPA's regulation (REIA). The public consultation process begins with SEMARNAT publishing a weekly list of environmental license applications, impact prevention reports, and EsIA study documents in the Ecological Gazette, available on the Internet.⁵⁸ Each listing must contain the proponent's name, the date of the application, the name of the project and its principal components, the type of assessment (prevention plan or EsIA study, and its modality (particular or regional)).⁵⁹



Any person from a local community that will be affected by a proposed project may make a request that SEMARNAT conduct a public hearing in connection with a submitted EsIA study.⁶⁰ The request must be written and presented to SEMARNAT within ten days of the published listing of the EsIA. The person making the request must state the reasons for making the request. If SEMARNAT decides to conduct a public hearing, it must publish an announcement of the hearing and include an abstract of the EsIA. The abstract must include, among other things, the types and current condition of ecosystems that exist at the project location and the principal environmental impacts that the proposed activity and mitigation plans could cause.

Following the announcement, any citizen or business in the affected communities may request that SEMARNAT also make the EsIA study in its entirety available to the public in the relevant jurisdiction.⁶¹ Within a twenty-day period, any interested stakeholder may propose preventative and mitigation measures, as well as pertinent observations.⁶² SEMARNAT must then publish these comments and proposals in the Ecological Gazette. During the public consultation process, SEMARNAT must organize a public information meeting that addresses the activities that may cause severe ecological imbalances, pose a public health threat, or damage ecosystems.⁶³ In addition, SEMARNAT must make a compilation of public comments and concerns that becomes an annex to the project application dossier that will form the basis for the decision to approve or reject the proposed project.⁶⁴

⁵⁸ SEMARNAT, *Gaceta Ecológica*, The link <http://sinat.semarnat.gob.mx/Gaceta/anosgaceta> provides a plain-text link to project listings by year.

⁵⁹ REIA, Art. 37.

⁶⁰ REIA, Art. 40.

⁶¹ REIA, Art. 41(II).

⁶² REIA, Art. 41(III).

⁶³ REIA, Art. 43.

⁶⁴ REIA, Art. 43(V).

C. Prior consultation with indigenous peoples

1. Background

In Mexico, prior consultation with indigenous peoples during the EsIA process is not a standardized process and is derived from a patchwork of national, state, and sectoral legislation, as well as rulings by the National Supreme Court of Justice (*Suprema Corte de Justicia de la Nación* or SCJN), the country's highest federal court. The majority of Mexican states have adopted specific legislation on indigenous rights or have integrated these rights into their constitutions.⁶⁵

Mexico ratified the Indigenous and Tribal Peoples Convention (ILO Convention 169) of the International Labour Organization in 1990, becoming the first Latin American country to become a signatory to this legally-binding agreement. Among its provisions, Convention 169 establishes the right of indigenous peoples to free, prior, and informed consent (FPIC) before ancestral land is developed or resources are used within their territory.

Despite Mexico's early commitment to the Convention, the prior consultation process in Mexico has had a troubled history, with many civil society organizations complaining that the rights and opinions of indigenous peoples have been largely disregarded in the face of commercially and politically attractive development projects.⁶⁶ A 2018 report on free, prior, and informed consent by Oxfam International and the Due Process of Law Foundation (DPLF) found that in the absence of a specific legal framework on prior consultation in Mexico, state and sectoral authorities have been guided by the provisions of judicial decisions and the protocol of the **National Commission for the Development of Indigenous Peoples** (CDI), which is described below.⁶⁷ In many cases, however, the pronouncements of the SCJN on this issue have simply been ignored.⁶⁸

FPIC has evolved to its current status as a fundamental right under Mexico's law as a result of a series of constitutional amendments and a key decision by the SCJN, in which the Court issued rules regarding the applicability of a decision by the Inter-American Court of Human Rights to the right of prior consultation in Mexico.⁶⁹ In order to clarify the right of indigenous peoples and communities to self-determination and autonomy, a 2001 constitutional amendment added the requirement that the authorities of the federal entities (national, state, and municipal) must, *where appropriate*:

...

⁶⁵ Baja California, Campeche, Colima, Chiapas, Chihuahua, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, Estado de México, Michoacán, Morelos y Nayarit, Nuevo León, Oaxaca, Puebla, Querétaro, Quintana Roo, San Luis Potosí, Sonora, Tabasco, Tlaxcala, Veracruz, and Yucatán.

⁶⁶ See, e.g., Oxfam-México/DPLF (2018), *Implementación de la consulta y consentimiento previo, libre e informado: Experiencias comparadas en América Latina y discusiones sobre una ley de consulta en México* (Finding generally that the constitutional rights of indigenous peoples and FPIC requirements have been consistently disregarded by competent decision-making authorities in Mexico), <http://www.dplf.org/es/resources/implementacion-de-la-consulta-y-consentimiento-previo-libre-e-informado-experiencias>.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ This issue was addressed in constitutional amendments on 14 August 2001, 10 June, 2011, and 29 January 2016; In Ruling P./J. 21/2014; The SCJN clarified the application of a decision by the *Corte Interamericana de Derechos Humanos*, formulating a rule on how criteria established by that court on the right to prior consultation must be applied in Mexico.

“Consult indigenous peoples in the preparation of the National Development Plan and the plans of states and municipalities and, *where appropriate*, incorporate the recommendations and proposals they provide.”⁷⁰ [Emphasis added]

Despite the considerable discretion this paragraph appears to provide to decision-makers, the mandate for prior consultation with indigenous stakeholders was further strengthened by a decision by the SCJN, declaring that international treaties (including ILO Convention 169) represent the highest level in the constitutional hierarchy of legal authority. In a 2014 decision, the SCJN found that jurisprudential criteria concerning the right to FPIC adopted by the Inter-American Court of Human Rights were binding on Mexican federal courts, regardless of whether a Mexican state where indigenous rights were at issue had previously been a party to litigation on this issue.⁷¹

In reaching its decision, the SCJN highlighted earlier precedent, which provided that the American Convention on Human Rights, as an international treaty, must be treated as mandatory authority under the provision of the Constitution.⁷² The SCJN formulated a rule to guide courts in applying precedent when deciding future cases that assert the right to prior consultation:

- (i) When the criterion has been issued in a case in which the Mexican state has not previously been a party [to a lawsuit involving indigenous rights], the applicability of the precedent to the specific case shall be determined by verifying that the same reasons that motivated the original pronouncement [prior judicial ruling in a different case] apply to the new case;
- (ii) In all cases where possible, national jurisprudence shall be harmonized with that of the Inter-American Court of Human Rights; and
- (iii) If harmonization is impossible, courts shall apply the most favorable criteria for the protection of human rights.⁷³

Although the SCJN has clearly articulated the mandatory right of indigenous groups to FPIC, this mandate has not been translated into legislation in any coherent manner and state authorities often disregard rulings by the court on this issue. Although there is no framework national legislation that addresses FPIC in a comprehensive manner, several laws establish responsibilities for certain government entities with respect to facilitating prior consultation.

The Law of the National Commission for the Development of Indigenous Peoples charges that entity with, among other functions:

“Designing and operating a system for indigenous consultation and participation, establishing technical and methodological procedures for promoting participation by indigenous peoples’ authorities, representatives, and communities in the formulation, execution, and assessment of development plans and projects.”⁷⁴

[...]

⁷⁰ Political Constitution of the United Mexican States, Art. 1(B)(IX).

⁷¹ Suprema Corte de Justicia de la Nación (SCJN), Ruling p./J. 21/2014 (10a.), *Semanario Judicial de la Federación y su Gaceta*, Tenth session, Book 5, Volume I, Report 2006265, April 2014, p. 204.

⁷² SCJN, Preamble, Ruling P./J. 21/2014.

⁷³ Suprema Corte de Justicia de la Nación (SCJN), Ruling p./J. 21/2014 (10a.), *Semanario Judicial de la Federación y su Gaceta*, Tenth period, Book 5, Volume I, Report 2006265, April 2014, p. 204.

⁷⁴ Law of the National Commission for the Development of Indigenous Peoples (2003), Art. 2(IX) and ; The Law was last amended on 9 April, 2012.

Establishing the basis for integrating and operating an indigenous information and consultation system, which allows the broadest participation of the peoples, communities, authorities and their representative institutions in the definition, formulation, execution, and assessment of the government programs, projects and actions.”⁷⁵

National Commission for the Development of Indigenous Peoples (CDI)

Article 2 of the *Law of National Commission for the Development of Indigenous Peoples* established the mandate of the CDI, whose purpose is to guide, coordinate, promote, support, encourage, monitor, and assess programs, projects, strategies, and public actions for the comprehensive and sustainable development of indigenous peoples and communities in accordance with Article 2 of the Political Constitution of the United Mexican States.”⁷⁶ Article 2 elaborates a list of the CDI’s functions, two of which specifically address the CDI’s role in connection with government actions that implicate the prior consultation process:

IX. Design and operate, within the framework of the Commission's Advisory Council, an *indigenous consultation and participation system*, establishing technical and methodological procedures for promoting the participation of indigenous peoples’ authorities, representatives, and communities in the formulation, execution, and assessment of development plans and programs;
[...]

XVI. Establish the basis for integrating and operating an *indigenous information and consultation system*, which allow the broadest participation of peoples, communities, authorities, and institutions representative of them, in the definition, formulation, execution, and assessment of government programs, projects, and actions. [Emphasis added]

Although it is unclear whether the systems mentioned in Article 2 were intended to the same or serve similar functions, the Commission has a centralized General Consultation Directorate and state delegations that conduct consultations in indigenous villages.⁷⁷ In addition, the CDI has developed a set of protocols that are used to guide the planning and implementation of the consultation process.

2. Energy sector mandate for prior consultation

Reform of Mexico’s energy sector began in 2013, resulting in a new energy policy that sought to make the energy sector more competitive, more environmentally sustainable, and allowed private sector developers to invest in the electric power and the petroleum sectors.⁷⁸ The reform maintained a generic mandate that existed to undertake prior consultation with indigenous communities for new energy projects.⁷⁹

⁷⁵ Law of the National Commission for the Development of Indigenous Peoples (2003), Art. 2(IX) and ; The Law was last amended on 9 April, 2012.

⁷⁶ Ley de la Comisión Nacional para el Desarrollo de los Pueblos Indígenas (2003, most recently amended 2012).

⁷⁷ Rodrigo Gutiérrez Rivas and Edmundo Del Pozo Martínez (2019), *De la Consulta a la Libre Determinación de los Pueblos: Informe sobre la implementación del derecho a la consulta y al consentimiento previo, libre e informado en México*, Due Process of Law Foundation, Instituto de Investigaciones Jurídicas de la UNAM, Fundar, Centro de Análisis e Investigación A.C., 26 <https://archivos.juridicas.unam.mx/www/bjv/libros/12/5528/11.pdf>.

⁷⁸ Vietor, Richard H.K., and Haviland Sheldahl-Thomason (Revised August 2017), *Mexico's Energy Reform*. Harvard Business School Case 717-027, January 2017.

⁷⁹ Mexico Institute, Woodrow Wilson International Center for Scholars (2018), *Mexico’s New Energy Reform*, Duncan Wood, Editor, https://www.wilsoncenter.org/sites/default/files/mexicos_new_energy_reform.pdf.

The **Electric Industry Law** requires the Department of Energy (*Secretaría de Energía* or “SENER”) to undertake social impact assessment and a formal consultation process with members of the local communities, including indigenous groups, before initiating a new project.⁸⁰ Article 119 of this law establishes the generalized requirement that:

“In order to take into account the interests and rights of indigenous communities and peoples with respect to the development of electrical industry projects, the [SENER] shall carry out the necessary consultation procedures and any other activity necessary for its safeguard, in coordination with the Department of the Interior and the corresponding agencies.”

The Energy Industry Law does not elaborate specific procedural details for undertaking the prior consultation. Since energy projects often require significant land acquisition, such as power generating facilities that require new transmission lines, the energy sector is inherently prone to conflicts with landowners and people who have a right to live on the land.

Due to Mexico’s complex land tenure system, developers face significant challenges in complying with consultation requirements. The federal government owns all subsurface assets, including oil, gas, and mineral deposits, and has the right to award rights for their exploitation, even if they lie under property inhabited by indigenous peoples.⁸¹ Communal landholding or *ejido* is the primary form of land tenure in Mexico, accounting for more than half of the inhabited land area. For this reason, developers must often consult with large numbers of stakeholders over an extended period of time.⁸² Developers of energy project must pay local communities for the use of their lands and are required to determine the amount of financial compensation through negotiations. However, these dialogues are often contentious and many developers (including the state) have little motivation to negotiate in good faith.⁸³

3. Tribe-specific prior consultation protocols

In the case of energy projects that implicate the land tenure rights of specific indigenous tribes, SENER has developed protocols as frameworks for managing negotiations with these groups. An example of this is SENER’s *Protocol for Consultation with the Yaqui Tribe Concerning the Construction and Operation of the Sonora Gas Pipeline on Yayui Lands (Guaymas-El Oro Section)*.⁸⁴ The Protocol formally describes the different parties involved in negotiations, the purpose of the consultation, the principles to be observed during the process (e.g., good faith, lack of coercion, transparency, flexibility, and the *objective* of achieving consent), the Yaqui communities involved, the phases of the consultation process, rules of conduct for the developer, and the budget for the consultation.

⁸⁰ Electric Industry Law (*Ley de la Industria Eléctrica*), 2014, Arts. 117-120.

⁸¹ Use of the term “concesión” (concession) is prohibited under Mexico’s Political Constitution, Art. 27; those who have obtained rights to prospect for and extract oil and gas are termed “assignees” or contractors.

⁸² The *ejido* system of land tenure combines communal land *use* rights (not ownership) of land with certain rights for individual use.

⁸³ Wilson Center, *Supra* note 69.

⁸⁴ SENER, *Protocolo para la Consulta a la Tribu Yaqui sobre la construcción y operación del Gasoducto Sonora en territorio Yaqui (segmento Guaymas–El Oro)*.

4. Prior consultation for oil and gas projects

Procedural requirements for prior consultation with landholders, including indigenous communities that collectively use and occupy lands, are described in Mexico's **Hydrocarbons Law**, which was issued on the same date as the Energy Transition Law.⁸⁵ Chapter IV of the law prescribes the process through which developers who have been awarded government contracts for hydrocarbons exploitation must negotiate and acquire the surface use rights necessary for undertaking these activities. Article 100 of the law expressly states that the negotiating rules it contains are applicable to indigenous communities and provides that:

The compensation, terms, and conditions for the use of surface rights necessary to carry out the hydrocarbon exploration and extraction activities will be negotiated and agreed between the owners or holders of said lands, assets, or rights, including real, ejido or communal rights, and the assignees or contractors.

Article 101 elaborates additional elements of the negotiation process:

- A request in writing to the holders of the land, explaining the land use right(s) that the developers ("assignees" and contractors) seek to obtain, including land acquisition.
- Description of the project in simple language, addressing doubts and questions the landholders might have, the possible consequences of the project, and possible benefits (if any).
- SENER may provide social witnesses in the negotiation process.
- The developers must notify SENER, as well as competent agricultural, land use, and urban development authorities, at the beginning of negotiations.
- The land must be suitable for the development of the proposed project.
- The agreed financial compensation for the project's anticipated effect on the land and the landholders' use of that land (including the possible need for resettlement). The compensation must be "proportional" to the developer's land use needs and must cover:
 - a. Payment for the landholders' lost use of the property and damages, calculated based on the value of the usual use of that property (by the indigenous community or other tenant).
 - b. The rent to be provided for the occupation, easement, or use of the land.
 - c. A percentage of the income derived from commercial extraction of oil and gas, if the project reaches that stage, after making required payments to the Mexican Oil Fund.⁸⁶

Despite the fact that a chapter of the Hydrocarbons Law is devoted to social impact assessment, the law's provisions potentially undermine the integrity of the process of consultation with indigenous communities and other local stakeholders. For example, Article 120 states that:

In order to take into account the interests and rights of the indigenous communities and peoples when hydrocarbon industry projects are developed, the Ministry of Energy shall carry out necessary procedures for prior, free and informed consultation and any other activity necessary for safeguarding it, in coordination with the Ministry of the Interior and the corresponding agencies. In

⁸⁵ Ley de Hidrocarburos (2014, Last amended on 16 November 2016), Arts. 101-117; The Hydrocarbons Law does not differentiate between indigenous and non-indigenous landholders in prescribing the procedure for negotiating land surface use rights, but Article 100 expressly states that the procedures are applicable to indigenous communities.

⁸⁶ Under the Hydrocarbons law, the allowable range for profit-sharing is from 0.5% to 3% for natural gas and from 0.5% to 2% for other hydrocarbons. As part of Mexico's energy reform, oil and gas developers must share a portion of revenues with the state, through payments to the Mexican Oil Fund for stabilization and Development.

these consultation procedures, the Ministry of Energy may provide for the participation of the Agency, the State's productive companies and their subsidiaries and subsidiaries, as well as private individuals, in accordance with the applicable regulations.

The second sentence in this Article opens the door to a biased prior consultation process if private oil and gas companies are permitted to take the lead role in conducting the consultation, since they are likely to put their own interests ahead of those of indigenous groups.⁸⁷ In addition, the provision is unclear concerning how the duty to undertake prior consultation is enforced. The final paragraph of Article 120 states that the Ministry of Energy, with the prior opinion of the Ministry of Finance and Public Credit, *may* prescribe the amount of funds that the developer must earmark for the purpose of addressing social issues, such as health, safety, and education.

It is clear that the prior consultation process is still evolving and subject to ongoing setbacks. New developments pertaining to this issue should be monitored in order to determine if and when reliable procedures for prior consultation with indigenous groups are implemented on a broad basis.

D. Integrating biodiversity into the EsIA process

1. Legislative requirements for the consideration of biodiversity impacts

Mexico became a signatory to the UN Convention on Biological Diversity (CBD) in 1993 and submitted its first National Biodiversity Strategy and Action Plan (NBSAP) in 2000. Although the Mexico included generalized biodiversity objectives in its National Action Plan 2013-2018, it has not incorporated specific requirements into federal legislation. Instead, the integration of biodiversity-related requirements into the environmental licensing process are generally implicit, defined in sectoral or state legislation, or mandated for activities allowed in natural protected areas. Nevertheless, the prevention of biodiversity loss is an important consideration for any activity that has the potential to fragment the habitat of threatened species or reduce their populations.

Although biodiversity is mentioned throughout LGEEPA, it is primarily addressed in the context of protected natural areas and not as an issue to be considered in undertaking EsIA studies. It is barely mentioned in LGEEPA's EsIA regulation. At the national level, biodiversity is treated as a critical issue for environmental assessment primarily in the narrow context of forest sector projects that require a change in land use or activities that are authorized within a natural protected area.⁸⁸ Apart from these contexts, biodiversity is addressed as an important principle to be considered in the abstract, but few specific federal requirements for its incorporation into the EsIA process exist.

At the state level, there are scattered examples of requirements for avoiding biodiversity loss in the EsIA process. For example, the Biodiversity Code of the State of Mexico (Decree No. 183) states that once an EsIA or environmental risk study has been evaluated, the Ministry of the Environment of the state may deny an environmental license if the proposed work or activity significantly affects biodiversity and its associated resources.⁸⁹ The Ministry of the Environment may require guarantees regarding compliance with the license conditions in cases where it is expressly indicated that serious damage to biodiversity

⁸⁷ Rodrigo Gutiérrez Rivas and Edmundo Del Pozo Martínez (2019), *De la Consulta a la Libre Determinación de los Pueblos: Informe sobre la implementación del derecho a la consulta y al consentimiento previo, libre e informado en México*, Due Process of Law Foundation, Instituto de Investigaciones Jurídicas de la UNAM, Fundar, Centro de Análisis e Investigación A.C., 26 <https://archivos.juridicas.unam.mx/www/bjv/libros/12/5528/11.pdf>.

⁸⁸ Ley General de Desarrollo Forestal Sustentable (2018), Art. 93.

⁸⁹ Decreto 183 (2005), El Código para la Biodiversidad del Estado de México, Libro Primero, Art. 2.70.

may occur during project execution. If the developer cannot avoid biodiversity loss in undertaking a proposed activity, s/he may either propose an off-site compensation project or deposit funds into the Fund for the Restoration and Preservation of Biodiversity, a federal fund administered by the National Forest Commission (CONAFOR).⁹⁰ If a contribution to the Fund is used to satisfy this requirement, the amount contributed must exceed a 1:1 ratio, with CONAFOR setting the level of contribution on a project-by-project basis.

2. The Mexican Commission for the Knowledge and Use of Biodiversity

The Mexican Commission for the Knowledge and Use of Biodiversity (CONABIO) is an Inter-ministerial government body that is dedicated to promoting mechanisms for the prevention of biodiversity loss, coordinating activities and research on the preservation of biodiversity, maintaining the National Biodiversity Information System (SNIB), implementing special projects and programs on biological diversity, and undertaking efforts to ensure Mexico's compliance with international agreements on biodiversity.⁹¹

In addition to the aforementioned functions, CONABIO is increasingly being asked by SEMARNAT to issue second technical opinions on the viability of certain types of projects that require environmental authorizations.⁹² This has been particularly true with respect to permits related to the cultivation or rearing of certain bird and plant species, or in the context of proposed wildlife management units. In 2016 alone, it fulfilled 276 such requests.⁹³

3. The National Biodiversity Strategy

The National Biodiversity Strategy on of Mexico (ENBioMex) and Action Plan 2016-2030 has supplanted the first-generation biodiversity strategy (ENB) that was adopted in 2000. The ENBioMex is a guiding document that presents the principal components of a national approach for conserving, restoring, and sustainably managing biodiversity and the services it provides in the short, medium and long term.⁹⁴ ENBioMex establishes 14 guiding principles and is structured around six strategic axes: Knowledge, Education, communication and environmental culture; Conservation and restoration; Sustainable use and management; Attention to pressure factors and integration and governance.⁹⁵ In addition, it consists of 24 lines of action and more than 160 actions, which seek to strengthen efforts that have a positive impact on biodiversity and reduce the direct causes of biodiversity loss.

Lines of action and action items that are pertinent to the EsIA process are presented in Table 5, on the following page.

⁹⁰ *Id.* at Art. 2.306; OECD (2013), *OECD Environmental Performance Reviews: Mexico*; CONAFOR (Comisión Nacional Forestal) is an autonomous dependency of SEMARNAT.

⁹¹ Comisión Nacional para la Conocimiento y Uso de la Biodiversidad (CONABIO) website, ¿Qué hacemos? <https://www.gob.mx/conabio/que-hacemos>.

⁹² CONABIO (2017), 25 años de evolución, 53, https://www.gob.mx/cms/uploads/attachment/file/262393/25_an_os_Conabio_web.pdf.

⁹³ *Id.* at 72.

⁹⁴ Government of Mexico (website), *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción 2016 – 2030*, <https://www.gob.mx/conabio/es/articulos/estrategia-nacional-sobre-biodiversidad-de-mexico-y-plan-de-accion-2016-2030>.

⁹⁵ Government of Mexico (2016), *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción 2016 – 2030*, https://www.biodiversidad.gob.mx/pais/pdf/ENBIOMEX_baja.pdf.

Table 5. National Biodiversity Strategy on of Mexico and Action Plan 2016-2030 Lines of action and action items that are pertinent to the EsIA process	
Axis 2: Conservation and Restoration	
<p><u>Line of action 2.1.1.3.</u> Develop and implement in-situ conservation programs and tools actions to reduce the main pressure factors on priority, native, at-risk and vulnerable ecosystems and species.</p>	<ul style="list-style-type: none"> • Strengthen the mechanisms of environmental impact assessment to be carried out based on the best scientific information, ensuring that the studies include environmental and social safeguards. • Strengthen and encourage surveillance in compliance with resolutions derived from environmental impact manifestations.
Axis 4: Attention to Stress Factors	
<p><u>Line of action 4.2.5.</u> Promote the evaluation of the effects of the overexploitation of biodiversity in the ecological, social and economic fields.</p>	<ul style="list-style-type: none"> • Perform comprehensive and interdisciplinary impact studies with a perspective of gender to know the environmental, social, economic and cultural impact of the unsustainable use of natural resources and incorporate their results into decision making.
<p><u>Line of action 4.7.6.</u> Incorporate criteria for biodiversity conservation in infrastructure construction works.</p>	<ul style="list-style-type: none"> • Incorporate clear criteria and verifiable technical information in Environmental Impact Assessments and Manifestations to avoid, reduce and mitigate environmental impacts, impacts on biodiversity and its ecosystem services Infrastructure development derivatives. • Promote technological innovation to make efficient use of water for irrigation, rehabilitate contaminated bodies of water and maintain aquatic biodiversity. • Consider environmental issues in urban areas from a global and gender perspective, and integrate all sectors within the urban environment to reduce inequalities.
Axis 6: Mainstreaming and Governance	
<p><u>Line of action 6.1.2.</u> In an inter-sectoral, coordinated manner, identify and address the problems that exist in applying the national regulatory framework for conservation and sustainable use of biodiversity.</p>	<ul style="list-style-type: none"> • Evaluate the effectiveness of existing standards, before issuing new ones. • Work with the agricultural, forestry, fishing and tourism sectors in integrating biodiversity issues, drawing on the experiences these sectors have acquired. • Interpret and properly apply the legal framework by the corresponding institutions, particularly in the application of environmental impact assessment.
<p><u>Line of action 6.2.7.</u> Consolidate and promote proactive transparency, access to public information focused on participation in decision making and access to justice, and accountability based on different target audiences.</p>	<ul style="list-style-type: none"> • Among other measures, actions include: 1) the regulatory and institutional framework, 2) budget implementation, 3) indicators of the performance of procedures and data on impacts that permit the evaluation of public programs that have impacts on biodiversity; 4) information on conservation and the sustainable use of resources, 5) data on applications and authorizations for environmental licenses, updated and organized by territorial unit, and 6) accessible mechanisms for the management of collective actions and other legal procedures that contribute to conservation and sustainable resource use, including those that repair of damage to biodiversity.
<p><u>Line of action 6.3.3.</u> Promote the establishment of mechanisms for citizen monitoring, accountability, and oversight mechanisms for evaluating actions in the field for conservation and sustainable use of biodiversity.</p>	<ul style="list-style-type: none"> • Develop an inclusive and effective citizen audit system for biodiversity conservation, particularly in connection with EsIA. • Strengthen the process of public consultation of EsIA studies, ensuring the full free, prior, and informed consent of cultural groups, women, and different age groups.

E. Protection of archaeological and cultural heritage

Mexican federal legislation does not directly address the issue of archaeological artifacts and structures discovered during the ESI process or during excavation and construction activities performed while executing an approved project. The **General Law on National Property** (“the General Law”) states that both fixed and movable objects that have been declared archaeological monuments by law or decree are property of the federal government.⁹⁶ Although the General Law does not explicitly prescribe the status of archaeological or cultural relics that are unexpectedly discovered during the “routine” development of a project site, the **Federal Law of Archaeological, Artistic, and Historical Monuments and Zones** predefines these assets as archaeological monuments.⁹⁷ Article 28 of this law states that Archaeological monuments are:

“movable and fixed property that are a product of cultures prior to the establishment of the Hispanic culture in the national territory, as well as human remains, flora, and fauna related to those cultures.”

Article 30 of the General Law on National Property designates the **Ministry of Culture** as the authority competent to possess, supervise, conserve, administer and control fixed archaeological sites, as well as moveable artifacts designated as archaeological monuments. The same article provides that the Ministry of Culture and SEMARNAT must establish coordination mechanisms for safeguarding archaeological assets in national waterways, protected natural areas, or “*any other area over which, in accordance with the applicable legal provisions, the Ministry of Environment and Natural Resources is responsible for exercising its powers.*” The latter provision indicates that coordination between the two entities is required for locations for which SEMARNAT has granted an environmental license or permit.

In the case of projects undertaken by the federal government or private sector projects that have obtained a permit to operate on federal land, Article 66 of the General Law provides that the Ministry of Culture or SEMARNAT, as is appropriate, shall seek insurance from parties who obtain an authorization to use federal land against damages to federal assets (including archaeological and cultural sites). If an environmental license is approved for a project that will take place on land where fixed archaeological assets are known to exist, the Ministry of Culture or SEMARNAT may need to authorize a change of use for the project.⁹⁸ Both the Ministry of Culture and SEMARNAT may issue guidelines concerning the treatment of specific archaeological or cultural assets.

⁹⁶ Ley General de Bienes Nacionales (2004, last update 2018), Art. 6(VIII) and (XVI).

⁹⁷ Many state laws on indigenous and cultural heritage exist and acknowledge the need for the protection of archaeological assets, but these laws provide few details concerning procedures for the handling of artifacts.

⁹⁸ Ley General de Bienes Nacionales, Arts. 67 and 68.

IV. Monitoring and enforcement of environmental license requirements

A. Overview

Chapter II of LGEEPA provides detailed procedures for carrying out monitoring and enforcement tasks. Consistent with Mexico's system of concurrent authority, Article 161 states that the federal, state, and municipal authorities may conjointly carry out inspection and surveillance actions in order to verify environmental compliance in matters of federal jurisdiction. In order to accomplish this collaboration effectively, federal, state, and municipal authorities have entered into intergovernmental coordination agreements.⁹⁹ Article 2 of LGEEPA's regulation (REIA) makes special provisions for activities in the hydrocarbons sector, for which monitoring, inspection, and sanctioning functions are carried out by the National Agency for Safety, Energy, and Environment (ASEA).

B. Inspection procedures

General procedures for environmental inspections by PROFEPA's Directorate for Environmental Monitoring and Verification are prescribed in LGEEPA and its regulation. LGEEPA requires the use of duly authorized personnel when carrying out inspections, who must be provided with official documents that provide evidence of their accreditation, as well as a well-founded and reasoned written order that specifies the location or area to be inspected, as well as the inspection's purpose and scope.¹⁰⁰ In the presence of two witnesses, the authorized personnel must provide a copy of the written order to the party who is responsible for the activity.¹⁰¹ A detailed record must be drafted following every inspection, with a copy being provided to the representative of the licensed project, who must be allowed the opportunity to give their own perspective on the findings.¹⁰² The competent environmental authority may request the assistance of police or other public force if the project operator tries to obstruct or oppose the inspection.¹⁰³

Once the project operator has been informed of the inspection team's findings and been offered an opportunity to be heard, the competent authority must issue an administrative resolution that specifies the measures that must be taken to correct the deficiencies that were found. Within five business days after the end of the time period allowed for rectifying the deficiencies identified, the project operator must provide a written communication confirming that the prescribed corrective measures have been completed.¹⁰⁴ If a subsequent inspection reveals that the project operator has not complied with the specified measures, the competent authority may impose one or more of the sanctions prescribed by Article 171 of LGEEPA (listed in section "e" below).

In cases where there is an imminent risk of environmental harm with dangerous risks to ecosystems or public health, SEMARNAT may order the temporary or confiscation of polluting material and an injunction for a temporary, partial, or total closure of the authorized project site.¹⁰⁵ When an activity subject to a mandatory EsIA requirement has been undertaken without the required authorization,

⁹⁹ *Id.*

¹⁰⁰ LGEEPA, at Art. 162.

¹⁰¹ LGEEPA, at Art. 163.

¹⁰² LGEEPA, at Art. 164.

¹⁰³ LGEEPA, at Art. 166.

¹⁰⁴ LGEEPA, at Art. 169.

¹⁰⁵ LGEEPA, at Art. 170; REIA, Art. 56.

PROFEPA (through the Directorate for Environmental Monitoring and Verification) must determine the degree of environmental harm and impose urgent security measures.¹⁰⁶ The security measures must be aimed at preventing further environmental damage, restoring the conditions of the natural resources affected, and offsetting the ecological harm with an equivalent environmentally beneficial action.

For repeated instances of noncompliance, competent authorities may impose sanctions as prescribed in LGEEPA's Article 171. In the case of acts or omissions that constitute criminal environmental violations, federal environmental authorities are directed to inform the office of the Public Prosecutor (*Ministerio Público*).¹⁰⁷

C. Verifying environmental compliance: performance indicators

For projects that have been granted environmental authorizations to carry out activities under federal jurisdiction, PROFEPA inspectors must confirm compliance with legal requirements that apply to project developers and facility owners. These obligations consist of project-specific environmental performance obligations contained in the EslA dossier (specific measures for avoiding and mitigating environmental impacts that were conditions of project approval), Official Mexican Standards, environmental legislation, and the maintenance of required levels of insurance coverage and/or guarantees. Since it is not clear that these diverse obligations are customarily compiled in one master list, more information is needed to determine how inspectors prioritize measurements and sample-taking that must be checked against the performance indicators that apply in each case.

D. Environmental enforcement programs and the selection of enforcement priorities

The monitoring and inspection of activities that are subject to environmental impact authorizations (licenses) are a subset of tasks that fall within PROFEPA's Monitoring and Inspection Program for the Environment and Natural Resources ("*Programa de Inspección y Vigilancia en Materia de Medio Ambiente y Recursos Naturales*"). Since data provided by PROFEPA (see Section on statistical data below) indicate that a relatively static number of inspections are being performed from year to year, while the overall number of authorized facilities has been steadily increasing as new activities are added, this suggests that the average frequency of inspections *per facility* is being diluted over time. Additional information is needed to determine whether this conclusion is valid, as well as the method used by PROFEPA to prioritize inspections.

E. Responding to citizen complaints

1. Overview

In Mexico, any person may submit a complaint to PROFEPA or any other competent federal or local authorities concerning any fact, act, or omission that results in ecological imbalance or damage to the environment, in violation of the law.¹⁰⁸ If the complaint was filed before a municipal authority, but is the result of a federal order, the complaint must be forwarded to PROFEPA for its attention and processing. However, if the facts implicate matters of local jurisdiction, the complaint will be directed to the competent local authority in order that appropriate measures may be imposed.¹⁰⁹ Within five business days following a complaint (involving matters of federal jurisdiction), PROFEPA must inform the

¹⁰⁶ REIA, Art. 57.

¹⁰⁷ *Id.* at Art. 169.

¹⁰⁸ LGEEPA, at Art. 189.

¹⁰⁹ LGEEPA, at Art. 192.

complainant of the steps that have been taken and within thirty business days must provide information on the result of its efforts to verify the facts and the measures it has imposed.¹¹⁰ In cases where damages have been caused due to violations of LGEEPA, interested parties may request PROFEPA to formulate a technical opinion on the matter, which will have evidentiary weight if the case is brought to court.¹¹¹

2. Procedural process for responding to citizen complaints¹¹²

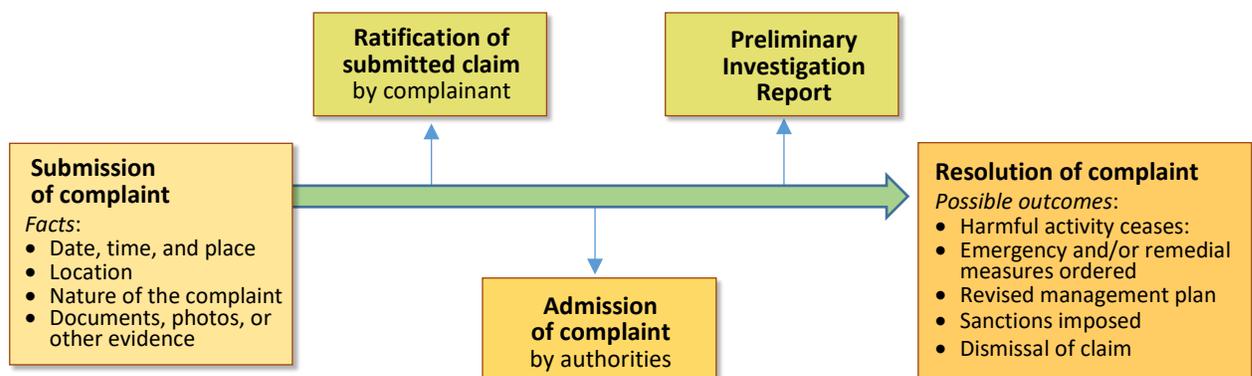
The complaint process in Mexico generally proceeds according to the following outline, but may vary in some details from jurisdiction to jurisdiction. The citizen complaint process begins when a member of the public lodges a complaint with the competent environmental authority, which may be implemented through a hotline (phone) or form on the website of the authority. For federal matters, the complainant must select the applicable state delegation.¹¹³ The party submitting the claim is then required to ratify (independently confirm) the complaint, in order to verify that the complaint originated with them and to provide the complainant with greater legal certainty that there will be an official response to their claim.

After the environmental authority has had a chance to review the information submitted by the complainant, it will make a determination concerning the substance of the complaint (whether the complaint is actionable and will be admitted into the investigation process) and a confirmation or agreement form will be issued. This document will state whether the environmental authority has admitted (accepted) the complaint and includes, where applicable, instructions for the complainant to follow in providing proof of the facts reported.

During the investigation, the environmental authority may:

- Confirm the facts alleged by the complainant
- Request information or assistance from other competent authorities
- Perform visits to verify and investigate the facts underlying the complaint
- Draft technical opinions regarding whether an actionable violation has occurred.
- Gathering additional evidence of the commission of a crime (if applicable).

Chart 4: Processing citizen complaints



¹¹⁰ LGEEPA, at Art. 193.

¹¹¹ LGEEPA, at Art. 194.

¹¹² See e.g., PAOT website, www.paot.org.mx/denunciantes/procedimiento.php (Outlining the steps involved in processing a citizen complaint).

¹¹³ PROFEPA (website) *¿Cómo realizar una denuncia ante PROFEPA?*, <https://www.gob.mx/profepa/articulos/como-realizar-una-denuncia-ante-profepa?idiom=es>.

After a period of time (specified by legislation), the environmental authority will provide the complainant with a preliminary report concerning the initial actions taken to investigate the complaint and the current status of its resolution.

Following the completion of the investigation, the authority will resolve the issue by recommending prosecution of a violation, entering into an agreement with the violator for resolving/remediating the environmental harm, or determining that there is an insufficient basis for pursuing action against the alleged violator.

F. Monitoring by organized citizen groups

As part of a strategy to deter environmentally harmful activities, PROFEPA utilizes organized citizen groups to supplement the level of monitoring and that it is able to perform within the constraints of its capacity, which is limited by budget allocations, finite resources, and the number of qualified staff. The citizen groups, which are known as **Participatory Environmental Monitoring Committees (CVAP)**, are comprised of volunteers who are committed to caring for and defending the natural resources in and near their communities.

PROFEPA provides training and accreditation to the teams of volunteers, who carry out surveillance, prevention, and reporting tasks. In addition to watching for the presence of illegal activities, CVAPs are trained to detect environmentally harmful behavior by operators of activities subject to the impact assessment and environmental licensing process. CVAPs use the formal Environmental Complaint process as a legal mechanism for preventing or stopping violations that cause detriment to the environment.

Table 6. CVAP responsibilities and functions

1. **Develop orientation activities** within the community, so that the group participates actively in actions of protection, conservation, restoration and sustainable use of natural resources.
2. **Attend meetings convened for CVAP members to identify problems** associated with the monitoring of the natural resources of the community.
3. **Participate in the pre-selection of the Environmental Wardens** of your community.
4. **Prepare their Work Program in coordination with the PROFEPA (regional office) Delegation**, in which their surveillance patrols will be established to prevent and/or detect illegal activities that affect natural resources.
5. **Deliver surveillance route activity reports to the PROFEPA Delegation**, in accordance with the provisions of the Work Program.
6. **Report contingencies in matters of natural resources and the environment** to the PROFEPA Delegation.
7. **Submit environmental complaints** in accordance with applicable legal provisions.¹¹⁴

¹¹⁴SEMARNAT website,
http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D4_R_PROFEPA01_05&IBIC_user=dgeia_mce&IBIC_pass=dgeia_mce.

G. Sanctioning regime

1. Violations of the terms and conditions of environmental authorizations

For environmental violations that relate to an activity subject to federal jurisdiction, Chapter VI of LGEEPA prescribes a regime of increasingly severe administrative sanctions available to enforcement authorities.¹¹⁵ The sanctions include:

- I. Fines that range from the equivalent of twenty to twenty thousand days of “the general minimum wage in effect in the Federal District” at the time the sanction is imposed;¹¹⁶
- II. Temporary or permanent, partial or total closure of the activity;
- III. Administrative arrest for up to 36 hours.
- IV. Revocation of environmental authorization (license).¹¹⁷

In determining the amount of the fine to be imposed, PROFEPA must take into account the seriousness of the infraction (considering the impact on public health and the generation of ecological imbalances as the principal criterion), the offender’s economic circumstances, and recidivism, if any.¹¹⁸

If an infraction persists past the conclusion of the sanctioning period, fines may be imposed for each day of noncompliance, until the total authorized level of fines is reached. In the case of recidivism, authorities may impose fines that are twice the previous level and compel closure of the activity, as well as revocation of the license.¹¹⁹ For environmental criminal infractions, federal prosecutors may impose jail sentences of three months to six years, accompanied by a fine ranging from 100 to 10,000 of the general minimum wage.¹²⁰ Jail sentences, as well as fines, may be increased for crimes relating to risky activities that are carried out near densely populated areas.¹²¹

2. Appealing sanctions imposed by environmental authorities: Motions for Review

Mexico’s legal system provides a remedy for administrative sanctions imposed by PROFEPA and other government agencies. The Motion for Review (*Recurso de Revisión*) is a remedy designed to protect the parties whose legal rights have been wrongly harmed by an administrative authority, such as an administrative unit of PROFEPA.¹²² This defense involves an authority that is hierarchically superior to PROFEPA (a federal court) undertaking a comprehensive review of the legality of PROFEPA’s administrative acts issued against the sanctioned parties, in order to confirm the validity of sanctions imposed.¹²³

¹¹⁵ *Id.* at Art. 171.

¹¹⁶ Like many other countries in Latin America, legislatively-specified fines are expressed in units that float with inflation or other indicators. For 2018, the daily general minimum wage has been set at 88.36 Mexican Pesos by the *National Commission on Minimum Wages* on 21 December 2017. 20 to 20,000 days of “the general minimum wage in effect in the Federal District” equate to approximately \$91 USD to \$91,158 USD (Source: www.xe.com, 8 September, 2018).

¹¹⁷ *Id.* at Art. 171.

¹¹⁸ *Id.* at Arts. 173

¹¹⁹ *Id.* at Arts. 171 and 172.

¹²⁰ *Id.* at Arts. 182-184.

¹²¹ *Ibid.*

¹²² PROFEPA (2017), *Informe de Actividades 2017*, <https://www.gob.mx/profepa/documentos/informe-de-actividades-profepa-2017>.

¹²³ PROFEPA (2018), *Informe de Rendición de Cuentas de Conclusión de la Administración PROFEPA 2012-2018*, Primera Etapa, Periodo Diciembre 2012-Diciembre 2017.

If a court determines that PROFEPA has not applied sanctions correctly, it may nullify the sanctions, replacing them with new resolutions that properly respond to the violations, or—when it deems appropriate—may impose no sanction in the case that was appealed. To some extent, the widespread use of this mechanism to reverse or ameliorate sanctions has the effect of undercutting PROFEPA’s authority, highlighting the need for improved legislative clarity in defining PROFEPA’s area of competence and discretion.

A 2012-2018 PROFEPA report on the use of Motions for Review reported from 2013 to 2017, a total of 4,358 Motions for Review were filed, of which 3,901 were resolved in the following manner:

- 1,645 cases: sanctions were confirmed.
- 149 cases: sanctions were modified.
- 524 cases: the appeals were denied.
- 57 cases: the Motions were dismissed
- 1,160 cases: sanctions were effectively annulled.
- 366 cases: sanctions were simply (explicitly) annulled.

In a number of cases, Motions were not processed due to the following circumstances:

- a) Delays in the start of sanctions that involve annual payments (e.g., if the filing date of the appeal occurs in the last months of the year);
- b) Procedural defects (e.g., the sanctioning authorities did not provide adequate records);
- c) Complexity of the issues involved, and;
- d) Decrease in the size of the court staff.

H. Prosecution and environmental tribunals

PROFEPA is the primary authority responsible for responding to environmental complaints, imposing sanctions, and developing agreements with noncompliant project or facility operators to return those parties to a state of environmental compliance. However, PROFEPA is confined by their mandate to the use of administrative remedies and cannot engage in prosecutorial functions involving civil or criminal claims and its actions may be challenged in a court of law. Cases involving matters that require the prosecution of civil charges or environmental crimes must be referred to the Office of the Attorney General of the Republic (*Procuraduría General de la República* or “PGR”), which has a delegation in each Mexican state. Through the PGR, the **Specialized Unit for the Investigation of Crimes Against the Environment and [Issues] Foreseen in Special Laws** (UEIDAPLE), which is attached to the Attorney’s Office for Special Investigations of Federal Crimes, is responsible for investigating and prosecuting crimes that are within the scope of federal jurisdiction.¹²⁴ Cases involving prosecution for negligent or criminal environmental behavior are not tried in a specialized tribunal, since Mexico does not currently have a court that is solely dedicated to hearing matters related to the environment.¹²⁵

¹²⁴ PROFEPA, <https://www.gob.mx/pgr/acciones-y-programas/unidad-especializada-en-investigacion-de-delitos-contr-el-ambiente-y-previstos-en-leyes-especiales>; The latter portion of the name of the Specialized Unit refers to matters that are tangent to environmental protection, such as laws which protect historic sites and cultural artifacts.

¹²⁵ Joséphine Marie Frochisse, *Tribunales Ambientales*, A.C. (CEMDA), <http://ceja.org.mx/IMG/pdf/Tribunales.pdf>.

I. Compliance promotion programs

The National Environmental Audit Program (PNAA)

The PNAA is a free, voluntary program in which commercial enterprises may participate in order to proactively ensure that they maintain a state of legal environmental compliance, improve the efficiency of their production processes, and benefit competitively from the positive reputational advantages of having a PROFEPA-issued Environmental Certificate that verifies their superior performance.¹²⁶ The requirements for participating in the PNAA are established in the LGEEPA regulation on self-regulation and environmental audits¹²⁷, as well as in the Mexican Standards NMX-AA-162-SCFI- 2012 and NMX-AA-163-SCFI-2012. The PNAA is a collaborative effort that involves PROFEPA, local governments, businesses, business associations, academic institutions, environmental auditors, and the Mexican Accreditation Entity (EMA).

When an enterprise decides to participate in the Audit Program, it must undergo a series of diagnostic assessments that apply four types environmental standards in evaluating the participant's performance: Mexican voluntary standards, environmental management standards, foreign standards, and sector-specific standards. There are three types of Environmental Certificates: (1) *Clean Industry Certificates*, for enterprises that engage in manufacturing and transformational production processes, (2) *Environmental Quality Certificates*, for commercial activities and facilities that provide services other than those related to tourism, and (3) *Tourism Environmental Quality Certificates*, for tourism- and recreation-related services and activities.

¹²⁶ PROFEPA, *Programa Nacional de Auditoría Ambiental*, http://www.profepa.gob.mx/innovaportal/v/26/1/mx/programa_nacional_de_auditoria_ambiental.html.

¹²⁷ Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en materia de Autorregulación y Auditorías Ambientales (31 October 2014).

J. Performance data on environmental licensing and inspections

When examining data on environmental inspections carried out by PROFEPA and its directorates, it is important to keep in mind that the inspection of projects that are subject to environmental impact authorizations represent a minority of these visits. PROFEPA conducts environmental inspection and verification visits in connection with a variety of other environmental permits and instruments, such as forestry concessions, as well as monitoring biodiversity, the state of protected areas, and illegal environmental activities.

Site visits performed by PROFEPA, state, and municipal environmental enforcement authorities include inspections, verifications, and monitoring trips. Verification visits are follow-up visits undertaken after inspections to verify that the licensee has implemented corrective, rehabilitative, or urgent security measures that were prescribed following an inspection. Monitoring trips are visits that are generally conducted as part of an ongoing focused program for tracking a specific environmental issue or threat.

1. Results of site visits carried out by PROFEPA, 2016 to 2018

Table 7: PROFEPA actions – 2016 to 2018*	2018¹²⁸	2017	2016
Total number of site visits: inspections, verifications, and operations¹²⁹ (1+2+3)	3,656	1,958	2,136
1. Inspections to verify compliance with environmental impact (license) terms and conditions ¹³⁰	265	415	399
2. Other types of inspections (e.g., air pollution, hazardous waste)	2,573	1,224	1,384
3. Verify implementation of measures ordered in administrative resolutions	1,054	319	353
Surveillance trips	No data	651	668
Operations (ongoing focused programs)	No data	176	179
Inspection outcomes:	—	—	—
No irregularities found	1,445	137	50
Irregularities were found	2,211	2,204	2,086
Closure of activity (temporary or permanent, full or partial)	127	408	453

*The data refer to inspections of enterprises, projects, and activities under federal jurisdiction.

It is difficult to assess the percentage of entities subject to environmental licenses that are inspected by PROFEPA per year. In a 2014 performance review independently conducted by Mexico's Superior Audit Office, it was reported that there were 91,340 installations that were subject to pollution monitoring, of which **approximately 4.5% were inspected per year (4/787 visits)**¹³¹ For certain delegations (state or municipal offices), the coverage was higher. Six of the top-performing delegations inspected an average of 30.6% of installations per year.

(Continued on the following page)

¹²⁸ Incomplete: The PROFEPA 2012-2018 report final data were only available from January 1 to August 31, 2018, with an estimate provided for September to November.

¹²⁹ Statistics provided by PROFEPA are difficult to parse, since slightly different terms are used to characterize inspections related to environmental impacts in pre-2018 data.

¹³⁰ An "environmental license," as used here, refers to the instrument formally referred to under Mexican law as an "environmental impact authorization" (autorización de impacto ambiental).

¹³¹ Auditoría Superior de la Federación (ASF), Auditoría de Desempeño 14-0-16E00-07-0132, <https://www.asf.gob.mx/Trans/Informes/IR2014i/Documentos/Auditorias/>.

2. Outcomes of PROFEPA inspections

Table 8: Outcomes of PROFEPA inspections January – August 2018	Number
Partial closure	33
Total closure	94
Minor violations detected	1,904
No violations detected	1,445

3. Industrial inspections by area of primary area of concern

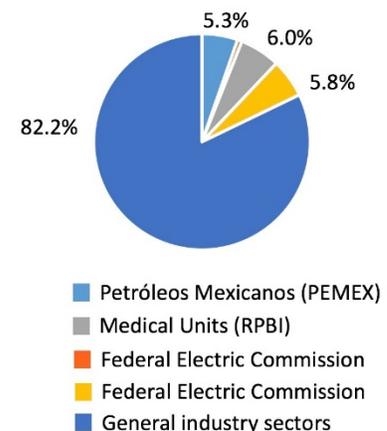
Table 9: PROFEPA industrial inspections by primary area of concern January – August 2018	2018
Atmospheric emissions	381
Verification of compliance with EsIA (license) terms and conditions	265
Generation, transport, and disposal of hazardous wastes	2,368
Verification of compliance with wastewater discharge limits	146
Monitoring of soil contamination	139
Verification of compliance by vehicle emission testing stations	1,445
Total number of inspections	3,656

4. Number of inspections by sector in 2016, for sectors that generate hazardous wastes.¹³²

Table 10: Type of activity/sector**	No. of inspections	% of total
Activities that comprise 1% or more of the total		
Food production	48	1.1
Mining	50	1.2
Electric power and electronics	57	1.3
Automotive	93	2.2
Hospitals	110	2.6
Asbestos	124	2.9
Chemical manufacturing	216	5.1
Transportation and cargo	230	5.4
Mechanic shops	468	11.0
Other industries that generate hazardous waste	2,258	53.0

** Data do not include the hydrocarbons industry, for which monitoring and inspections are undertaken by the National Agency for Safety, Energy and Environment (ASEA).

Number of inspection and verification visits by major industry groups



¹³² PROFEPA, *Visitas de inspección y verificación a fuentes de contaminación ambiental de competencia federal, por giro de actividad económica*, http://apps1.semarnat.gob.mx/dgeia/compendio_2017/03_institucional/profepa.html.

V. Information systems and technology tools for case management and project planning

A. The National Environmental Information System and the Natural Resources Information System (SNIARN)

SNIARN is a statistical, cartographic and documentary data bases that collect, organize and disseminate information about the environment and natural resources of the country. Within SNIARN are a number of other databases of environmental data. Among these are the **National Information System of Environmental Indicators** (SNIA), which offers an overview of changes and trends in the country's current situation with respect to the environment and natural resources, as well as the pressures and institutional responses aimed at their conservation, recovery, and sustainable use.¹³³ The latter include an up-to-date set of 14 environmental indicators that provide a description of the principle environmental issues on the national agenda, as well as a set of 69 green growth indicators regarding social conditions, and the economic environment, as well as economic opportunities and public policies aimed at achieving sustainable development.

B. The Geographic Information System for Environmental Impact Assessment (SIGEIA)

SIGEIA is a tool that helps developers, consultants, NGOs, and government agency staff to identify the physical and environmental characteristics of the locations where it is proposed that projects will be undertaken, as well as allowing them to see the legal environmental regulatory instruments that apply to those locations.¹³⁴ The tool was developed by the **Subministry of Management for Environmental Protection** with the **General Directorate of Impact and Environmental Risk** (DGIRA), which developed a geographic information system that would allow ESI tasks to be supported through the geospatial analysis of location coordinates. The system identifies restrictions or limitations to the development of proposed projects, such as the presence of nearby or overlapping environmentally sensitive areas that may constitute a cause for refusal by the competent environmental authority.

C. Strategic Institutional Information System (SIIE)

The SIIE is a strategic analytical tool that consolidates data that each of PROFEPA's state offices generate on a daily basis, transforming the data into a set of strategic indicators that can be used to: (a) measure the effectiveness of PROFEPA's activities, (b) further pursue activities regarding the PROFEPA's programs and lines of action, and (c) provide the information that is necessary for sound decision-making. This information includes data on audits and certificates of good environmental performance, certificate renewals, and the number of inspections carried out in connection with environmental authorizations or the monitoring of natural resources.

¹³³ Government of Mexico, Sistema Nacional de Información Ambiental y de Recursos Naturales, <https://www.gob.mx/semarnat/acciones-y-programas/sistema-nacional-de-informacion-ambiental-y-de-recursos-naturales>.

¹³⁴ SEMARNAT, Sistema de Información Geográfica para la Evaluación del Impacto Ambiental (SIGEIA), <https://www.gob.mx/semarnat/acciones-y-programas/sistema-de-informacion-geografica-para-la-evaluacion-del-impacto-ambiental-sigeia>.

VI. Cost recovery and funding for licensing and enforcement tasks

A. Budget allocations

Table 11. Budget allocations and revenues (in millions)	2018	2017	2016	2015
Allocation for environmental protection, generally ¹³⁵ Pesos – top, USD – bottom	9,700 \$512.00	9,247 \$488.10	16,631 \$877.80	7,190 \$379.50
PROFEPA, Allocation from national budget Pesos – top, USD – bottom	[No data]	1,051.7 ¹³⁶ \$59.80	968.4 ¹³⁷ \$55.10	1,107.2 ¹³⁸ \$63.00
Environmental monitoring and inspection program ¹³⁹ Pesos – top, USD – bottom	99.0 \$5.63	94.4 \$5.39	94.4 \$5.39	56.6 \$3.22
Licensing fee revenues [no data available]	—	—	—	—

B. Fees for services: processing environmental license applications

For projects and activities that are governed by federal jurisdiction, SEMARNAT imposes a fee for reviewing and issuing a resolution concerning ESI studies (*manifestaciones de impacto ambiental*) for proposed activities. The fees may be paid at SEMARNAT's central or regional offices or online, at a web portal called "e5cinco" that the federal government is testing for online payments of fees. On an annual basis, SEMARNAT publishes a document that provides a two-part formula for calculating the amount of these fees, based on the answers to a simple series of questions. The first part of the calculation assigns points for the answers to yes/no questions concerning environmental criteria, while the second part determines the level of the fee based on the classification for the type of activity.

For 2018, the following fees apply, according to whether the type of activity requires the *specific modality* or *regional modality* for project applications:

Table 11. Fees for ESI review and issuance of an environmental license¹⁴⁰		
Modalidad Particular	\$ Pesos	≈ \$ USD
a) Low Impact	30,069.45	1,710
b) Moderate impact	60,140.31	3,421
c) High impact	90,211.18	5,131
Modalidad Regional		
a) Low Impact	39,350.24	2,238
b) Moderate impact	78,699.06	4,476
c) High impact	118,047.87	6,714

¹³⁵ Cámara de Diputados (29-11-2017), *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal 2018*, 69; other amounts were drawn from prior years' budgets.

¹³⁶ SEMARNET, *Informe de Actividades 2017*, 114, https://www.gob.mx/cms/uploads/attachment/file/311596/Informe_de_actividades_profepa_2017.pdf.

¹³⁷ SEMARNET, *Informe de Actividades 2017*, 129, https://www.gob.mx/cms/uploads/attachment/file/196266/Informe_de_actividades_2016.pdf.

¹³⁸ SEMARNET, *Informe de Actividades 2015*, 134, https://www.gob.mx/cms/uploads/attachment/file/125063/Informe_Anuar_de_Actividades_PROFEPA_2015.pdf.

¹³⁹ Cámara de Diputados (29-11-2017), *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal 2018*, 69; other amounts were drawn from prior years' budgets.

¹⁴⁰ SEMARNAT, *Costo por la recepción, evaluación y resolución de la manifestación de impacto ambiental, particular. modalidad a: no incluye actividad altamente riesgosas*, https://www.gob.mx/cms/uploads/attachment/file/58899/Pago_de_Derechos_Manifestaci_n_de_Impacto_Ambiental.pdf.

C. Environmental guarantees

Under LGEEPA, project proponents must supply an environmental guarantee (bond, letter of credit, or other rapidly executable financial security instrument) “when serious damage to ecosystems may occur during the execution of works,” such as the leakage of toxic chemicals, impacts to protected wetlands and species, or the type of activity is classified by legislation as posing a high level of risk.¹⁴¹ The REIA states that the possibility of *serious damage* must be considered in cases where:

- I. Substances may be released that become toxic, persistent, and bioaccumulative when they are in contact with the environment;
- II. If there are bodies of water, species of flora and fauna or endemic species that are threatened, endangered, or subject to special protection in the intended location(s) of the work or activity;
- III. The projects involve carrying out activities that are considered to pose a high risk according to the Law, the respective regulations, and other applicable provisions; and
- IV. The works or activities are to be carried out in Protected Natural Areas.¹⁴²

Under REIA, SEMARNAT is charged with determining the amount of each guarantee based on the cost of remediating damages caused by the proponent’s noncompliance with the conditions imposed by the environmental authorization.¹⁴³ If a proponent allows the required insurance or guarantee to lapse, SEMARNAT may order the total or partial, temporary or permanent stoppage of the authorized activity.¹⁴⁴ Since project proponents may forfeit all or part of the financial guarantee if they violate the terms and conditions of authorization, the guarantee provides a powerful incentive for the them to comply with these requirements.

D. Dedicated environmental funds

Although SEMARNAT administers a fiduciary fund to advance Mexico’s agenda for responding to climate change, the author has not found information indicating the existence of an environmental fund to finance its operating or capital costs related to the EsIA process, licensing, and enforcement.

¹⁴¹ LGEEPA Regulation in the Matter of Impact Assessments (REIA), Art. 51.

¹⁴² REIA. Art 51

¹⁴³ REIA. Art 52.

¹⁴⁴ Ibid.