





Mexican Environmental Taxes Guideline

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Start

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Introduction

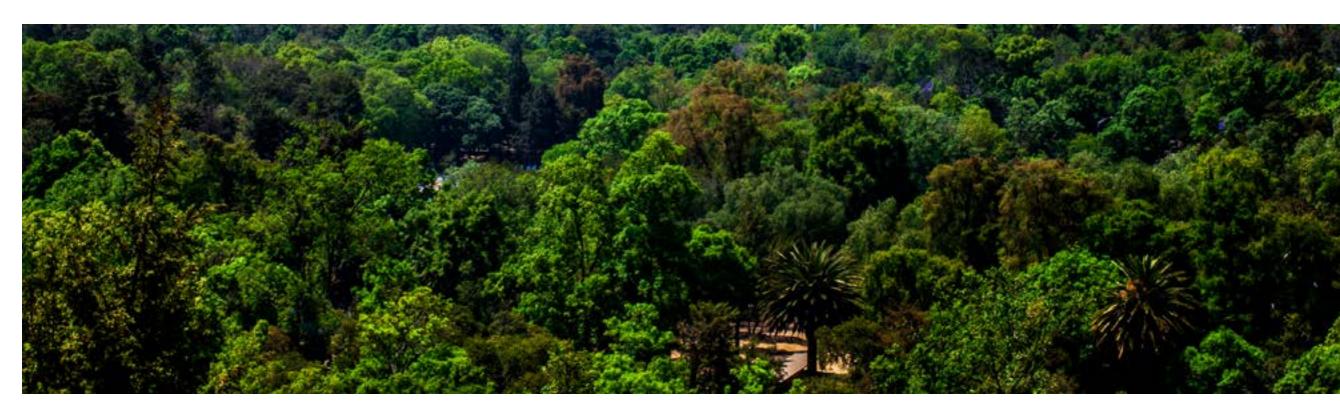
Environmental degradation, global warming and climate change as a historical consequence of human activity are some of this decade's most significant global challenges for the economy. Such challenges pose relevant risks to economic, social and political stability in almost all of the geographic regions. This raises the need to design public policies, as a response by governmental action to incentivize processes of mitigation and adaptation, which facilitate a fair, inclusive and equitable transition to low-carbon economies.

Environmental taxes are one of various mechanisms that governments have to implement economic instruments aimed at protecting the environment. Such taxes generally focus on taxing individuals or legal entities that have engaged in activities that result in environmental impacts or those that intend to perform activities that have the potential to cause such impacts. In this sense, governments on the one hand seek to penalize those who contribute to environmental degradation and, on the other hand, discourage behaviors that promote the unsustainable use of resources or pose a risk to environmental sustainability, while governments at the various administrative levels (federal, state and municipal) collect taxes.

In this regard, the Secretariat of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales, "SEMARNAT" for its acronym

in Spanish) notes that "environmental taxes (also called "green taxes" or "ecotributes") are economic or market instruments that are born from the intention to include in the prices the negative environmental costs of the production or use of goods. On the one hand, they allow the behavior of consumers and producers to be influenced by discouraging the consumption of products or activities that degrade the environment, and on the other hand, they increase government revenue, making it possible to allocate the resources obtained towards improving the environmental sector."

Therefore, Mexico has a variety of environmental taxes at federal and state level which seek to discourage certain behaviors and activities that are considered to be damaging to the environment, since the central approach to environmental legislation is based on the principle of prevention, i.e. prior to any damage being caused to the environment. Among the various activities listed as being subject to environmental taxes are the purchase of certain fuels or new motor vehicles, the extraction and use of stone materials, and of soil and subsoil, the uncontrolled discharge of water waste with exceeding concentrations of pollutants than those of the parameters of the various receiving bodies, soil and subsoil, the pollutant emission into the atmosphere, among others.



With this document, PwC seeks to provide its clients with an annual guide regarding the environmental taxes that exist in Mexico, as well as to highlight tax trends in the field of environmental taxation.

Based on the above, this guide is a result of the methodology we have developed at PwC to enable our readers to:

- Have a holistic approach to improve the understanding of environmental obligations in Mexico, supported by a multidisciplinary team that will collaborate with our clients to design strategies that enable sustainable and responsible management of operations, the establishing of adequate measures for control, impact mitigation, and the promotion of environmental preservation and recovery.
 - For these purposes, taxpayers will have to carry out environmental technical analyses in order to identify which activities involved in their business processes and value chains are likely to generate an administrative and/or tax-environmental impact in Mexico, either at the federal or state level, and in any case, develop strategies that allow them to achieve a level of compliance with their legal obligations in matters of the environment, prevention of environmental impacts and, therefore, the present or future tax impact.

Please consider the following, as an example:

- i. What process(s) or activities are declared in the Current Federal or State Single Environmental License?
- ii. What supplies, fuels, equipment and assets are required in order to carry out the processes that have been declared in the Current Environmental License?
- iii. Do you keep your inventory of fixed sources up to date, including periodic monitoring and reporting of your pollutant emissions to the atmosphere?
- iv. Do you keep your records as a generator of waste, whether hazardous, for special handling or urban solids, up to date, including periodic monitoring and reporting of the volume generated?
- v. Do you keep your water waste discharge permits up to date including monitoring, reporting and paying duties for your specific discharge conditions?

- vi. Have you monitored emissions into the atmosphere and discharge of water waste with a laboratory authorized and accredited by the Mexican Accreditation Entity (*Entidad Mexicana de Acreditación*, "EMA" for its acronym in Spanish) in accordance with current Mexican official standards?
- Define a strategy to correctly identify environmental obligations, including the planning, monitoring and control of environmental aspects, as well as the availability of technical, economic and human resources for the implementation of mitigation measures and technology for compliance with environmental tax provisions at federal and state level.
- 3. Establish areas of opportunity to prevent pollution and mitigate the environmental impacts arising from the business's operations, as well as applicable environmental incentives.
- 4. Fully comply with the administrative obligations for registration in the applicable state environmental taxpayer records, daily records, monitoring and control logs, filing of periodic notices and reports, among others.
- 5. Establish new processes and internal controls for compliance of environmental tax provisions and be prepared to adhere to the legal requirements that are established as mandatory.
- 6. Constantly monitor the degree of compliance regarding environmental initiatives attached to a methodological framework of the ESG strategy (Environmental, Social And Corporate Governance) for example, the Task Force on Climate related Financial Disclosures (TCFD), Sustainability and Accounting Standards Board (SASB) or Global Reporting Initiative (GRI), through the evaluation of data management processes, bases and estimates calculations, design and review of controls and associated systems, assessment of the information consolidation process and establishment of policies and procedures, in addition to the assurance of "non-financial" information through the issuance of limited assurance reports under internationally recognized standards (ISAE 3000) providing transparency and confidence to the reader of the information.

Furthermore, based on the content of this guide, we expect readers to be able to identify opportunity areas based on their business operations and turn to PwC to identify models for optimizing potential environmental, federal and state taxes that might be incurred.

Federal Environmental Taxes

Special Tax on Products and Services

At the federal level, there is an excise tax named special tax on products and services (Impuesto Especial por Productos y Servicios, "IEPS" for its acronym in Spanish) that is incurred when certain services are rendered or certain goods are disposed of or imported into national territory. The essential elements of this special environmental tax can be summarized as follows:

- Taxable party: Individuals and legal entities that carry out the acts or activities subject to the tax.
- Tax object: Transfer or sale within Mexico, or, as applicable, the importation of the following items:

I. Automotive fuels²

Fossil fuels	Fee	Unit of Measure
Gasoline, less than 91 octane	5.4917	Mexican pesos per liter
Gasoline ³ 91 octane or more	4.6375	Mexican pesos per liter
Diesel ⁴	6.0354	Mexican pesos per liter
Non-fossil fuels ⁵	4.6375	Mexican pesos per liter

If there is a mixture of fuels, then a calculation is performed to reflect the amounts in each fuel.

II. Fossil fuels

Fossil fuels	Fee	Unit of Measure
Propane	8.2987	Mexican cents per liter
Butane	10.7394	Mexican cents per liter
Gasoline and Avgas	14.5560	Mexican cents per liter
Jet fuel and other kerosenes	17.3851	Mexican cents per liter
Diesel	17.6624	Mexican cents per liter
Fuel oil	18.8496	Mexican cents per liter
Petroleum coke	21.8784	Mexican pesos per ton
Coal coke	51.2901	Mexican pesos per ton
Mineral coke	38.6201	Mexican pesos per ton
Other fossil fuels ⁶	55.8277	Mexican pesos per ton of carbon contained in the fuel

Notwithstanding the above fees and rates, the following fees apply to the transfer or sale of gasoline and diesel in Mexico:

- I. Gasoline, less than 91 octane: 48.4720 Mexican cents per liter.
- II. Gasoline, 91 octane or more: 59.1449 Mexican cents per liter.
- III. Diesel: 40.2288 Mexican cents per liter.

In this case, in addition to the price, taxpayers also transfer to the purchaser of the gasoline or diesel an amount equivalent to the tax established in this article, but in no case will they do so expressly and separately (in other words, the final price to the consumer must already include these taxes).

- Tax base: Value of goods sold or imported, in this case, fuels.
- **Tax payment:** It is calculated monthly and paid no later than the 17th day of the month following the payment, except in the case of imported goods⁷.

It is important to note that, in the case of the fossil fuels tax, the Law provides that taxpayers may choose to pay the tax using carbon credits.89

- III. Pesticides. The rate is applied according to the acute toxicity hazard category as follows:
 - 1. Categories 1 and 2: 9%
 - 2. Category 3: 7%
 - 3. Category 4: 6%

The acute toxicity hazard category is determined according to the following:

			Category		
Means of exposure	1	2	3	4	5
Ingestion	5	50	300	2000	5000
Contact with Skin or Eyes	50	200	1000	2000	-
Inhaled gasses (ppmV)	100	500	2500	5000	
Inhaled vapors (mg/L)	0,5	2	10	20	
Inhaled powders and mists (mg/L)	0,05	0,5	1	5	

The application of the table is subject to the Official Mexican Standard "NOM-232-SSA1-2009, Pesticides; that establishes the requirements for containers, packaging and labeling of technical grade products and for agricultural, forestry, livestock, gardening, urban, industrial and domestic use". It was published on April 13, 2010 in the Mexican Official Gazette.

Tax is not paid on the sale or importation of pesticides that come in the category of acute toxicity hazard, corresponding to category 5.

Tax on new automobiles

- Taxable party: Individuals and legal entities who perform the activities defined below.
- **Tax object:** Sale or transfer of new¹⁰ automobiles¹¹ and definitive importation into Mexico of automobiles by anyone other than the manufacturer, assembler, authorized distributor or dealer in the vehicle industry.
- Tax base: This is calculated by applying the established fee or rate to the sale price of the automobile to the consumer by the manufacturer, assembler, authorized vehicle distributors or dealers, including optional, special, common or luxury materials or equipment, without decreasing the amount of any discounts, reductions or bonuses.

In the case of definitive importation of automobiles, including those destined to remain permanently in the northern border strip of the country¹² and in the States of Baja California, Baja California Sur and the partial Sonora State region, the tax will be calculated by applying the established rate to the aforementioned sale price, added to the general import tax and to the amount of the contributions that have to be paid due to the import, less value-added tax.

Tax rate: Automobiles seating up to 15 passengers are subject to the following rates to be applied to the sale price of the automobile in question:

Lower limit	Upper limit	Fixed fee	The percentage applicable to amounts exceeding the lower limit
0.01	313,163.32	0.00	2
313,163.33	375,795.92	6,263.16	5
375,795.93	438,428.76	9,394.94	10
438,428.77	563,693.73	15,658.19	15
563,693.74	And up	34,447.90	17

If the price of the automobile is greater than \$864,750.45 Mexican pesos, then the amount resulting from applying 7% to the difference between the unit price and \$864,750.45 Mexican pesos will be reduced by the amount of the tax determined.

For trucks with a cargo capacity of up to 4,250 kilograms, including panel trucks with a maximum capacity of three passengers, and trailers and recreational vehicles, the 5% rate will be applied to the sale price of the vehicle in question.

• Tax payment: It is calculated by fiscal year, except in the case of the imports referred to in the Law. 13 Taxpayers will make advanced monthly I payments no later than the 17th of each month of the fiscal year, by means of a statement that they will submit to the authorized offices, documenting the sales and transfers effected during the immediately preceding month. Tax for the period, less monthly advanced payments, will be paid by means of a statement that will be filed with the authorized offices within three months following the close of the same period.

General Circular Economy Act

Purpose of the Law

The General Circular Economy Act¹⁴ is a bill on environmental protection, sustainable development, conservation and restoration of the ecological balance, which promotes, among other matters, the following:

- Efficiency in the use of resources through reuse, recycling, redesign or any criteria of Circular Economy¹⁵, as well as energy valuation to comply with Zero Waste policies.¹⁶
- That, with respect to economic activities, criteria of the Circular Economy are observed.
- Disseminate a culture of environmental responsibility in the population, in furtherance of responsible consumption.

Involvement of individuals, legal entities and public bodies in the Circular Economy

Federal entities must periodically submit to the Secretariat of Environment and Natural Resources the registration of individuals and legal entities dedicated to the redesign, restoration, recycling and transformation of waste and products that have concluded their first useful life (Article 12).

In addition, any individual or legal entity whose activity is the fabrication, finishing, production, import or manufacture of containers and packaging is obligated to submit a Circular Economy Plan to the Secretariat¹⁷, for the registration thereof. Notwithstanding the foregoing, microgenerators¹⁸ and small generators are exempt¹⁹, in accordance with the General Law for the Prevention and Comprehensive Management of Waste [Ley General para la Prevención y Gestión Integral de los Residuos, "LGPGIR" for its acronym in Spanish] (Article 15).

Finally, the municipalities and territorial demarcations of Mexico City will have, among other responsibilities, to provide information for the state registry of companies with a Circular Economy Plan.

Tax incentives and economic activities

In addition, the Federation shall establish the tax or economic instruments necessary to incentivize taxpayers to include goods subject to destruction in the value chains in accordance with applicable legislation, provide services for recycling, redesign, restoration, repair of goods and products, as well as handling compostable products so that they have tax deductibility, in accordance with Article 35 of the Mexican Income Tax Law, and prioritize materials that can be recycled and that at the end of their useful life they may be secondary raw materials in procurement, sale or purchase of materials by various government sources, among other activities.

In addition, the municipalities and territorial demarcations of Mexico City will have, among their responsibilities, to establish the **payments corresponding to private entities** who manage, are granted or are assigned a final disposal site and issue the regulations and other provisions within their jurisdictions to comply with the General Circular Economy Act. The payment of these taxes must be established in the Mexican Revenue Laws going forward from **fiscal year 2023**, in order to facilitate the valuation of the materials. It should be noted that a final disposal site is a location where urban solid and specially handled waste is permanently deposited.

The manufacture, finishing, marketing, distribution, sale or use of goods, merchandise or products made of raw materials that meet national or international standards, which are intentionally designed to be reinstated into a value chain, will be promoted.

Instruments of Law

The following will be considered as instruments for the promotion, control, management and improvement of the Circular Economy:

- I. The National Circular Economy Program.
- II. The Circular Economy Plan.
- III. Tax incentives and economic instruments.

Entry into force and supplementary provisions

It is important to note that the Circular Economy Act is not yet in force. It was approved on November 17, 2021 by the Mexican Senate. That said, its approval in the Mexican Chamber of Deputies and its publication in the Mexican Official are pending.

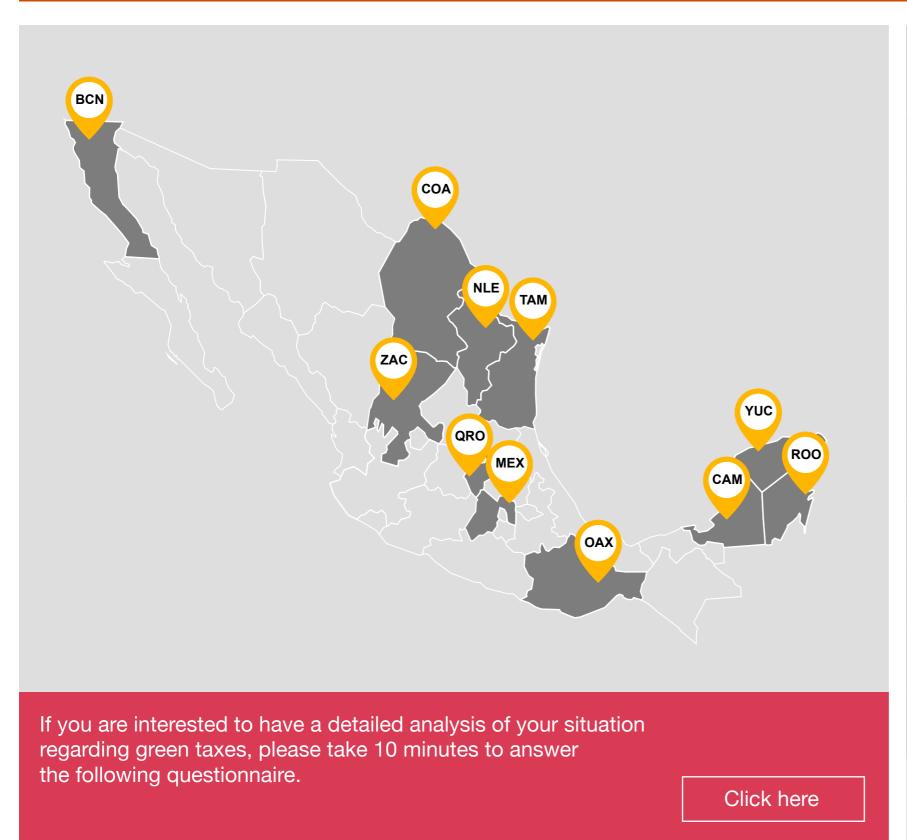
In addition, the Federation, through the Secretariat of Environment and Natural Resources, has the power to issue regulations, official Mexican regulations, standards and other legal provisions necessary to promote and facilitate the Circular Economy. These supplementary ordinances are still pending approval and publication.

In connection with the foregoing, the first transitory **article** of the General Circular Economy Act shall enter into force **180 calendar days** from the **day following its publication in the Mexican Official Gazette of the Federation**. In addition, the second transitory article provides that the Federal Executive, through the Secretariat of Environment and Natural Resources and other agencies mentioned in the Law, must issue and publish the National Circular Economy Program in the Mexican Official Gazette within a period **of no more than six months after the entry into force of the Law**. In the same manner, the regulations of the Law will be issued within a period of no more than 180 **calendar days** from the publication of the Law in the Mexican Official Gazette.

From a tax perspective, the Miscellaneous Tax Regulations must be modified within a maximum period of **180** days, to make use of terminology such as *secondary raw materials*, and to establish a preferential tax incentive mechanism for those involved in the various activities of the value chains.



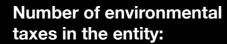
State Environmental Taxes



Baja California	
Campeche	
Coahuila	
State of Mexico	
Nuevo Leon	
Oaxaca	
Queretaro	
Quintana Roo	
Tamaulipas	
Yucatan	
Zacatecas	
Environmental tax maps	•



Baja California





Environmental tax on the extraction and use of stone materials

Article 7 of the Income Law of the State of Baja California for the 2022 Fiscal Year regulates this tax, the essential elements of which are:

- **Tax object:** the extraction and use of stone²⁰ material that is carried out in the State, including on private or communal [ejido in Spanish] property, is subject to this tax.
- Taxable party: individuals or legal entities, who, for profit, carry out the activities indicated above.
- Tax base: the monthly volume determined in cubic meters of stone material extracted and used.
- Tax rate or fee: 4.78 Mexican pesos per cubic meter extracted and used.
- Tax payment: the tax will be paid monthly to the offices of State Income Collection offices, through the forms approved by the Secretariat of State Planning and Finance, within the first five days of the month following the extraction and use.



Campeche

Number of environmental taxes in the entity:

One. Currently in force



Tax on the removal of soil and subsoil

Articles 13 to 19 of the Treasury Law for the State of Campeche governs this tax. The essential elements are:

- Tax object: the removal from soil and subsoil of materials that constitute deposits of the same nature as components of the ground, such as rocks, stones, substrate or fertile layer.
- **Taxable party:** individuals and legal entities or economic units that, within the territory of Campeche, extract from the soil and subsoil the materials listed above.
- Tax base or fee: the volume of cubic meters of material extracted. The State of Campeche's Tax Administration Service may use instruments such as global positioning systems or any other that facilitates the determination of the volume extracted.
- **Tax rate:** this will be incurred for each cubic meter extracted from the materials subject to this contribution, with a rate of 0.14 times the daily value of the Unit of Measure and Update ("UMA", for its acronym in Spanish).
- Tax payment: taxpayers subject to this tax must make payments no later than the 20th of the month following the performance of the activities described in the object, by means of a statement that they will submit in the forms authorized by the State of Campeche's Tax Administration Service.





Number of environmental taxes in the entity:

One. Currently in force



Tax on environmental remediation for the extraction of stone materials

This environmental tax is based legally on Articles 41 to 47 of the Treasury Law for the State of Coahuila de Zaragoza. The essential elements of the tax are:

- **Tax object:** the extraction, exploitation or use of stone materials²¹, as well as the derivative products that are required by law, that are not concessible by the Federation and that constitute deposits of the same nature as the ground components. The extraction, exploitation or exploitation must be carried out through open pit work within the State.
- **Taxable party:** individuals, legal entities or economic units that carry out the activities described above.
- Tax base: the volume of stone materials or derivatives described in the Law that are extracted, exploited or used within the State. Determined based on the volume extracted.
- Tax rate or fee: this will be incurred for each cubic meter extracted, in accordance with the following:
 - I. Rate of 0.20 times the general minimum wage in force in the State for limestones, sands, gravels, pozzolans, tezontle, tepetate, and clays that do not require underground work, and slate, peats, silica sands, mixtures of non-metallic minerals and other earthy substances.
 - II. Rate of 0.25 times the general minimum wage in force in the State for construction stones and decorative marble, travertines and quarry stones.
- III. Rate of 5.0 times the general minimum wage in force in the State for construction stones and ornamental granite and onyx.
- **Tax payment:** it must be paid within the first 17 days of the month following the performance of the activities described above, by means of a statement submitted on the pertinent forms by the tax authorities.





Number of environmental taxes in the entity:

One. Currently in force



Tax on the emission of polluting gasses into the atmosphere

This tax is regulated in Articles 69 S – 69 S Sexies of the Financial Code of the State of Mexico and the Municipalities.

- **Tax object:** the direct or indirect discharge into the atmosphere of carbon dioxide, methane and nitrous oxide, whether individually or any combination thereof, which alters the ecological balance, is considered as the emission of polluting gasses into the atmosphere.
- Taxable party: individuals and legal entities that have fixed sources within the territory of the State of Mexico.
- Tax base: the amount of the contaminating emission of carbon dioxide, methane and nitrous oxide whether individually or in any combination of them, expressed in tons, that the fixed sources discharge, which do not fall within the jurisdiction of the Federation located in the territory of the State of Mexico. To determine the tons discharged, any of the gasses set forth in the article must be converted to carbon dioxide (CO2). Each ton of the non-CO2 gas type emitted is multiplied by the corresponding equivalent value:

Gas name	Molecular Composition	Tons	CO2 Equivalence
Carbon dioxide	CO2	1	1
Methane	CH4	1	28
Nitrous Oxide	N20	1	265

- Tax rate or fee: determined by applying a fee of 43 Mexican pesos per ton of carbon dioxide, in accordance with the above table.
- Tax payment: monthly advanced payments will be made based on the annual tax, which must be submitted no later than the 10th of the month following the month in which the corresponding tax was incurred. It will be paid annually no later than April of the fiscal year following the one in which the corresponding tax was incurred.



Nuevo Leon

Number of environmental taxes in the entity:

Four. In force since January 1, 2022.



Environmental tax on pollution in the extraction of stone materials

This tax is provided for in the Treasury Law for the State of Nuevo León. Articles 118 to 137 Bis-5 govern environmental taxes in the State.

- **Tax object:** the extraction, exploitation or use of stone materials²², that are not covered by the Federation and which constitute deposits of the same nature as the components of the ground. It must be through open-pit work within the state of Nuevo Leon.
- Taxable party: individuals, legal entities or economic units that carry out the activities described above.
- **Tax base:** volume of stone materials that are extracted, processed or used within the State, and which will be determined by the volume extracted.
- Tax rate or fee: it will be charged at a rate of 1.5²³ for each cubic meter or fraction of extracted materials subject to the tax. Determined from the first complete unit of a cubic meter. For extractions that do not reach the next unit, the rate for that excess must be calculated proportionately for the fraction exceeding the unit.
- Tax payment: the payment must be made by means of a monthly statement, no later than the 17th of the month following the statement filing.

Environmental tax for the emission of pollutants into the atmosphere

- Tax object: emissions into the atmosphere of pollutants generated in the various productive activities and processes that are carried out in the State. Direct release into the atmosphere of the following pollutants affecting air quality includes:
 - I. Particulates smaller than 10 micrometers in size (PM10);
 - II. Particulates smaller than 2.5 micrometers in size (PM 2.5);
- III. Total suspended particulates (PST);
- IV. Total suspended particulates
- V. Sulfur dioxide.
- Taxable party: individuals, entities or economic units, whether or not they are domiciled within the State, which have fixed facilities or sources within which the activities are performed that cause the emissions into the atmosphere addressed by the tax.
- Tax base: excesses beyond the maximum limits of polluting emissions into the atmosphere. The base is in accordance to the provisions of NOM-043-SEMARNAT-1993, which establishes the maximum allowable levels of emission into the atmosphere of solid particulates from fixed sources, as well as NOM-085-SEMARNAT-2011, which establishes the maximum allowable levels for fixed sources that use solid, liquid or gaseous fuels or any combination thereof, smokes, total suspended particulates, sulfur dioxide and oxides of nitrogen. The taxpayer will determine the tax base by estimating or directly measuring the emissions it generates and, where appropriate, the Operations Card of the Federal Secretariat of Environment and Natural Resources will be taken as reference, as well as the emissions reports of the Operations Card under the responsibility of the Secretariat of Environment.
- Tax rate or fee: it will be incurred at the time that entities subject to the tax make emissions into the atmosphere which are taxable under this tax, applying a rate of 2.79²⁴ for each ton of particulates emitted or fraction thereof. It is to be calculated from the first complete ton. In the event that the emissions do not reach the next unit, the rate for that surplus must be calculated proportionately for the fraction exceeding the unit.
- **Tax payment:** it is paid by means of a monthly statement, no later than the 17th of the month following the statement filing.

Environmental tax on the emission of water pollutants

- **Tax object:** the emission of pollutants that are deposited, disposed of or discharged into the water²⁵ within the State.
- Taxable party: individuals, legal entities, as well as economic units that, in the territory of the State, regardless of the tax domicile of the taxpayer, under any title, by themselves or through intermediaries, perform acts or activities established above.
- Tax base: The amount in cubic meters of water affected, expressed in milligrams per liter. The basis is taken from the provisions of NOM-001-SEMARNAT-1996, which establishes the maximum allowable levels of pollutants in discharges into national waters and assets.

I. Basic pollutants

Pollutant	Milligrams per liter per cubic meter
Fats and oils	25
Solids, total and suspended	60
Biochemical oxygen demand 5	60
Total nitrogen	25
Total phosphorus	10

II. Heavy metal and cyanide pollutants

Pollutant	Milligrams per liter per cubic meter
Arsenic	0.2
Cadmium	0.2
Cyanide	2.0
Copper	6.0
Chromium	1.0
Mercury	0.01
Nickel	4.0
Lead	0.4
Zinc	20.0

If water is contaminated by two or more substances, each pollutant will be charged.

- Tax rate or fee: the tax payable will be obtained by applying a fee equivalent to 1.10²⁶ for each cubic meter or fraction thereof affected. The tax is to be calculated as from the first complete cubic meter affected. In the event that the impacts do not reach the next unit, the rate for that excess must be calculated proportionately for the fraction exceeding the unit.
- **Tax payment:** this tax will be paid by monthly tax statement, no later than the 17th of the month following the statement filing.

Environmental tax for the emission of soil and/or subsoil pollutants

- Tax object: the emission of organic and inorganic pollutants that are deposited, disposed of or discharged into the soil and/or subsoil in State territory, which are common-use goods, goods intended for a public service and own property belonging to the Federation, the States or the Municipalities, or abandoned immovable property.
- Taxable party: individuals, legal entities, as well as economic units that, within the State, regardless of the tax domicile of the taxpayer, under any title, by themselves or through intermediaries, perform the acts that trigger the incurrence of this tax.

Tax base:

- I. Pollutants discharged to affected soil and/or subsoils, milligrams per kilogram, dry base, obtained from samples taken in accordance with the MexicanOfficial Standards in every 100 square meters of ground, according to the following:
 - A) Hydrocarbon-contaminated subsoils or soils. Samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with MexicanOfficial Standard NOM-138-SEMARNAT/SSA1-2012: "Maximum allowable limits of hydrocarbons in soils and guidelines for sampling for characterizing and specifying remediation."

Pollutant	Milligrams per kilogram, dry base, per hundred square meters of ground
Benzene	6
Toluene	40
Ethylbenzene	10
Xylenes (total isomers)	40
Benzo [a] pyrene	2
Dibenzo [a,h] anthracene	2
Benzo [a] anthracene	2
Benzo [b] fluoranthene	2
Benzo [k] fluoranthene	8
Pyrene (1,2,3-cd) indenum	2

B) Soils and/or subsoils contaminated by: arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium. Samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with MexicanOfficial Standard NOM-147-SEMARNAT/SSA1-2004: "Criteria are established for determining the concentrations of remediation of soils contaminated by arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium."

Pollutant	Milligrams per kilogram, dry base, per hundred square meters of ground
Arsenic	22
Barium	5400
Beryllium	150
Cadmium	37
Hexavalent chromium	280
Mercury	23
Nickel	1600
Silver	390
Lead	400
Selenium	390
Thallium	5.2
Vanadium	78

In these cases, the tax is calculated from the first complete unit of milligrams per kilogram, for every one hundred square meters of affected ground.

II. Organic or inorganic waste discharged into soil per kilogram in every one hundred square meters of affected ground.

In these cases, the tax is calculated from the first complete kilogram unit, for every one hundred square meters of ground affected.

If the effects do not reach the next complete kilogram unit, the rate for that surplus must be calculated proportionately for the fraction exceeding the unit.

If the soil and/or subsoil are contaminated with two or more substances of those mentioned in this article, then the fee will be paid for each pollutant.

- Tax rate or fee: the tax payable will be obtained by applying 1.10²⁷ for each kilogram or milligrams per kilogram, as applicable, of pollutant for each one hundred square meters of affected ground.
- **Tax payment:** the payment must be made by means of a monthly statement, no later than the 17th of the month following the statement filing.



Oaxaca

Number of environmental taxes in the entity:

One. Currently in force



Tax on the extraction of materials for environmental remediation

Its legal basis is found in Chapter Nine Bis of the Treasury Law for the State of Oaxaca, specifically in Articles 69 A to 69-F.

- **Tax object:** the extraction of soil and subsoil from materials that constitute deposits of the same nature as the components of the ground, even if they constitute veins, layers or deposits, such as stone aggregates²⁸, andesite, clays, sand, sulfur, limestone, gravel, rhyolite, sizable rocks²⁹, salt, vermiculite, plaster, stones and substrate or fertile layer. For these purposes, the extraction must be carried out through open pit work within the State.
- Taxable party: individuals, legal entities, as well as economic units that, in the territory of the State, extract from the ground and subsoil materials referred to above.
- Tax base: the volume of cubic meters of material extracted from the soil and subsoil that constitute deposits of equal or similar nature to the components of the ground.



• Tax rate or fee: this is calculated by adding the fees per cubic meter extracted from the materials that is the object to the contribution, under the following terms:

Material	Fee in UMA
Stone aggregates	0.31
Andesite	0.47
Clays	0.19
Sand	0.25
Sulfur	2.04
Limestone	0.21
Gravel	0.20
Rhyolite	0.31
Measurable Rocks	2.94
Salt	0.67
Vermiculite	7.45
Gypsum	0.40
Stones and substrate or fertile layer	0.13

• **Tax payment:** payment will be made by means of a definitive bimonthly statement that must be submitted within the first 17 days of the months of March, May, July, September, November and January of the following year in which the activities of extraction of materials subject to the tax occurs.



Queretaro

Number of environmental taxes in the entity:

Three. In force since January 1, 2022



Tax on environmental remediation for the extraction of materials

This tax is regulated in Articles 83 Bis-2 to 83 Bis-7 of the Treasury Law for the State of Queretaro. The principal essential elements of this tax are:

- **Tax object:** the extraction of soil and subsoil from materials that constitute deposits of the same nature as the components of the ground, even if they constitute veins, layers, natural deposits or geological deposits of stone aggregates, gravel, stone, *tezontle*, *tepetate*, sand, grit, tepecil or any non-metallic material derived from rocks or sedimentation or processes of metamorphism. For the purposes of this article, the extraction must be carried out within the State. A distinction is made between low environmental³⁰ impact non-metallic minerals and high environmental impact non-metallic minerals³¹.
- **Taxable party:** individuals, legal entities and economic units which, within the territory of the State, regardless of the tax domicile of the taxpayer, extract deposits equal or similar in nature to the components of the ground from the soil and subsoil materials, referred to above.
- Tax base: the tax payable will be the amount resulting from applying the
 indicated fee to the volume of cubic meters of material extracted, as stated
 in the annual report of the Record of Emissions and Transfer of Pollutants
 through the Annual Operation License submitted to the Secretariat of
 Sustainable Development, in accordance with the provisions of the State of
 Queretaro's Environmental Code.

• Tax rate or fee: the tax will be incurred for each cubic meter extracted from the materials subject to the tax, based on the following fees:

Material	UMA
Non-metallic minerals not under environmental impact	0.20
High environmental impact non-metallic minerals	0.50

• Tax payment: the tax incurred must be paid as definitive payments no later than the 22nd day of the month immediately following that in which the materials being taxed are extracted. In addition, an annual informative statement for this tax must be filed no later than March of the year following the tax year in question. The statements referred to in this article must be submitted even when no amount is payable.

Tax on gas emissions into the atmosphere

This tax is regulated in Articles 83 BIS-8 to 83 BIS-13 of the Treasury Law for the State of Queretaro.

- Tax object: the emission into the atmosphere of certain substances generated in the production processes that are carried out within the State and which generate the following effects in the territory thereof: the direct or indirect emission of the following substances subject to reporting in the Federal Secretariat of Environment and Natural Resources' Pollutant Release and Transfer Registers (PRTR), as well as in the emissions reports of the PRTR, of the Secretariat of Sustainable Development: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, either as units or in any combination thereof that affect air quality, the components of the atmosphere which are greenhouse gasses that impact environmental deterioration by causing global warming.
- Taxable party: individuals, legal entities and economic units, whether
 or not they are domiciled within the State, which have fixed facilities or
 sources within which the activities are carried out within the State that
 generate the emissions to the atmosphere addressed by this tax.

 Tax base: the amount of contaminating content of the taxed emissions generated by the facilities or fixed sources expressed in tons. To determine the tons emitted, the entities subject to this tax will convert the gasses detailed below to Equivalent Carbon Dioxide (CO2e), multiplying each ton of the type of gas emitted by the related factor according to the following table:

Greenhouse gasses	Molecular Composition	Tonnage of gasses emitted	CO2 equivalent in tons
Carbon dioxide	CO2	1	1
Methane	CH4	1	28
Nitrous Oxide	N2O	1	265
	HFC-23	1	12,000
	HFC-125	1	12,400
	HFC-134 ^a	1	5,560
Hydrofluorocarbons	HFC-152 a	1	120
	HFC-227ea	1	6,450
	HFC-236fa	1	979
	HFC-4310mee	1	1,500
	CF4	1	6,630
Perfluorocarbons	C2F6	1	11,100
	C4F10	1	9,200
	C6F14	1	7,910
Sulfur Hexafluoride	SF6	1	23,500

- Tax rate or fee: the tax will be incurred at the time that the entities subject to this tax make emissions into the atmosphere, so this tax is effective within State territory, applying a tax fee for the equivalent of 5.6 UMA per ton of Carbon Dioxide Equivalent (CO2) emitted or the conversion thereof.
- Tax payment: this tax will be paid annually during the month following the one for which the respective report has been made in thePRTR of the Federal Secretariat of Environment and Natural Resources, as well as the emissions reports of the PRTR, of the Secretariat of Sustainable Development.

Tax on the final disposal of special and hazardous wastes

This tax is regulated in Articles 83-Bis 14 through 83 Bis 20 of the Treasury Law for the State of Queretaro.

- Tax object: the final disposal of waste for special handling in landfills, spoil banks or public or private final disposal sites located in the State, as well as the temporary storage or controlled confinement of hazardous waste in the State, which, when they are released into the environment, are a toxic or dangerous constituent, which causes risky effects on human health, ecosystems or the ecological balance.
- Taxable party: regardless of their tax domicile, individuals, legal entities and economic units classified as a large generator in terms of the General Law for the Prevention and Comprehensive Management of Waste that, under any title, by themselves or through intermediaries, carry out the final disposal of waste, as well as the temporary storage or controlled confinement of hazardous waste.
- Tax base: the amount in tons of specially handled waste deposited or stored or per ton of hazardous waste confined in the State. Specially handled waste brought into transfer stations must go for complete final disposal, when the parties subject to this tax do not have infrastructure and facilities authorized for their valuation.
- Tax rate or fee: the tax will be incurred and paid by applying a fee of 1.25 UMA per ton of specially handled waste deposited or stored, or per ton of hazardous waste temporarily stored or confined in the State.
- Tax payment: this tax must be paid monthly no later than the 22nd of the month immediately following the one in which the specially handled waste has been deposited or stored at the sites defined by the Treasury Law for the State, or per ton of hazardous waste temporarily stored or confined in the State.





Quintana Roo

Number of environmental taxes in the entity:

One. Currently in force



Tax on the removal of soil and subsoil

This tax is regulated in Articles 61 to 67 of the Treasury Law for the State of Quintana Roo.

- **Tax object:** the extraction of soil and subsoil from materials that constitute deposits of the same nature as the components of the ground, such as: rocks, stones, substrate or fertile layer and sascab.
- **Taxable party:** individuals and legal entities or economic units that extract deposits of equal or similar nature to the components of the ground, such as: rocks, stones, substrate or fertile layer and sascab from the soil and subsoil within the territory of the State of Quintana Roo.
- Tax base: the volume of cubic meters of material extracted.
- Tax rate or fee: will be incurred for each cubic meter of extracted materials based on the following rate:

Type of material	UMAs/m³
Fertile substrate or soil	0.14
Sascab	0.16
Stone	0.20
Sand	0.22

Tax payment: the tax will be paid no later than the 17th day
of the month following the one in which the activities occur
that are referred to in the description of the tax.



Tamaulipas

Number of environmental taxes in the entity:

One. Currently in force



Duty for the gas emission into the atmosphere

The legal basis for this tax is Articles 76 Bis – Decies of the Treasury Law for the State of Tamaulipas.

- **Tax object:** emissions into the atmosphere³² of substances generated by the production processes that are carried out within the State and which affect the territory of the State starting at 25 tons per month.
- Taxable party: individuals, legal entities and economic units, whether or not they are domiciled within the State, which have fixed facilities or sources in which activities that result in the emissions into the atmosphere taxed in the territory of the State are carried out and which emit more than 25 tons per month of emissions.
- Tax base: the mass of pollutant emissions taxed from the facility or fixed sources expressed in tons, starting from 25 tons per month. The taxpayer will determine the taxable base by direct measurement or estimation of the emissions it generates and, as applicable, the most recent PRTR of the Federal Secretariat of Environment and Natural Resources will be taken as a reference, as well as the emissions reports of the Secretariat of Urban Development and Environment's State Environmental Register. The conversion of gasses to carbon dioxide (CO2) must be done by multiplying the tonnage of the type of gas emitted by the corresponding factor in accordance with the following table:



Greenhouse gasses	Molecular Composition	CO2 equivalent in tons
Carbon dioxide	CO2	1
Methane	CH4	28
Nitrous Oxide	N2O	265
	HFC-23	12,400
	HFC-125	3,170
	HFC-134 ^a	1,300
Hydrofluorocarbons	HFC-152 a	138
	HFC-227ea	3,350
	HFC-236fa	8,060
	HFC-4310mee	1,650
Perfluorocarbons	CF4	6,630
	C2F6	11,100
	C4F10	9,200
	C6F14	7,910
Sulfur Hexafluoride	SF6	23,500

- Tax rate or fee: This law shall be effective at the time that the entities subject to the tax produce emissions into the atmosphere, which this law taxes and which affect the territory of the State, applying a tax rate equivalent to three times the daily value of the Unit of Measure and Update, starting from 25 tons a month of carbon dioxide emitted or the conversion thereof. If emissions exceed the unit of measurement indicated in the previous paragraph as a tonnage, without emissions reaching the next unit of measurement or ton, the tax rate for that surplus must be calculated as being directly proportional to the portion exceeding the corresponding ton.
- **Tax payment:** this is to be paid no later than the 17th of the month following the month in question.



Yucatan

Number of environmental taxes in the entity:

Two. In force January 1, 2022



Tax on environmental gas emission

Based on Articles 47-AH to 47-AQ of the State Treasury Law.

- **Tax object:** the emission into the atmosphere³³ of certain substances generated in the production processes carried out in the State and which result in an impact on its territory.
- Taxable party: individuals, legal entities and economic units, whether or not they are domiciled within the State, which have fixed facilities or sources within which the activities that result in the emissions into the atmosphere addressed by this tax in the territory of the State are carried out.
- Tax base: this constitutes the amount of contaminating content of taxable emissions into the atmosphere from the facility or fixed sources, expressed in tons. The taxpayer will determine the tax base, by directly measuring or estimating the emissions into the atmosphere it generates and, as applicable, the most recent PRTR of the Federal Secretariat of Environment and Natural Resources, as well as the emissions reports of the State Register of Emissions by the Secretariat of Sustainable Development, will be used as a reference. The taxpayer will determine the tons emitted, making the conversion by multiplying the ton of the type of gas emitted by the corresponding factor in accordance with the following table:

Greenhouse gasses	Molecular Composition	CO2 equivalent in tons
Carbon dioxide	CO2	1
Methane	CH4	23
Nitrous Oxide	N2O	296
	HFC-23	12,000
	HFC-125	3,400
	HFC-134 ^a	1,300
Hydrofluorocarbons	HFC-152 a	120
	HFC-227ea	3,500
	HFC-236fa	9,400
	HFC-4310mee	1,500
Perfluorocarbons	CF4	5,700
	C2F6	11,900
	C4F10	8,600
	C6F14	9,000
Sulfur Hexafluoride	SF6	22,200

- Tax rate or fee: the tax shall be incurred at the time that entities subject to the tax produce emissions into the atmosphere addressed by this tax that affect the territory of the State, applying a tax fee for the equivalent of 2.70 UMA per ton of carbon dioxide emitted or its conversion.
- Tax payment: the tax referred to in this chapter will be paid by annual statement, listing all emissions into the atmosphere addressed by this tax that the taxpayer has generated during the fiscal year. The annual statement will be filed in May of the year following the one in which the fiscal year in question ends. On account of the tax, taxpayers will make monthly advanced payments, by means of a statement that will document the emissions into the atmosphere that the taxpayer has generated from the start of the fiscal year until the last day of the month to which the payment corresponds, and will be submitted no later than the 17th of the month immediately following the one to which the payment corresponds.

Tax on soil, subsoil and water pollutant emission

This is based on Articles 47-AR to 47-BB of the State Treasury Law.

- Tax object: the emission of pollutants generated by industrial or agricultural activities, which are deposited, discarded, discharged or injected into the soil, subsoil or water within the State.
- **Taxable party:** individuals, legal entities, as well as economic units that, within the State's territory, regardless of the tax domicile of the taxpayer, under any title, by themselves or through intermediaries, perform the acts or activities established above.
- Tax base: the amount in square meters of ground or cubic meters of water affected, as applicable, with pollutants emitted or discharged from the facility or fixed sources, expressed as follows:
 - I. For soil and subsoil, the amount of milligrams per kilogram, dry base, obtained from samples that are taken in accordance with the MexicanOfficial Standards for every one hundred square meters of ground, in accordance with the following:
 - A) Hydrocarbon contaminated soils: Samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with Mexican Official Standard NOM-138-SEMARNAT/SSA1-2012: "Maximum allowable limits of hydrocarbons in soils and guidelines for sampling for characterizing and specifying remediation."

Pollutant	Milligrams per kilogram, dry base, per hundred square meters of ground
Benzene	6
Toluene	40
Ethylbenzene	10
Xylenes (total isomers)	40
Benzo [a] pyrene	2
Dibenzo [a,h] anthracene	2
Benzo [a] anthracene	2
Benzo [b] fluoranthene	2
Benzo [k] fluoranthene	8
Idene(1,2,3-cd)pyrene	2

B) Soils contaminated by: arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium. Samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with Mexican Official Standard NOM-147-SEMARNAT/SSA1-2004: "Criteria are established for determining the concentrations of remediation of soils contaminated by arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium."

Pollutant	Milligrams per kilogram, dry base, per hundred square meters of ground
Arsenic	22
Barium	5400
Beryllium	150
Cadmium	37
Hexavalent Chromium	280
Mercury	23
Nickel	1600
Silver	390
Lead	400
Selenium	390
Thallium	5.2
Vanadium	78

II. For water in milligrams in liters, presented for each cubic meter, based on the following: Samples to determine the number of milligrams per liter per cubic meter of water will be obtained in accordance with Mexican Official Standard NOM001-SEMARNAT-1996: "The maximum permissible limits are established of pollutants in waste discharges in national waters and assets:

A. Basic pollutants in wastewater

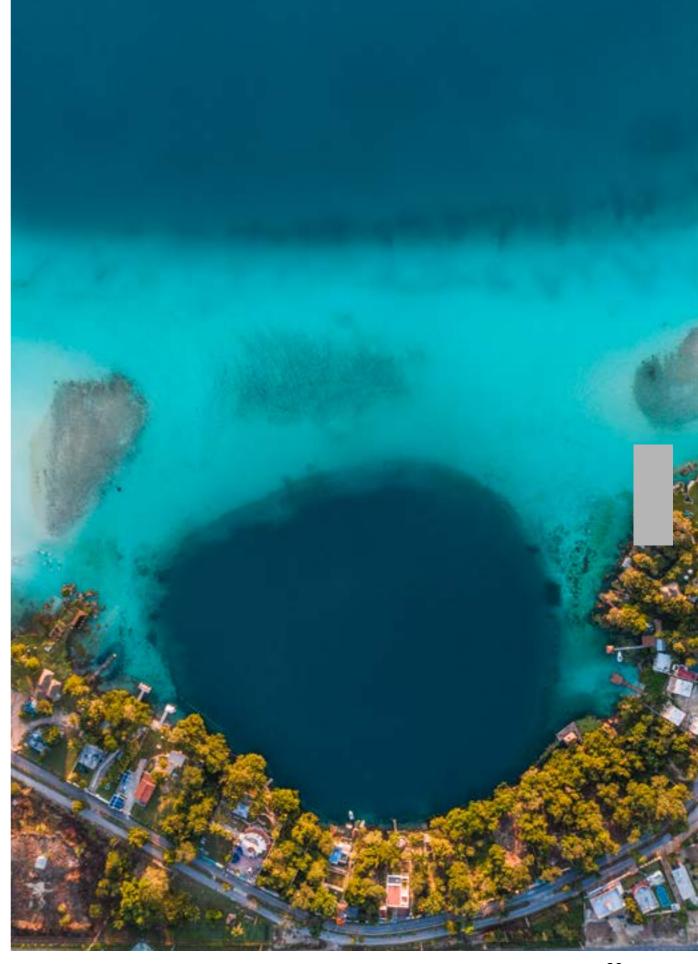
Pollutant	Milligrams per liter, per cubic meter
Fats and oils	25
Total suspended solids	60
Biochemical oxygen demand 5	60
Total nitrogen	25
Phosphorus	10

B. Pollutants in wastewater, caused by heavy metals and cyanides.

Pollutant	Milligrams per liter, per cubic meter
Arsenic	0.1
Cadmium	0.1
Cyanide	1.0
Copper	4.0
Chromium	0.5
Mercury	0.005
Nickel	2.0
Lead	0.2
Zinc	10.0

It will be understood that the values presented in the tables represent one unit of pollutant in square meters of ground or cubic meters of water affected as applicable. The unit of pollutant in soil, subsoil or water must always be expressed in whole numbers, such that, if there are fractions or surpluses of pollutant substances that do not constitute a pollutant unit, they will be rounded down.

- Tax rate or fee: The tax incurred is calculated by applying the following equivalents and fees:
 - I. Soil and subsoil: a tax fee for the equivalent of 0.27 UMA for each unit of pollutant in soil or subsoil of those indicated in Article 47-AT, section I, of the State Treasury Law, found in every one hundred square meters, and
- II. Water: a tax fee for the equivalent of 0.20 UMA for each unit of pollutant in water of those indicated in Article 47-AT, section II, of the State Treasury Law, found per cubic meter. If the soil, subsoil or water is contaminated with two or more of the substances mentioned in this chapter, the fee will be paid for each pollutant unit.
- Tax payment: the tax will be paid by way of a final monthly statement, which will list units of pollutant in square meters of ground or cubic meters of water affected as appropriate, that the taxpayer has generated in the corresponding calendar month, and which the entities subject to the tax will present in the offices authorized by the Tax Administration Agency of Yucatan, by the 17th of the month following the corresponding calendar month, on the date of its origination or else the next business day.





Zacatecas

Number of environmental taxes in the entity:

Four. Currently in force.



Tax on environmental remediation for the extraction of materials

It is based on Articles 8 to 13 of the Treasury Law for the State of Zacatecas.

- **Tax object:** the extraction of soil and subsoil from materials that constitute deposits of the same nature as the components of the ground, even if they constitute veins, strata or deposits such as: stone aggregates³⁴, andesite, clays, sand, limestone, quarry stones, kaolin, gravel, rhyolite, rocks³⁵, stones and substrate or fertile layer. The extraction must be carried out through open pit work within the territory of the State.
- **Taxable party:** individuals, legal entities, as well as economic units that, within the State, extract from the soil and subsoil materials that constitute deposits of equal or similar nature to the components of the ground, such as: stone aggregates, andesite, clays, sand, limestone, quarry stones, kaolin, gravel, rhyolite, rocks, stones and substrate or fertile layer.
- Tax base: The basis for the calculation of this tax will be the volume of cubic meters of material extracted.

• Tax rate or fee: tax will be due on each cubic meter of the materials extracted, based on the type of material. The fees are as follows:

Material	Fee (MXN)
Stone aggregates	\$24.11
Andesite	\$35.72
Clays	\$14.50
Sand	\$17.59
Limestone	\$15.56
Quarry stone	\$18.29
Kaolin	\$456.01
Gravel	\$11.25
Rhyolite	\$24.64
Rocks	\$399.67
Stones and substrate or fertile layer	\$11.25

 Tax payment: taxpayers subject to this tax will make their payments, no later than the 17th of the month following the one in which the activities described in the description of the tax occurred.

Taxes on the gas emission into the atmosphere

The legal basis can be found in Articles 14 to 19 of the Treasury Law for the State of Zacatecas.

- **Tax object:** emissions into the atmosphere³⁶ of certain substances generated in the production processes that are carried out within the State and which affect its territory.
- **Taxable party:** individuals, legal entities and economic units, whether or not they are domiciled within the State, which have fixed facilities or sources in which the activities that determine the emissions into the atmosphere are addressed by this tax in the territory of the State.

• Tax base: the amount of contaminating content of the taxed emissions that are generated by the facility or fixed sources expressed in tons. The taxpayer will calculate the tax base by direct measurement or estimation of the emissions it generates and, as applicable, the most recent PRTR of the Federal Secretariat of Environment and Natural Resources will be taken as a reference, as well as the emissions reports of the Secretariat of Water and Environment's State Register of Emissions. In order to calculate the tons emitted, the taxpayer will convert the gasses to carbon dioxide, multiplying the ton of the type of gas emitted by the corresponding factor in accordance with the following table:

Greenhouse gasses	Molecular Composition	CO2 equivalent in tons
Carbon dioxide	CO2	1
Methane	CH4	23
Nitrous oxide	N2O	296
	HFC-23	12,000
	HFC-125	3,400
	HFC-134 ^a	1,300
Hydrofluorocarbons	HFC-152 a	120
	HFC-227ea	3,500
	HFC-236fa	9,400
	HFC-4310mee	1,500
Perfluorocarbons	CF4	5,700
	C2F6	11,900
	C4F10	8,600
	C6F14	9,000
Sulfur Hexafluoride	SF6	22,200

 Tax payment: monthly advanced payments will be made, which will be submitted no later than the 17th of the month subsequent to the corresponding month. In addition, an annual statement for this Tax must be filed no later than the last business day of the month of March of the year subsequent to the corresponding fiscal year.

Tax on soil, subsoil and water pollutant emission

The legal basis for this tax can be found in Articles 20 through 27 of the Treasury Law for the State of Zacatecas.

- Tax object: the emission of pollutants, which are deposited, disposed of or discharged into the soil, subsoil or water in the territory of the State.
- **Taxable party:** individuals, legal entities, as well as economic units that, in the territory of the State, regardless of the tax domicile of the entity subject to the tax, under any title, by themselves or through intermediaries, perform the acts or activities described above.
- Tax base: the amount in square meters of ground or cubic meters of water affected, as applicable, with pollutants emitted or discharged from the facility or fixed sources, expressed in:
 - For soil and subsoil, the amount of milligrams per kilogram, dry base, obtained from samples that are taken in accordance with the MexicanOfficial Standards for every one hundred square meters of ground, in accordance with the following:
 - A) Hydrocarbon contaminated soils: samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with MexicanOfficial Standard NOM-138-SEMARNAT/SSA1-2012: "Maximum allowable limits of hydrocarbons in soils and guidelines for sampling for characterizing and specifying remediation."

Pollutant	Miligrams per kilogram, dry base, per hundred square meters of ground
Benzene	6
Toluene	40
Ethylbenzene	10
Xylenes (total isomers)	40
Benzo [a] pyrene	2
Dibenzo [a,h] anthracene	2
Benzo [a] anthracene	2
Benzo [b] fluoranthene	2
Benzo [k] fluoranthene	8
Idene(1,2,3-cd)pyrene	2

B) Soils contaminated by: arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium. Samples to determine the number of milligrams per kilogram, dry base, per hundred square meters of ground, will be obtained in accordance with Mexican Official Standard NOM-147-SEMARNAT/SSA1-2004: "Criteria are established for determining the concentrations of remediation of soils contaminated by arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium."

Pollutant	Milligrams per kilogram, dry base, per hundred square meters of ground
Arsenic	22
Barium	5400
Beryllium	150
Cadmium	37
Hexavalent Chromium	280
Mercury	23
Nickel	1600
Silver	390
Lead	400
Selenium	390
Thallium	5.2
Vanadium	78

II. For water in milligrams in liters, presented for each cubic meter, based on the following: Samples will be obtained to determine the number of milligrams per liter per cubic meter of water in accordance with Mexican Official Standard NOM-001-SEMARNAT-1996: "The maximum allowable limits are establishes of pollutants in waste discharges in water and national assets."

A. Basic pollutants in wastewater

Pollutant	Milligrams per liter, per cubic meter
Fats and oils	25
Total suspended solids	60
Biochemical oxygen demand 5	60
Total nitrogen	25
Phosphorus	10

B. Pollutants in wastewater, resulting from heavy metals and cyanides

Pollutant	Milligrams per liter, per cubic meter
Arsenic	0.1
Cadmium	0.1

- Tax rate or fee: the tax will be incurred by applying the following equivalents and fees:
 - I. Soil and subsoil: a tax amount for the equivalent of 25 Mexican pesos for every one hundred square meters affected by pollutants.
 - II. Water: Basic pollutants in wastewater and in residual water, caused by heavy metals and cyanides, a tax fee of the equivalent of 100 Mexican pesos for each cubic meter affected by the pollutants.
- Tax payment: it must be paid either by means of a monthly statement, within the first seventeen calendar days of the month following the one corresponding to the statement, at any income collection office of the Secretariat, or in the manner and under the terms established in law.

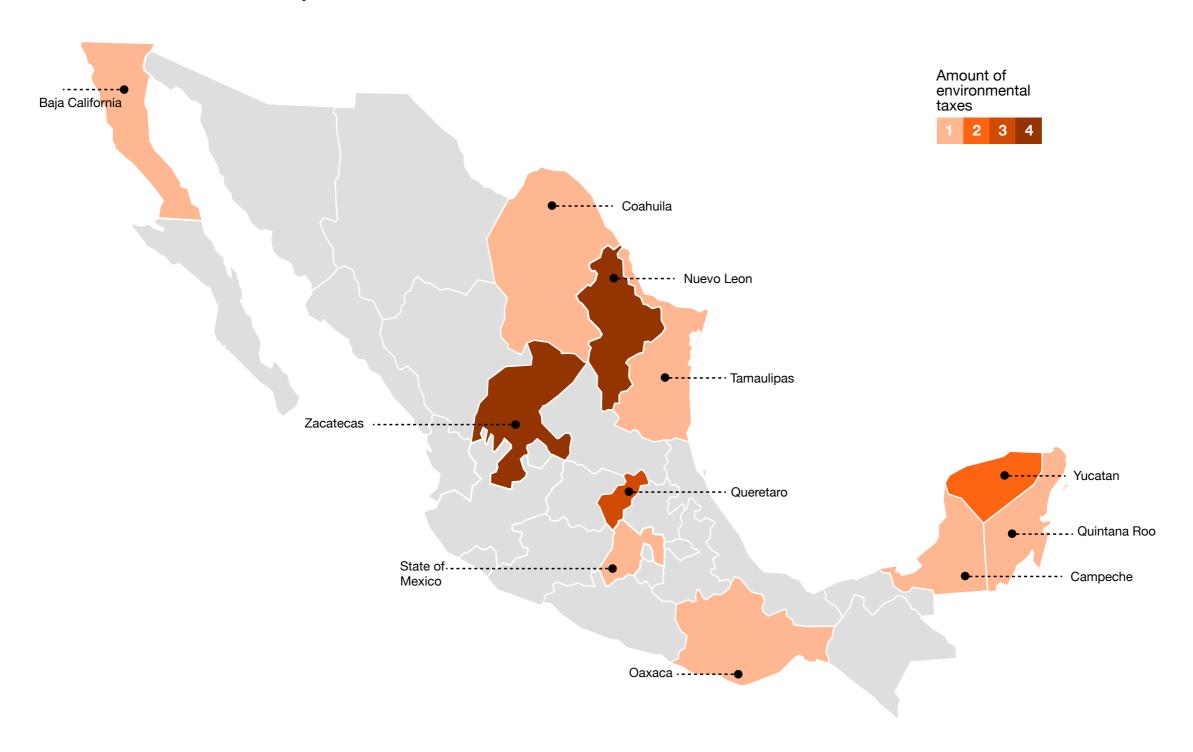
Tax on waste storage

Its legal basis is to be found in Articles 28 to 34 of the Treasury Law for the State of Zacatecas.

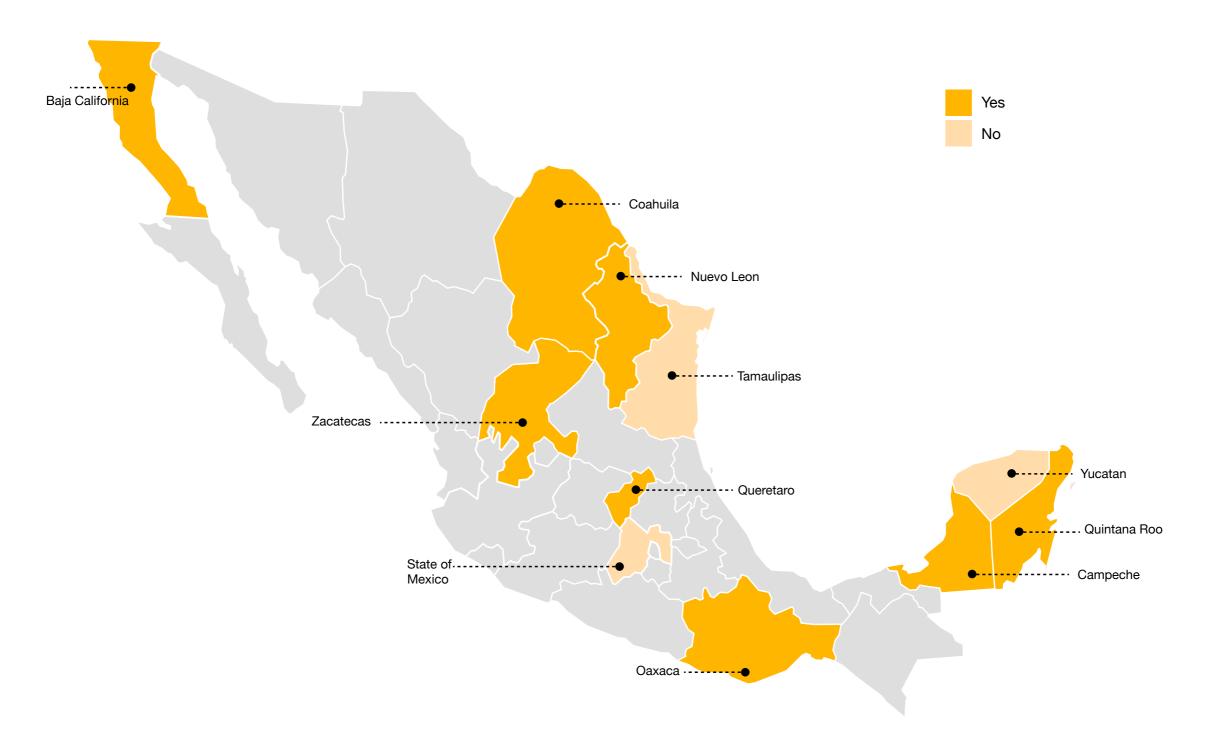
- Tax object: the deposit or storage of waste in public or private landfills, located in the State, which, when released into the environment, are a toxic or dangerous constituent that can be hazardous to human health, ecosystems or the ecological balance. The information that is reported by the entities subject to the tax to the Secretariat of Environment and Natural Resources, through the Environmental Impact Manifesto, of its Sole Environmental License, of the Annual Operating License and its Waste Management Plan will be taken as a base, in accordance with the provisions of the General Law on Ecological Balance and Environmental Protection; or if applicable, the waste is identified in the General Law for the Prevention and Comprehensive Management of Waste, or in any of the following Mexican Official Standards depending on the activity carried out by the obligated entities.
- Taxable party: individuals and legal entities, as well as economic units, whether or not they are domiciled within the State, which generate the waste and which, by themselves or through intermediaries, deposit or store waste in public or private landfills, which, when released into the environment, are a toxic or dangerous constituent that can be hazardous to human health, ecosystems or the ecological balance.
- Tax base: the amount in tons of waste deposited or stored in public or private landfills, located in the State, which is generated during a calendar month or fraction thereof.
- Tax rate or fee: the tax on the deposit or storage of waste shall be incurred by applying a fee of 100 Mexican pesos per ton of waste deposited or stored in public or private landfills.
- **Tax payment:** it must be paid monthly by individuals and legal entities, as well as by economic units, within the first 17 days of the month following its expiration, in any office that collects income for the Secretariat.

Environmental tax maps

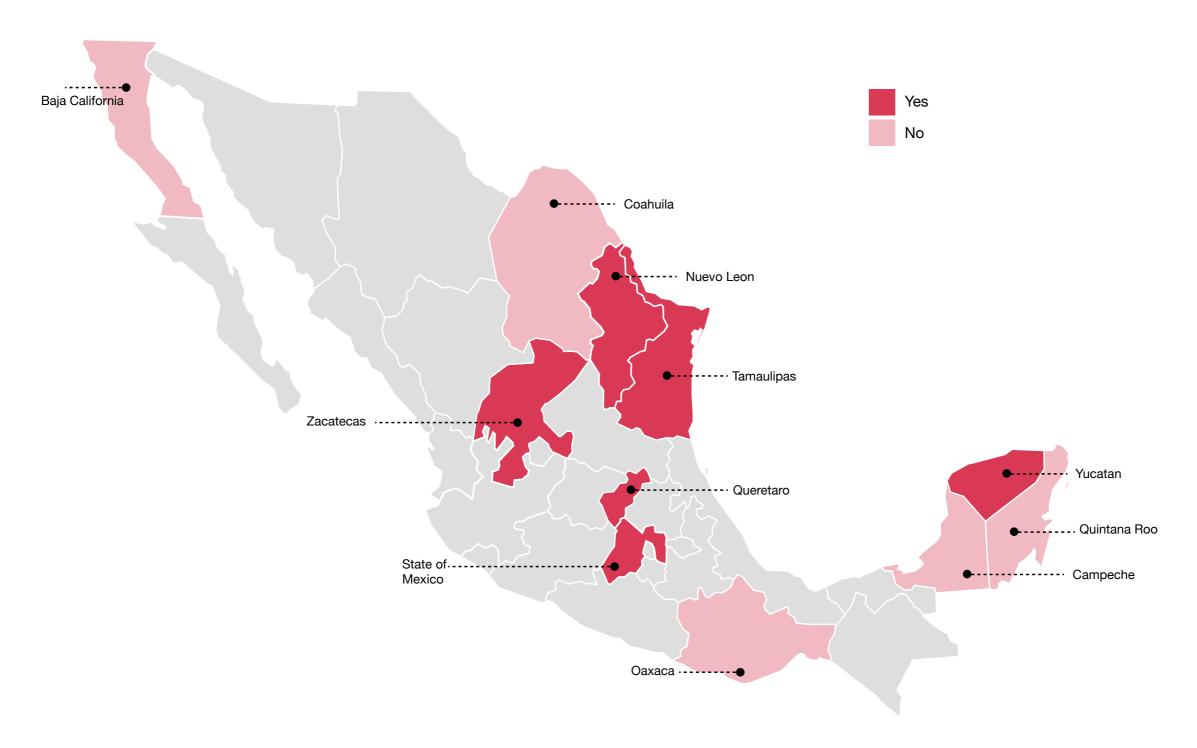
States that collect environmental taxes and number of taxes they collect.



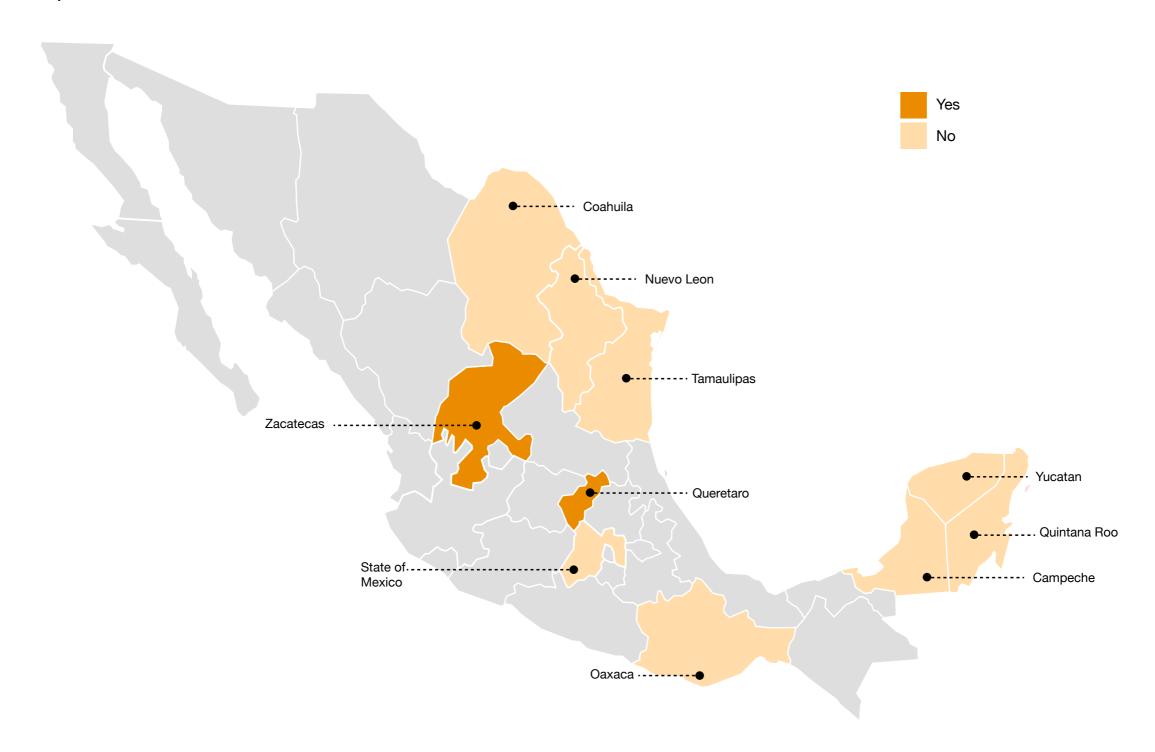
States that collect environmental taxes for the extraction of materials and the environmental remediation for their extraction.



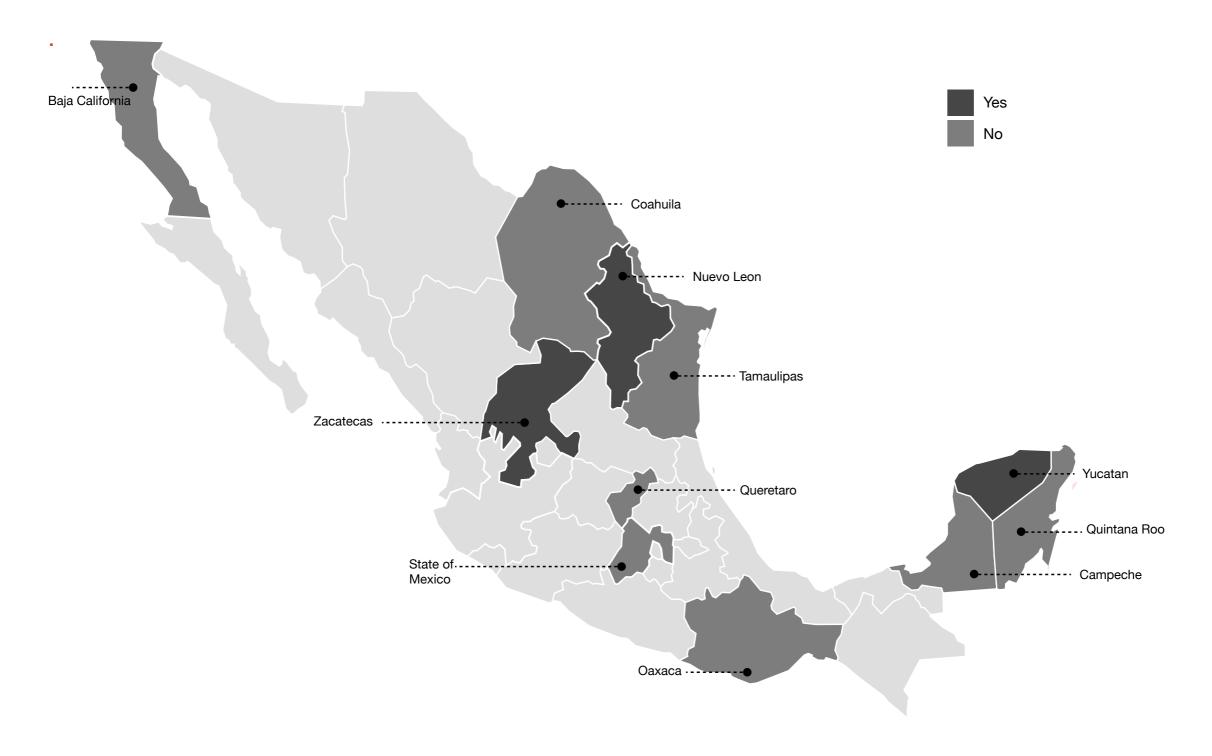
States that collect taxes for the emission of gasses to the atmosphere.



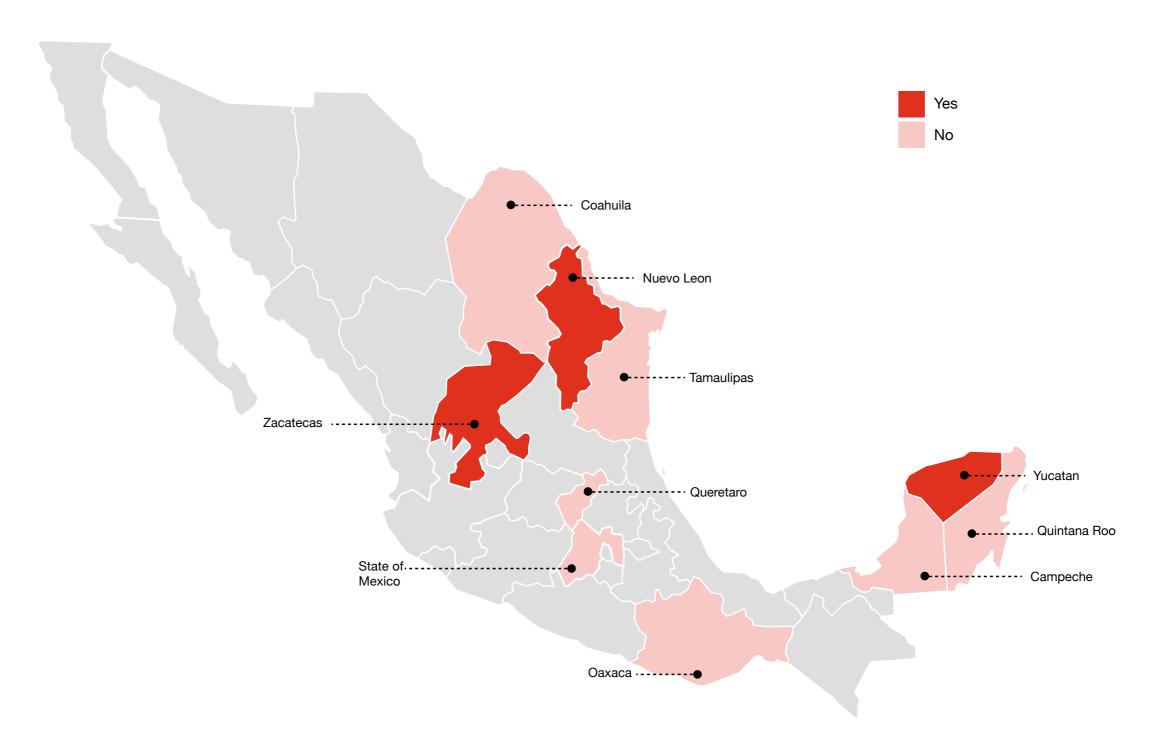
States that collect taxes for the final disposition, storage, or deposit of waste.



States that collect taxes for the emission of pollutants to the soil and subsoil



States that collect taxes for the emission of pollutants to the water.



Steps to confirm the impact of an environmental tax on your business and its activities

Take note of which states in Mexico have environmental taxes.

Check whether your company has a tax domicile in any of said states, or has activities within the territories of the states that charge environmental taxes.

Check whether the business processes and activities, products, supplies, equipment and fuels that your organization states in its current federal or state unique environmental license correspond to the operational reality of your organization or whether it has recently been modified and its situation needs to be adjusted.

Check whether your organization keeps its annual air emissions inventory up to date, if it has conducted and reported periodic monitoring of its air emissions, water waste discharges, and the authorized volume of its waste generation.

Review which type of environmental tax might be applicable; who must pay the tax; why is it that the tax must be paid.

Confirm that your company falls within the entities subject to the tax, and also whether the activities it carries out may be the extraction of stone materials and other materials from the soil and subsoil, activities which result in the emission of gasses to the atmosphere, activities which result in the emission of pollutants to the soil and subsoil and/or activities that result in the deposit or storage of hazardous waste.

Once the potential tax impacts have been identified, then it is advisable to define a strategy for environmental compliance and mitigation which can be implemented in the short, medium and long term, as well as potential applicable tax incentives.

Periodically monitor which other fMexican states are submitting initiatives on tax reform to introduce one or more environmental taxes, as well as potential tax and/or administrative impacts.

Endnotes

- 1 SEMARNAT. (2015). Inflows from environmental taxes. February 23, 2022, from the Secretariat of Environment and Natural Resources website: https://apps1.semarnat.gob.mx:8443/dgeia/indicadores_verdes16/indicadores/04_innovacion/4.1.1.html
- 2 Gasolines, diesel, non-fossil fuels or a mixture of any of the above fuels.
- 3 Liquid fuel that can be obtained from the crude oil refining process or through alternative processes that can use raw materials that originated in the oil formed by the mixture of volatile liquid hydrocarbons, mainly branched paraffins, aromatics, naphthenes and olefins as input, and which may contain other compounds from other sources, to be classified according to the octane number.
- 4 Liquid fuel that can be obtained from the process of refining crude oil or through alternative processes that can use raw materials that originated in oil as input, formed by the complex mixture of hydrocarbons, primarily from non-branched paraffins, and which may contain other compounds from other sources, regardless of the intended use.
- 5 Fuels or fuel components that are not obtained or derived from a crude oil distillation process or from natural gas processing.
- 6 Paraffins, raw material for smoke black, extended residue, asphalts, light cyclic oil, oils (basic lubricants), lubricants, propylene, refinery grade propylene and chemical grade propylene are excluded. This is because they are not intended for a combustion process.
- 7 The payment of import tax shall be made together with that of the general import tax, even when the payment of the latter is deferred by virtue of the fact that the goods are in tax storage in the common storage warehouses. In the case of goods for which there is no requirement to pay the general import tax, taxpayers will pay the special tax on production and services, by means of a statement that they will submit to the corresponding customs office.
- 8 Carbon credits are an economic instrument included within the Kyoto Protocol and endorsed by the United Nations Organization within the United Nations Framework Convention on Climate Change and each carbon credit equals one ton of carbon dioxide equivalent (CO2 ton eq.) that is no longer emitted into the atmosphere.
- 9 The value of such credits will be their market value at the time that the tax is paid. The delivery of these credits and the determination of their value should be performed in accordance with the general rules issued for this purpose by the Secretariat of Finance and Public Credit.
- 10 A new automobile is one that is sold first to the consumer by the manufacturer, assembler, authorized distributor or dealer in the vehicle industry.
- 11 Transport carrying up to fifteen passengers, trucks with load capacity of up to 4,250 kilograms including panel trucks, as well as trailers and recreational vehicles.
- 12 The one between the international dividing line with the United States of America and the parallel line 20 kilometers into Mexico, in the section between the border of the partial region of the State of Sonora and the Gulf of Mexico, as well as the Border Municipality of Cananea, in the State of Sonora.
- 13 In the case of automobiles ultimately imported by persons other than the manufacturer, assembler, authorized vehicle distributors or vendors, the tax must be paid in customs by means of a statement, together with the general import tax, even when payment of the latter is deferred by virtue of it being in tax storage in common storage warehouses. Automobiles may not be withdrawn from customs or tax or auditing areas without the corresponding payment's having first been made.
- 14 On November 18, 2021, the Mexican Senate approved the ruling by the General Circular Economy Act, which is regulated by the provisions of Articles 4, paragraph five, 25, [sub-]paragraph seven and 73, section XXIX-G, of the Political Constitution of the United States of Mexico on environmental protection, sustainable development, conservation and restoration of the ecological balance. Said bill still requires the approval of the Mexican Chamber of Deputies for its subsequent publication in the Mexican Official Gazette.
- 15 A system of production, distribution and consumption of goods and services, aimed at the redesign and reinstatement of products and services to maintain the value and useful life of the products, materials and resources associated with them in the economy, for as long as possible, and that the generation of waste is prevented or minimized, reincorporating them back into cyclical or biological productive processes, as well as encouraging changes in production and habits of consumption.
- 16 Set of policies, instruments and programs aimed at promoting the valuation and use of waste, in order to discourage materials from ending up in a landfill or in the environment.
- 17 Secretariat of Environment and Natural Resources.
- 18 A microgenerator produces less than 400 kg of waste per year (LGPGIR).
- 19 A small generator is one that produces between 400 kg and 10 tons of waste per year (LGPGIR).

- 20 For the purposes of this tax, minerals or substances not reserved for the Federation, which constitute deposits of a nature similar to the components of the ground, such as sand, clay, silts, fill material, gravel, rocks or other products of their decomposition, will be considered.
- 21 Stone materials are considered to include building and ornamental stones, marble, quarry stones, sands, granite, gravels, slates, clays that do not require underground work, limestones, pozzolans, peats, silica sands, onyx, travertines, tezontles, tepetate volcanic rock, sized stones or any other non-precious stones, mixtures of non-metallic minerals and earth substances, and other non-metallic minerals.
- 22 Stone materials: building and ornamental stones, marble, quarry stones, sands, granite, gravels, slates, clays that do not require underground work, limestones, pozzolans, peats, silica sands, onyx, travertines, tezontle, tepetate, sized or any other non-precious stones, mixtures of non-metallic minerals and earthy substances, as well as other non-metallic minerals.
- 23 Article 10 of the Tax Code of the State of Nuevo Leon provides that, when reference is made to a fee in the same or in other tax laws of the State, the current Unit of Measure and Update is to be used. The amount is MXN \$96.22.
- 24 Article 10 of the Tax Code of the State of Nuevo León provides that, when reference is made to a fee in the same or in other tax laws of the State, the current Unit of Measure and Update is to be used. The amount is MXN 96.22.
- 25 For the purposes of the foregoing, water is considered to be what is referred to in the fifth paragraph of Article 27 of the Political Constitution of the United Mexican States, in addition to natural streams or water deposits, reservoirs and waterways.
- 26 Article 10 of the Tax Code of the State of Nuevo León provides that, when reference is made to a fee in the same or in other tax laws of the State, the current Unit of Measure and Update is to be used. The amount is MXN 96.22.
- 27 Article 10 of the Tax Code of the State of Nuevo Leon provides that, when reference is made to a fee in the same or in other tax laws of the State, the current Unit of Measure and Update is to be used. The amount is MXN 96.22.
- 28 Stone aggregate. The inert solid granular materials used for road metalling with or without the addition of active elements and with suitable granulometries; will be used for the manufacture of strong artificial products, by mixing them with hydraulically activated agglomerated materials (cements, limes, among other things) or with asphalt binders.
- 29 Measurable rocks: granite, quarry stones, marble, onyx, travertine rock, sedimentary rocks and other rocks for construction.
- 30 Sand, grit, tezontle, tepetate, tepecil, clay, a combination of the above, or those of equal or similar nature, characteristics or properties;
- 31 Gravel, granite, volcanic rock, basalt, marble, onyx, travertine rock, sedimentary rocks, metamorphic rocks and igneous rocks, or those with equal or similar nature, characteristics or properties.
- 32 Emission into the atmosphere is the direct or indirect ejection of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, either individually or in any combination thereof that affects the quality of the air, the components of the atmosphere and that constitute greenhouse gasses which impact environmental deterioration due to causing global warming.
- 33 For the purposes of this tax, emission to the atmosphere is considered to be the direct or indirect emission of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, either per unit or any combination of them that affect air quality, the components of the atmosphere and that constitute greenhouse gasses that cause environmental deterioration due to their simple emission that affects the quality of the air.
- 34 Stone Aggregates: inert solid granular materials used as ironwork for roads with or without the addition of active elements and with suitable granulometries; used for the manufacture of resistant artificial products, by mixing them with hydraulically activated binder materials (cements, limes, among others) or with asphalt binders.
- 35 Rocks: granite, volcanic rock, marble, onyx, travertine rock, sedimentary rocks and other rocks for construction.
- 36 For the purposes of this tax, emission to the atmosphere is considered the direct or indirect ejection of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, either individually or in any combination that affects the quality of the air, the components of the atmosphere and which constitute greenhouse gasses that impact environmental deterioration by causing global warming.



If you are interested to have a detailed analysis of your situation regarding green taxes, please take 10 minutes to answer the following questionnaire.

Click here

ESG Contacts - PwC:

Luis Felipe Muñoz Partner, ESG Solutions luis.felipe.munoz@pwc.com

Adriana Rodríguez Partner, ESG Solutions adriana.rodriguez@pwc.com

Eduardo Reyes Lead Partner, Consulting Solutions eduardo.reyes.bravo@pwc.com

Cristian Jaramillo Senior Manager, Sustainability & Risk Management cristian.jaramillo@pwc.com

