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THE DEVELOPMENT OF PLASTIC PRODUCTION AND ENVIRONMENTAL PROTECTION IN MEXICO THROUGH THE PRESIDENTIAL PERIODS IN MEXICO

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INTRODUCTION

This work was born as a complement to the research titled: From eco-efficiency to eco-effectiveness in the design of plastic products in Mexico: the contribution of social ecology and permaculture as instruments of transition, by Mtra. Tania Tamara Sánchez Castellanos, research that seeks to propose a design model for the transformation of plastic objects aimed at creating an eco-effective production system, in which synergies are developed with the natural environment to which they belong, and this way, not only minimize the negative environmental impact (eco-efficiency), but also create impacts that favor the restoration and preservation of ecosystems.

The use of plastic products today presents a paradox: on the one hand, they have become indispensable for modern human life and on the other, it is known that plastics are highly polluting at each stage of their life cycle, especially for natural systems, but also for humans. Plastics are of utmost importance for today's society and the benefits they bring to it are undeniable. There is an increase in the consumption of plastic, since this material has offered the possibility of minimizing human effort, has made possible the development of technology and science in different areas of human action and has played a fundamental role in preventing the transmission of diseases and obtaining better hygiene, as in the case of the current Covid 19 pandemic.

To know the impact that the plastics industry has had, together with the evolution of policies on environmental protection in Mexico, we consider it necessary to address this issue from the perspective of environmental history, which will allow us to know the errors (and possible successes) that were in the decisions that were made in each of the presidential stages, starting above all, from the time in which Mexico achieved political and economic stability in the 20th century, that is, from the presidential period of General Lázaro Cárdenas, although we also make a brief introduction that includes the barely previous presidential periods, those of the 20th century. So the main objective of this work is to investigate, starting in 1934, in each of the presidential six-year terms, what happened in terms of environmental protection and the production of plastics.

Introducing ourselves to the topic of environmental history, we must remember that its study is very recent. Let us remember that the term ecology was coined in 1869 and environmental science a few decades later, not because there was no prior interest in the relationships between living beings and their environment, "but because the discipline lacked a specific name." The same thing happens with the history of the environment, which was originally prepared by specialists in other disciplines. "It was much later that, at the behest of the Annales, historians sought to approach a total history, and the environment began to enter their interests in a specific way, although almost always with an economic bias – by focusing research on the landscape." as results of anthropic action (or climate), and human activities aimed at its exploitation" (Simón, 2010: 365). So we insist on the fact that environmental history studies are only a few years old. As antecedents of this type of studies in Mexico we have those of Alejandra Moreno Toscano and those of Enrique Florescano, although their works were more directed to agrarian history (Simón, 2010).

BACKGROUND

Although there is little to comment on environmental protection in the era prior to the presidential term of President Lázaro Cárdenas, it is important to have an idea of the political events that took place at that time, to understand the events of the six-year terms. later. When considering the 20th century as

a starting point, we consider it appropriate to begin with the presidential period of General Porfirio Díaz, who was in power from 1876 to 1911.

The general Porfirio Díaz, upon assuming the Presidency of the Republic, "took on the task of restructuring the Army; reorganize the General Staff and promote education." The country's economic progress was unquestionably upward: "it allowed the construction of railways that little by little facilitated commercial exchange and, in turn, encouraged the sectors of industry, mining and agriculture for export purposes" (SDN, 2023). However, the negative part of his presidential stay was the excessive exploitation of natural resources and the impoverishment of the most unprotected sectors, "thousands of farmers were affected by the construction of railways, unfortunately economic growth was to the detriment of the well-being of the population, generating a growing social differentiation, generalizing discontent and opposition to the established government" (SDN, 2023, s/p). There were overexploited resources: one was water and the other was the forest; water for a growing city and wood for railroad tracks (UNAM, 2021). In relation to water, two big problems arose at this time: the lack of water in some areas of the capital and what to do with the wastewater of Mexico City. In relation to the first problem, which was more a problem of distribution than lack, 500 thousand pesos were invested to improve the network and strong surveillance was established in the Desierto de los Leones, where an important part of the water that came from came. It supplied the city, and was used by towns, farms and mills, which contaminated it before its arrival in Mexico City. Additionally, Carlos Medina Ormaechea's project was adopted that would improve the flow of water reaching the capital (Simón, 2010).

In relation to the unsanitary problem caused by the city's sewage discharged into Lake Texcoco, two proposals were presented: one by the Dutchman Adrian Boot and another by Enrico Martínez, "Boot proposed that no works be done to remove water from the city, but that said waters be used as was done in Holland and as the Mexicans had done since before the conquest. But he finally won Enrico Martínez's proposal, which had the idea of draining the valley through the construction of the Great Drainage Canal. (Simon, 2010).

lThe main sources of pollution during the Porfiriato were industry, mining and transportation. "These activities generated emissions of polluting gases and particles into the air, release of toxic substances into water and soil, and emissions of polluting gases from the burning of fossil fuels in train and ship engines." To control this, some measures were taken to combat it that were insufficient: industrial regulations, sanitation programs, creation of protected areas (Gutiérrez, s/f).

There is little to say about the protection of the environment about the subsequent presidential period of President Venustiano Carranza. Perhaps the only relevant thing was that in 1917 "the Desierto de los Leones was decreed as the first protected natural area in the country" (UNAM, 2021).

Later, when President Carranza was assassinated, Adolfo de la Huerta took his place for a brief period, while the new presidential elections were being held, an appointment that fell to General Álvaro Obregón, of whom it must be mentioned that "During "His mandate strengthened the Rural School, as well as Public Education in general and international relations, especially with the United States," in this sense the so-called Bucareli Treaties stand out. Likewise, he created the Ministry of Public Education to promote a national culture, returned the

Mexican currency to the gold standard and "invited foreign investors and companies to invest in Mexican infrastructure, revitalized the economy and increased oil exports abroad" (Avila,s/f), although with dubious advantages for the country.

"He was the first president to put into practice agrarian reform through "endowments" of land to create small property, but preserving large exploitation units, thus 1,200,000 hectares were endowed or restituted. He tried to implement "workers insurance", a precedent of social security. He began the reconstruction of the financial system through the return of the banks seized during the armed movement and the General Law of Credit Institutions; He also established the income tax. He openly faced pressure from the North American oil companies, to which he increased the tax decreed by Carranza and added other new taxes. (Avila)."Obregón's contribution was nothing less than creating the first institutions and policy instruments that would allow the State to fulfill this mandate."(Avila). In relation to the environment there are also no important decisions worthy of discussion.

Regarding the presidential period of General Plutarco Elías Calles, there is also little to comment on. Their struggle focused, first, on controlling the power and privileges that the Catholic Church had and, despite the fact that the 1917 Constitution had restricted such privileges, its leaders refused to abide by these new provisions, and sought to the constitution was abolished. The consequence of this distancing was the Cristero War that took place during this period. The other big problem that President Calles had to deal with was being able to control the companies that exploited oil in Mexico without leaving any benefit to the country. The problem was particularly serious with North American companies, which were on the verge of causing an armed conflict between both countries (Moreno, 2008).

After finishing his presidential term and, being assassinated, the virtual candidate to occupy the presidency of the republic, that is, General Álvaro Obregón who sought re-election, Plutarco Calles continued governing through the following presidents: the interim Emilio Portes Gil (1928-1930), of the elected president Pascual Ortiz Rubio (1930-1932), and of the interim Abelardo L. Rodríguez (1932-1934), until the election of General Lázaro Cárdenas in 1934, which expelled Calles from the nation.

WORK DEVELOPMENT

GENERAL LÁZARO CÁRDENAS DEL RÍO (1934-1940)

During the presidential period of General Lázaro Cárdenas, the Second World War broke out (1939-1945). Mexico lived somewhat abstracted from the world, assimilating the war, social, political and cultural experience that it had lived during the 30 years of the Revolution.

One of Cárdenas's main concerns was the agrarian distribution for which Emiliano Zapata fought. In March 1934, the Agrarian Code was issued that ordered ejidal legislation and the abolition of large estates (Graillet Juárez y Col., 2015: 34). Thus, starting in 1934, the agrarian distribution accelerated and productive development policies and public spending were oriented towards agriculture (Carabias and Rabasa, 2017: 53-54).

The policy to promote the use of forest resources continued to be non-existent. Miguel Ángel de Quevedo pointed out the risks that smallholdings and the indiscriminate distribution of forest lands had for the conservation and protection of ecosystems and their resources. That is why Cárdenas put him in charge of the Forestry Department

of Hunting and Fishing (DFCP), when he created said institute in 1935. From there he promoted the protection of strategic areas for their forestry potential, flora, fauna and environmental services, mainly hydrological. By the end of 1940, up to 30% of the national territory had been protected under various legal entities (forest protection zones, forest reserves, national parks and reforestation reserves).[1](Carabias and Rabasa, 2017: 54). Two million trees were planted in the Valley of Mexico and four million in the rest of the Republic. He promoted the creation of forestry cooperatives and 40 national parks were created (Semarnat, 2020). However, Quevedo's criticism of the agrarian distribution led Cárdenas to end his responsibility towards the DFCP, and to close the Department in 1940 (Carabias and Rabasa, 2017: 54). It is important to highlight the figure of Miguel Ángel de Quevedo "the Apostle of the Tree", who since he received an invitation from the president of the USA, Teodoro Roosevelt, to attend a North American international conference on the conservation of natural resources, he was so impressed that He made a series of recommendations to the Porfirio Díaz government to protect the forests, experiences that he would seek to apply during the six-year term of President Cárdenas (Alfie, 2011: 14).

A very important event during this six-year term was the Oil Expropriation (Rivera, 2008: 2). For more than 30 years, foreign companies acted freely to carry out irrational exploitation of oil fields. They did not comply with fiscal obligations, much less did they make correct use of scientific instruments when drilling wells and exploiting resources, which on numerous occasions caused fires, damage to agricultural properties and terrible ecological consequences, such as the explosion on July 4, 1908 in the San Diego de la Mar well (whose incident lasted 160 days) or that of December 27, 1910 in the Potrero del Llano 4 well (Rivera, 2008: 3; Ibarra, 2003: 44).

Regarding the production of plastics, in 1934 the commercialization of polyethylene (PE) began.(Lugo de Lille, 2008).

GENERAL MANUEL ÁVILA CAMACHO (1940-1946)

When General Ávila Camacho became president, he declared that Mexico had no possibility of competing in the international market as an industrialized country, so development must be based on promoting agricultural activity (National Institute of Ecology and Climate Change, 2007 (1).

Thus, given the accelerated growth in demand for food due to World War II, Mexican products were in great demand in international markets, with which prices increased and exports grew by 75%. During this period, the economic resources sent by the braceros who migrated to the United States also increased to finance the production of their plots. These factors allowed the activation of the national agricultural economy, resulting in a growth in agricultural product of 5.1%. The cultivated area tripled and went from 5.9 million hectares in 1940 to 14.7 million in 1965 (Carabias and Rabasa, 2017: 55). In forestry matters, his actions were fundamental:

> President M. Ávila Camacho considered that the use of the country's forests could lay the foundations for the constitution of a solid forestry industry, which would significantly impact the national economy. (Knight, 2017, 10)

Therefore, he approved a series of presidential decrees "in favor of forestry concessions that would promote and supply a future forestry industry", thus giving birth to the Industrial Forest Exploitation Units that

1. Action that was not repeated in national history and that, unfortunately, was lost over time due to the lack of political will, economic resources to operate, monitor and expropriate the lands, and due to the agrarian distribution that continued on these lands. (Carabias and Rabasa, 2017: 54).

would promote the use of Mexico's forests for four decades, formalized through the article 6 of the Forest Law of 1943 (Caballero, 2017, 10). Although since 1942 the landslide suffered by deforested lands was recognized, which was associated as a cause of national impoverishment, which is why the Department of Soil Conservation was created, registered in the National Irrigation Commission and, in 1946, it was promoted the Soil and Water Conservation Law. However, this president's main concern was not conservation, but rather the modernization of the countryside. Proof of this is the technological package that was developed for irrigation areas in the north of the country based on an agreement between the Rockefeller Foundation and the Mexican government, a program designed to improve wheat and corn varieties, as well as to control pests. destructive effects of plants and increase soil productivity, which would later be known as the Green Revolution (National Institute of Ecology and Climate Change, 2007 (1).

This so-called Green Revolution consisted of the use of selected and improved seeds, application of agrochemicals, machinery and irrigation, which allowed increased yield and food production, but caused significant damage to the environment by spreading irresponsibly to different regions of the country., without thinking or knowing the pollution caused by agrochemical products, nor considering their adaptation to the diversity of existing environmental conditions, especially those that had forestry and non-agricultural suitability (Carabias and Rabasa, 2017: 55-56). Banks and industrial companies such as Mexican Fertilizers or tractor manufacturers were created, in addition to the construction of warehouses, roads and, above all, large dams and irrigation infrastructure works that allowed the irrigated area to increase to 2.5 million hectares (Carabias and Rabasa, 2017: 55).

In September 1941, the Processing Industry Law was issued, which sought to promote economic growth through industrialization. That December of that same year, the National Chamber of the Processing Industry (CANACINTRA) was created (Presidency of the Republic EPN, 2013). The bases of the industrialization process were created, which was called the Substitute Industrialization Model or Import Substitution Model. With this, some support organizations were established such as the Mexican Social Security Institute (IMSS) in 1942, Cobre de México, SA in 1943, and Nacional Financiera was reorganized in order to support the industrialization process and revitalize the productive apparatus of the State., thereby benefiting the country's private initiative (Solís D., 2009).

In this stage, huge factories began to be established, many of them supported by the State, dedicated to steel, pulp, paper, fertilizers, textiles, food packaging, cement, metalworking and chemical products, among others (Vergara, 2009: 45). Since the beginning of the 1940s, an experimental artificial fiber (cupro-rayon) factory was installed, which years later became Celanese Mexicana, for a long time the largest chemical company in the country. Also in this period, the first plastic production unit was inaugurated: nitrocellulose films produced by solution and casting.(Bucay, 2001).

In 1945, Polystyrene (PS) began to be marketed in Mexico and, although the marketing of polyethylene (PE) had already begun in 1934, it was not until 1946 that its manufacture began in the country.(Lugo de Lille, 2008).

MIGUEL ALEMÁN VALDÉS (1946-1952)

Upon assuming the presidency in 1946, President Miguel Alemán Velasco created the National Colonization Commission (CNC), an institution dedicated exclusively to reviving private investment in the countryside, strengthening rural private property and reinforcing State intervention in a commercial movement that It gained strength as the conditions of the agricultural business improved (Aboites, 2019).

One of the first measures of this government consisted of reforming the agrarian legislation of Cárdenas, introducing protection for agricultural or livestock properties that were in a position to have certificates of unaffectability (Krauze, 1999: 56, 58). Also, in that same year, he transferred responsibility for the protection of the nation's soils to the Ministry of Agriculture, so the available budgets did not allow the expansion of conservation activities. With this, the government presented a diminished soil conservation program (National Institute of Ecology and Climate Change, 2007 (3).

Another of his measures was to reform in April 1947, article 27 of the Political Constitution in which section XV was included, which indicated the limits of small agricultural property, defining it as that "that does not exceed per individual one hundred hectares of irrigation or first-class humidity" and, as a small livestock property, "that which does not exceed per individual the surface area necessary to maintain five hundred head of large livestock or its equivalent in small livestock, in accordance with the forage capacity of the land."To apply this criterion, the Agostadero Coefficient Advisory Commission (COTECOCA) was established, which encouraged the accumulation of land destined for livestock activity and, therefore, for deforestation (Carabias and Rabasa, 2017: 56-57).

In 1948, the Forest Law was approved, but it would not be strictly enforced, since at the end of Miguel Alemán's term the destruction of forests in the hydraulic basins remained uncontrolled, and the campaign to suspend the use of charcoal would have disappointing results. (National Institute of Ecology and Climate Change, 2007 (1). And with the reforms approved by Ávila Camacho, wood production was increasing.

As for the plastic industry, in 1947, Celanese Mexicana began the production of viscose rayon and, some time later, cellulose acetate. In 1949, the Union Carbide company began the manufacture of urea and phenolic resins and in 1950, this same company, in addition to Monsanto Mexicana, started the production of polystyrene (PS), shortly after manufacturing polyvinyl chloride (PVC) (Bucay, 2001; Lugo de Lille, 2008).

In 1951, a sour gas treatment plant began work in Poza Rica, Veracruz, with two objectives: the extraction of hydrogen sulfide to obtain pure sulfur, and to eliminate impurities in the gas that hindered its use. This plant and another ammonia plant are the first efforts by PEMEX under the exclusive direction of the State (Vergara, 2009: 96).

Infrastructure works increased, especially roads and bridges. (Solis D., 2009). The industry was provided with electrical, energy, communications and transportation infrastructure, support that made it grow an average of 7.2% annually. Many of the important companies for the country were founded then, such as Jarritos, CONDUMEX, Ingenieros Civiles y Asociados (ICA Group), Grupo Chihuahua and Industrias Resistol, among others (Krauze, 1999: 60).

ADOLFO RUIZ CORTINES 1952-1958

During the six-year term of President Adolfo Ruiz Cortines, he sought to "consolidate" the course imposed by his predecessor, but within a framework of "honesty, decency and morality." (Krauze, 1999: 108, 110). His management was characterized by the success of his measures and the wisdom of his projects. However, in 1954 Ruiz Cortines had to pay the bill for Alemán's economic acceleration: he undervalued the peso from $8.50 to $12.50 per dollar (Krauze, 1999: 110-114).

He maintained many of Miguel Alemán's restrictive policies regarding forest conservation, but at the same time offered special concessions, mainly to railroad companies, which resulted in the devastation of large forest areas. His public works program coincided with a forestry campaign aimed at discouraging farmers from irrationally using forests, arguing that the results of the government's public works programs - such as roads, railways, bridges and hydroelectric plants - would be useless if the farmers did not protect their forest resources. However, these same projects served to destroy Mexican forests (National Institute of Ecology and Climate Change, 2007 (3). During his six-year term, the average annual timber production reached 3.68 million cubic meters of round wood (Caballero, 2017).

It is considered that the national petrochemical industry, linked to thermoplastic resins, began in the 1950s with the installation by PEMEX of plants to produce polyethylene (PE) in Reynosa Tamaulipas, and polyvinyl chloride (PVC) in La Presa, State of Mexico in 1953, with the objective of replacing imports of formaldehyde, plastic resins and ammonia (Vergara R., 2009: 96).

That same year, the president stated that the great enemy of Mexican economic progress was soil erosion; however, the amount of public funds directed to soil conservation and rehabilitation was almost zero.

Between 1953 and 1958, the budget for the Office of Soil and Water Conservation was reduced (National Institute of Ecology and Climate Change, 2007 (3), however, the production of basic foods was intensified in addition to the works of irrigation and infrastructure, and the ejido endowment was reduced to 3 and a half million hectares (Krauze, 1999: 114).

In 1956 PEMEX began the production of sulfur, a byproduct of the treatment of sour gas. In 1959, this company put into operation the first dodecylbenzene (DDB) unit for detergents. At that time, the petrochemical industry was in its phase of intense development: from fertilizers to plastics and synthetic fibers (Bucay, 2001). In 1957, the first polystyrene injection machines were imported, which allowed the country to industrially obtain items equal to those imported, but in greater numbers to meet market demands (Lugo de Lille, 2008). Through rule quality of the machinery and equipment to be imported, nor does it contain provisions aimed at avoiding the acquisition of obsolete equipment. As a consequence, the internal production of capital goods is discouraged and the country's technological dependence increases (Vergara, 2009: 48).

One of the problems that has constantly affected the Mexican economy since then has been the negative balance of payments, due to the fact that exports did not grow as fast as imports after the Korean War (Aguilar, 2001:13). The result of the excessive protection of the industry was that the quality of the products and their prices were moving away from international parameters, with which the Mexican industry gradually decreased its competitiveness in the world market (Vergara, 2009: 49).

By the end of this six-year period and the beginning of the next, development in the

petrochemical field and its derivatives was already noticeable, such as the Celulosa y Derivados company (later CYDSA Group) in the manufacture and development of cellulose acetate, rayon, chlorine/soda, sulfuric acid and carbon disulfide. In addition to this company and Celanese Mexicana, other companies would continue with the development of synthetic fibers such as nylon, polyester and acrylic fibers and, on a small scale, elastomeric fibers (Bucay, 2001).

Given that by law PEMEX had exclusive responsibility for the production and sale of a large number of products such as ethylene, propylene, benzene, polyethylene or ammonia (among almost 30 other products), the company began an unprecedented expansion program as plants of olefins, aromatics, synthesis gas units, etc., however, the oil company's production lagged behind what the country needed(Bucay, 2001).

ADOLFO LÓPEZ MATEOS (1958-1964)

In 1958, during his presidential campaign, Mr. Adolfo López Mateos declared that soil erosion was one of the most serious problems facing Mexico, that an effort was necessary to prevent the destruction of this heritage. However, he continued with the same pattern as the previous president. According to official estimates, soil conservation techniques were only applied in 300,000 of the 16 million hectares of cultivated land (National Institute of Ecology and Climate Change, 2007 (3).

In 1961, thanks to the permit policy, Negromex began the production of carbon black and, soon its competitor, Hules Mexicanos, began the manufacture of polybutadiene and styrene butadiene rubber. (Bucay, 2001). That same year, the Mexican government continued to support the operation called "Green Revolution", and with this large extensions of monocultures were created that grew rapidly, due to high doses of artificial nutrients, which made it possible to face climatic adversities and pests of insects, fungi and weeds that proliferated in the micro environment(National Institute of Ecology and Climate Change, 2007), but with the subsequent environmental repercussions (National Institute of Ecology and Climate Change, 2007 (3).

Additionally, a new impetus was given to the distribution of land: before Cárdenas, 7 million hectares were distributed, with Cárdenas it reached 17 million hectares, Ávila Camacho distributed 5 million hectares, Miguel Alemán 4 million, Ruiz Cortines 3 million and, finally, López Mateos reached 16 million hectares distributed.

That is to say that by 1964, 25% of the national territory had been distributed. However, only 15% of the national territory was suitable for cultivation (Krauze, 1999:152).

At the end of this six-year term there was an attempt to reorient forestry policy to stop the destruction of ecosystems and boost their potential. The head of the Undersecretary of Forestry and Fauna, Enrique Beltrán, promoted the vision that to maintain forests it was better to encourage their productive use than to prohibit them; The Forestry Law was reformed to remove obstacles in forestry production; the forest administration institution was restructured; The budget allocated to the sector was doubled and forestry research was strengthened with a renewed Forest Research Institute, at the same time that the National Forest Inventory was started and fire prevention and combat and reforestation were reinforced; However, forestry activity remained stagnant (Carabias and Rabasa, 2017: 57). The average annual timber production amounted to 4.15 million cubic meters of round wood (Caballero, 2017).

It is from this six-year period that the infrastructure and capacity of economically wealthy regions increased their participation

in the plastics sector, by promoting the dynamic growth of thermoplastic resins and the internal demand for synthetic resins (Lugo de Lille, 2008).

GUSTAVO DÍAZ ORDAZ (1964-1970)

Much of the economic success during this six-year term lay in the president's respect for the autonomy of his Secretary of the Treasury (Antonio Ortiz Mena), in his two key institutions: the Bank of Mexico and the National Financial Institution.

The project for economic and social development provided for eight goals: achieving growth of at least 6% annually; priority to the agricultural sector; boost industrialization; mitigate regional imbalances; equitably distribute national income; improve education as well as social and welfare services; promote domestic savings; maintain the exchange rate and combat inflationary pressures (Krauze, 1999: 202).

Ortiz Mena was very careful in spending the money from the external debt, which was only used for projects that generated enough foreign currency to meet the obligation that was contracted. At this time "the Mexican miracle" was quite a slogan; Mexico did not belong to the first world, but it was in the take-off stage that would take it there (Krauze, 1999: 203).

Starting in 1965, the growth of agricultural production was lower than the growth of the national population. The ability to satisfy the domestic market was lost, so food imports were resorted to. The field gradually became decapitalized and finally went into crisis in the 1970s. Entrepreneurs withdrew from agriculture, and the growth of agricultural land during the previous six-year periods remained stagnant (Carabias and Rabasa, 2017: 57-58).

During this six-year period, agronomists achieved the application of soil conservation practices on 240,000 hectares more than in the previous period, despite this the amount of arable land lost to erosion was greatly exceeded, reaching almost one million hectares. only in those years. The budget for the Ministry of Agriculture that was allocated to soil and water conservation was not more than 2.3%, although the government recognized the need for soil conservation, however, this concern was not supported by sufficient economic resources. and human, since national priorities were focused on other spheres, such as the interests of industrialists, this at the expense of the peasantry; Agricultural price controls were instituted to keep industrial costs down. The government's development program exacerbated the problems of deforestation and soil erosion by forcing peasants to open marginal lands to production; in addition, support was allocated to the agriculture of rich landowners rather than to that of peasants (Institute National Ecology and Climate Change, 2007 (3). The average annual timber production amounted to 5.22 million cubic meters of round wood (Caballero, 2017).

In 1966, the maquiladora program was created to stimulate the establishment of labor-intensive plants linked to export, along the northern border and, with this, tax-free access was offered for the import of inputs and machinery. in addition to the exemption from VAT and income tax (Solís Dominguez, 2009:69).

PEMEX, for its part, began the ethylene, polyethylene and vinyl chloride plants in 1967 in its first petrochemical complex in Pajaritos, Veracruz. Later, the complex would grow to be the largest ammonia production center in the world in Cosoleacaque.(Bucay, 2001).

Long-term external credit was used to diversify exports of goods and services, and import substitution continued based on foreign direct investment, which is mainly

concentrated in the manufacturing industry, at the cost of reducing investment in mining., in the oil industry, in communications and transportation and in electrical energy (Vergara, 2009: 52).

LUIS ECHEVERRÍA ÁLVAREZ (1970-1976)

When Luis Echeverría becomes president of Mexico, he proposes to introduce a radical change in the country's historical course. He would take as ideological inspiration the example of Lázaro Cárdenas returning to nationalist origins (Krauze, 1999: 238), but in reality he continued with an authoritarian policy (Alfie, 2005: 120). He completely rethought Mexico's economic scheme, in addition to repudiating stabilizing development. The poor distribution of income constituted the unfortunate face of the Mexican miracle and had to be corrected. The fashionable path was the application of the methods recommended by ECLAC (Economic Commission for Latin America) (Krauze, 1999: 238).

At the beginning of the seventies, the first plastic production units on a global scale were incorporated that were equally oriented towards the domestic and export markets, such as Petrocel in Altamira, which produced dimethyl terephthalate (DMT), used to produce polyester resins., fibers and films, and Mexican Terephthalates in Coatzacoalcos. Likewise, there is activity in the production of epoxy resins, acrylic resins, fluorinated hydrocarbons, aromatic derivatives, and acrylonitrile and polymeric glycols, among other substances.(Bucay, 2001).

During this decade, industrial development continued thanks to the creation of companies, institutions and bureaucratic entities, a situation that brought with it two effects: 1) the considerable expansion of the administrative apparatus; and 2) the creation of a high number of new companies and parastatal institutions, with the expectation of boosting the country's industrial growth, basing this on the state's investment and debt capacity (Vergara, 2009: 56).

Regarding the development of Mexican environmental policy, Echeverría takes a first step towards a greater commitment to environmental protection, although not very convinced. In the early 1970s he placed environmental issues on the political agenda, but remained steadfast in his commitment to industrialization. This president feared that the severity of environmental problems in the country could cause political and economic unrest or, in the worst case, political instability. Even so, he defended his economic programs in the face of international pressures that criticized the social and environmental ruptures produced by industrialization (National Institute of Ecology and Climate Change, 2007 (2). Furthermore, with the constitutional reforms of 1971, the regulation of pollution prevention and control was raised to the Federal level, so that same year the Federal Law to Prevent and Control Pollution was published, although it did not provide powers to the states. to participate in environmental legislation, and its focus was relegated to health aspects (Metropolitan Environmental Commission, 2002: 41).

With the increase in demand for animal protein as the basis of rural nutrition, the meat market became more dynamic and investment capital was transferred to livestock farming.

This is how the aggressive megaprojects of the Mexican humid tropics were implemented (Carabias and Rabasa, 2017: 10), such as the Chontalpa Plan, which was conceived since 1963 (Bartra, 1976: 59). The Uxpanapa Plan (1975) was also created in Veracruz, whose axis of action involved two goals: the relocation of the Chinantec indigenous population, displaced from their place of

origin by the construction of the Cerro de Oro dam in 1974, and the clearing of the tropical soil to transform the jungle into an agricultural emporium. With this plan, more than 85 thousand hectares of jungle were destroyed, considered an obstacle to the effective implementation of agricultural and livestock plans (Cruz, 2001: 755-756).

The National Clearing Program (PRONADE) (1972-1977) was a political piece that sought to create "development poles", that is, it consisted of economic planning of the territory to convert ejidos into agro-industrial companies. (Moreno et al, 2019: 118, 124). This organization required communally exploiting the plots, "as a way of reorganizing them into units large enough to allow mechanization, the use of pesticides and fertilizers" (Ewell and Poleman, 1980 in Moreno et al., 2019, pp. 118); In short, converting jungles into grasslands. This would allow farmers to receive a double income: a temporary salary for the hours worked and a permanent one, in the sense that they would inherit the infrastructure for their future exploitation. The project failed since productivity was so low that not even the investment was recovered, leaving farmers unemployed and without life options, in addition to the significant destruction of ecosystems due to clearing, thus ending a complementary source of the resources for feeding farmers (Moreno, et al., 2019, pp. 124). In relation to forest resources, we have that the average annual timber production increased to 6.33 million cubic meters of round wood (Caballero, 2017).

In 1972, the Undersecretary of Environmental Improvement was created within the structure of the Secretariat of Health and Assistance (SSA), with this it was stated that the issue of environmental deterioration was an issue related only to private health, and had little influence as a program linked to economic growth or urban planning (Alfie, 2011: 14).

Within this six-year period, public investments went from 6.8% in 1970 to 10.9% in 1975. In this process, Nacional Financiera participated strongly with support programs through its development funds: FONEP, FIDEIN and FOMIN. (Vergara, 2009: 58).

JOSÉ LÓPEZ PORTILLO (1976-1982)

Following the vision of Echeverría, his friend and virtual president of the country, Mr. José López Portillo maintained that saying that pollution had been the result of the development process itself was a hysterical statement (National Institute of Ecology and Climate Change, 2007 (2). It is estimated that between the period 1950 and 1970, the intensity of pollution, measured as the annual volume in kilograms of emissions per million dollars of product, grew by 50%.due above all to the contribution of intermediate companies. From 1970 to 1989, the intensity increased by 25%, due to public sector investments in the petrochemical and fertilizer industries during the period 1978 to 1982 (SEMARNAP, 2000 in Carabias, and Rabasa, 2017: 59).

This president instituted some minor changes in environmental policy. In 1977, the Ministry of Health and Assistance was assigned the responsibility of planning and directing said environmental policy and, a year later, an Intersecretarial Commission for Environmental Health was created in order to coordinate environmental programs, thereby obligating the Secretariats of Agriculture and Water Resources, to enforce regulations for pollution control. These two institutions improved monitoring of water quality, but did not take strong measures to reduce its pollution (National Institute of Ecology and Climate Change, 2007 (2).

The sudden rise in oil prices, after the discovery of the Cantarel well, the most important in the country, produced a sudden economic prosperity in Mexico, with this the

president saw the country's income from oil exports increase significantly and since the cost of money lent by international banks was low, it encouraged him to borrow billions from foreign banks. Part of this money was allocated to the construction of large-scale public works such as dams and roads, which resulted in greater deforestation and soil erosion (National Institute of Ecology and Climate Change, 2007 (2).

"The initial moderate growth plan of three biennia was thrown overboard and was replaced by a growth plan so unbridled that Echeverría's management seemed almost austere." Expenses and investments were made in companies with low immediate productivity, with fresh income or short-term credits, which included companies of all types: railways, nuclear energy, petrochemicals, infrastructure in the countryside, dozens of expressways in Mexico City., among other things. In PEMEX, the largest public company in Mexico, investments were made without order or balance; By 1981 this company already owed 87% of its assets (Krauze, 1999: 252).

The administration of protected natural areas continued to be located in the agricultural and forestry sector in some cases and, in others, in the human settlements sector (Secretariat of Human Settlements and Public Works). Although in the seventies, due to the push of Arturo Gómez Pompa and Gonzalo Halffter, and supported by some academics and non-governmental organizations, a new breath of protection of natural heritage emerged. In 1978, the decree of the Montes Azules Comprehensive Biosphere Reserve was promoted, in 1979 the Mapimí and La Michilía Biosphere Reserve, as well as the forest protection zones for the monarch butterfly in 1980, among other actions (Carabias and Rabasa, 2017: 59).

When oil prices fell in 1980, and the cost of international money increased, the Mexican economy entered a serious crisis, so López Portillo began to implement certain austerity measures to face outstanding loans for billions of dollars. (National Institute of Ecology and Climate Change, 2007 (2). However, he refused to lower the price of oil, arguing that whoever wanted it would have to pay for it at the price that Mexico set; With this action, more than 20 billion dollars were lost. He also refused to devalue the Mexican peso against the dollar, arguing that "a president who devalues devalues himself," which caused a large outflow of capital that took advantage of the low cost of dollars. As a consequence of the serious crisis that was growing, he finally devalued and nationalized the banks, thus holding the bankers responsible for the outflow of capital.

Already between 1978 and 1982, Petrocel, Grupo Primex, Policyd and Negromex installed petrochemical plants in the Port of Altamira, making it an export-oriented petrochemical hub. In 1981, before the oil crash, the federal government decided to create considerable fiscal stimuli with the condition that the new plants export a significant proportion of their production, thus giving rise to the modern complexes of Altamira and Coatzacoalcos, and the Cangrejera and Morelos complexes. These two plants began operating in the late 1980s (Bucay, 2001 and Vergara, 2009: 98).

The 1980s laid the first foundations for a modern environmental policy. Given the evidence of the deterioration of the environment, organized social reaction increased. In January 1982, the Federal Environmental Protection Law was issued, which provides for the development of programs to improve the quality of air, water, the marine environment, soil and subsoil, as well as those areas whose degree of Pollution is considered dangerous for public health, flora, fauna and ecosystems (Carabias and Rabasa, 2017: 60).

MIGUEL DE LA MADRID HURTADO (1982-1988)

During the 1982 presidential campaign, Miguel de la Madrid's motto was "democratic planning and comprehensive democratization" (Krauze, 1999: 258). For the first time in the country's history, the environment is made a campaign issue, declaring that natural resources had already been defended from foreign ambition, but not from the Mexicans themselves, which meant that a national and ecological awareness must be developed. of respect, towards the norms and criteria necessary for the conservation of natural resources (National Institute of Ecology and Climate Change, 2007 (2).

The same year that Miguel de la Madrid assumed the presidency of Mexico, he created the first modern institution on environmental issues: The Secretariat of Urban Development and Ecology (SEDUE), with an Undersecretary of Ecology. This expands the panorama of environmental issues and strengthens the protection of ecosystems, including national parks, forest and fauna protection zones important for their biodiversity, and biosphere reserves. New areas were decreed such as the Sian Ka'an Biosphere Reserve (1986), Manantlán (1987) and El Vizcaíno (1988). However, issues related to the use of renewable natural resources remain unrelated (Carabias and Rabasa, 2017: 60).

The critical situation of the country made it necessary to design a new industrialization and growth strategy. Within the National Development Plan (1983-1988), a policy is decided that tries to guarantee the defense of the productive plant and employment, as well as establish the conditions to begin a structural change. This led, in 1983, to establish the Immediate Economic Reorganization Program (PIRE), whose objective was the cost of aggregate demand and the gradual establishment of price stability. Among other things, support for small and medium-sized businesses was also expanded through the PAI (Comprehensive Support Program for Medium and Small Industries) (Vergara, 2009: 64-65).

Thus begins a profound reorganization and transformation of the national productive plant promoted by the state, which reduces its participation through the liquidation or sale of numerous public companies (Vergara, 2009: 65).

The SEDUE focused on 4 fundamental points: 1) the ecological planning of the territory; 2) the prevention and control of environmental pollution; 3) the use and expansion of natural resources for their comprehensive management; and, 4) environmental education. Progress was made in the regulatory environmental aspects and very little in the executive ones, which gave rise to a command-control policy, whose central actor was the State and the events were concentrated in environmental regulations (Alfie, 2011: 17)

Manuel López Portillo y Ramos became the head of the Undersecretariat for Environmental Improvement and, in 1982, he passed the Federal Environmental Protection Law, which gave the government power to close industries that did not install pollution control equipment, and put in prison executives of corporations that violate environmental law. It also gave the government the power to suspend industrialization and urban development when these showed detrimental effects on the environment and ecological processes. The law implied a promise of greater government intervention for the benefit of environmental protection, as government agencies and industries had to submit environmental declarations (National Institute of Ecology and Climate Change, 2007 (2). Under this law, in 1985 the government closed a fertilizer plant in the State of Mexico and temporarily closed two others. And in 1988 during a thermal

inversion[2]especially severe, the government suspended industrial activity in Xalostoc by 50%, and the Tlalnepantla factories by 30%, until meteorological conditions improved (National Institute of Ecology and Climate Change, 2007 (2).

In the field of agricultural policy, the National Program for Comprehensive Rural Development (PRONADRI) is implemented, with the aim of providing legal security to the various forms of land ownership, promoting the organization of producers, achieving self-sufficiency in grains. basics and reduce shortages of priority foods, in addition to meeting the needs of the countryside by providing it with goods, services and reorganizing production support (Graillet J., and Col., 2015: 43)."The growth trend in timber production slowed down during the six-year term of the president of Madrid Hurtado. However, in that presidential administration, timber production reached its highest historical peak in 1985, with a value of 9.95 million cubic meters of round wood" (Caballero, 2017, 14).During his tenure, public and private groups planted more than 65 million trees, but for every tree planted, 100 were cut down. Many of these died from pollution or were cut down to allow for the widening of streets within the Valley of Mexico. Another example is the 143 thousand hectares of the Lacandon Jungle that were cut down despite the creation of an intersecretarial commission for the protection of said jungle (National Institute of Ecology and Climate Change, 2007 (2). "With the cancellation of the Forest Units, the Government promoted a policy of increasing socio-production, to promote the active participation of the owners of ejidal and communal forests in their use, and, in general, in the forest production chain", without However, with this modification the desired answer was not obtained (Caballero, 2017: 15).

For PEMEX it did not mean more than a small change with respect to previous administrations, despite being one of the most polluting companies in the country; She was never fined by the government. Although after the Ixtoc well spill in 1981, it was forced to establish a cleanup fund and take preventive measures. However, in 1983, the company allowed oil to leak from one of its drilling rigs in the state of Tabasco, which spread along the coast of the Gulf of Mexico (National Institute of Ecology and Climate Change, 2007 (2).

After the 1985 earthquakes, SEDUE focused more on urban development than on environmental protection. Many times this agency neglected compliance with environmental laws, a notable example was the failure to control the illegal trade of species despite the commitment to do so. Mexico was the only country in the Western Hemisphere that had not signed the Convention on International Trade in Endangered Species, making it an important center of operations for animal traffickers (National Institute of Ecology and Climate Change, 2007 (2).

These and other situations generated several protests from Mexican and foreign conservationists. Many SEDUE officials were genuinely concerned about the future of environmental protection in Mexico, and fought for a legal framework that would force subsequent governments to take environmental issues into account (National Institute of Ecology and Climate Change, 2007 (2). Their efforts culminated in January 1988 when the General Law of Ecological Balance and Environmental Protection (LGEEPA) was formulated, which came into force in May of that same year. It establishes the legal framework for environmental policies, which regulates and defines the government regime to follow from the rule of law, in order to dictate obligations and standards. This law established

2. Thermal inversion is an atmospheric condition in which cold air and pollutants become trapped under a mass of warm air. (National Institute of Ecology and Climate Change, 2007)

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ecological planning, environmental impact assessment and the creation of technical standards as a fundamental point. He also ordered the regulation of resources using fiscal and financial stimuli (Alfie, 2011: 16).

However, this government's efforts to maintain ecosystems were restricted to the creation and management of protected natural areas, and the conservation of flora and fauna, with the exception of some small programs such as the promotion of hunting ranches., aquaculture and horticulture. In reality there was no support for sustainable development in rural areas (National Institute of Ecology and Climate Change, 2007 (2).

Regarding the production of plastics, in 1987 PET containers for beverages and food began to be manufactured on a large scale. This event transformed the panorama of the Mexican packaging industry, since the volume of food and beverages represented a significant percentage of the total packaging used in the market. The plastic packaging sector grew by up to 43% of the production of the current plastic industry. The main resins used in this sector are polyethylene terephthalate (PET), high-density polyethylene (HDPE), polyvinyl chloride (PVC), low-density polyethylene (LDPE), polypropylene (PP) and polystyrene (PS) (Vergara, 2009: 132).

However, although the Plastic Industry was important within national economic activity, it was not considered a priority. In the late 1980s, efforts were made to obtain government support, which gave rise to the National Plastics Program, which was a collaboration agreement between the plastics industry and the Ministry of Commerce and Industrial Development, despite Of this, it operated for a few months due to the end of this president's administration, and in the following six-year term it was not continued (Vergara, 2009: 89).

CARLOS SALINAS DE GORTARI (1988-1994)

Both the government of Miguel de la Madrid and the Salinas de Gortari government maintained a new order called "social liberal" (which was actually the beginning of neoliberalism in Mexico), an order that tended to displace the previous revolutionary nationalist order, this under the view of a new economic rationality monitored by the International Monetary Fund (IMF), and characterized by "the rehabilitation of public finances, banking reorganization, privatization of the parastatal sector, the elimination of subsidies, the thinning of the public sector and the rescheduling of the external debt", among other things (Alfie, 2005: 123).

During this six-year term, private investment replaces public investment as an engine of growth, the Mexican economy transforms into an open economy, after the stage of protectionism. The development of non-banking financial intermediaries (credit and factoring unions or leasing companies) was encouraged (Vergara, 2009: 68-69). This presidential period was characterized, on the one hand, by the elimination and reduction of production subsidies and, on the other, by the promotion of the market economy as a consequence of commercial liberalism and the globalization of markets. (Graillet J. and Col., 2015: 43-44). Another of the strategies applied was the modification of article 27 of the Constitution, which sought to give the peasant the opportunity to decide the property regime that suited him, whether it was ejidal (collective) or private property, a measure justified before the economic crisis in the countryside, low productivity, extreme poverty, land erosion and the exodus to the cities (Krauze, 1999: 270).

A few months after taking office, Salinas declared a three-month moratorium on logging in the Lacandon Jungle and banned

new settlements in the region. However, he fails to implement these measures, raising doubts among conservationists and the environmental division of the World Bank about his commitment to caring for Mexico's rainforest. With financing from the World Bank and Conservation International Conservation Foundation[3](International Foundation for Conservation), in the early nineties, and as part of the exchange of nature for debt, initiated programs to study the biological diversity of the humid forest, and to promote sustainable development in the region (National Institute of Ecology and Climate Change, 2007 (2). On the other hand, the decline in forestry production that began during the six-year term of Miguel de la Madrid continues during this six-year term. (Caballero, 2017, 17).

The National Environmental Protection Program 1990 – 1994 was also created, whose purpose was to make the general development process compatible with the preservation and restoration of the quality of the environment, as well as the construction and sustained use of environmental resources (Alfie, 2011: 17).

On May 25, 1992, the Secretariat of Social Development (SEDESOL) was created, which established new ecological parameters and rules for the protection of the environment. A few months later, the internal regulations of SEDESOL determine the formation of the National Institute of Ecology (INE), and the Federal Attorney for Environmental Protection (PROFEPA). The INE would have technical powers, while PROFEPA would exercise control and attention to citizen demands (Alfie, 2011: 17-18). That same year, the National Commission for the Knowledge and Use of Biodiversity (CONABIO) was created with the purpose of compiling and generating the necessary information to base public policies and societal decisions on biodiversity. Despite these advances in the context of sustainable development, and in the linking of environmental dimensions with social and economic ones, the issue of the use of natural resources still remained in the agricultural and fishing productive sector, disconnected from the environment. (Carabias and Rabasa, 2017: 61-62).

The incorporation of environmental issues in SEDESOL was the result of citizen concerns regarding high pollution rates. It must be remembered that the Mexican environmental movement had its peak in the mid-80s, a date that coincides with the external pressure produced by the United States and Canada before the signing of the North American Free Trade Agreement (NAFTA), since these Countries demanded the signing of a Parallel Environmental Agreement, which would protect common borders against the environmental deterioration that economic openness could cause (Alfie, 2011:19). In addition to NAFTA, two other events impact environmental policy in Mexico: the explosion of some gas pipelines in Guadalajara in 1992, an explosion that killed 192 people, and the end of the SEDUE exercise, which caused confusion over whether ecological concerns would perish or flourish in the new Secretariat of Social Development (National Institute of Ecology and Climate Change, 2007 (2).

The signing of NAFTA in 1993 was accompanied by three important events that describe Mexican politics and economy: The Zapatista Movement, which represented the discontent of the marginalized and poor of Mexico; The murders of Colosio and Ruiz Massieu, which revealed the internal crisis of the Institutional Revolutionary Party (PRI) and, finally, the financial crisis, which was a severe blow to the Mexican economy (Alfie, 2004: 132).

3. The Conservation International Foundation (CI) is a non-profit organization that has been operating since 1987. It is currently in more than 30 countries with a wide range of partners with the aim of "empowering societies to care for nature. responsible and sustainable manner for the well-being of humanity" (International Conservation Foundation, 2015)

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Regarding the plastic industry, in 1988 polyethylene occupies first place in national production, it is used for the container and packaging market, shrink and stretch film, food packaging and can coatings, pressure tubing, large bags and films. In 1989, the first plant dedicated to the manufacture of polypropylene (PP) was created, which since 1957 had occupied fourth place nationally among plastic uses. Among its main applications, it was used in the raffia sector for bags of sugar, grains and other food products, in films for snacks, chocolates, sweets, dry products and cold meats. But it was not until 1992 that these plastics were formally commercialized in Mexico. The production of PET (polyethylene terephthalate) began at the beginning of 1987, however, at first it presented some difficulties due to the relatively high cost of the raw material, even so in 1989 around 11 thousand tons of PET were consumed in the country. this plastic(Lugo de Lille, 2008).

Another issue that must be noted is that on August 15, 1989, a modification was published in the Official Gazette of the Federation that violated a 1960 law, which established that basic petrochemical products could only be produced by the nation and by Through PEMEX, secondary petrochemicals would require a permit granted by the Ministry of Energy, Mines and Parastatal Industry, with the prior consent of the Mexican Petrochemical Commission. Petrochemical products not considered in the previous classifications could be manufactured by the public or private sector without requiring any authorization from the Ministry of Energy, Mines and Parastatal Industry (Vergara, 2009: 100). It must be clarified that in 1986, the reclassification of 36 petrochemical products as secondary was decreed and, in 1989, another 16 basic petrochemicals were removed from this classification, so only 20 basic and 64 secondary petrochemicals were considered.

This constitutes the disintegration process of PEMEX[4], since the production of said products is allowed to companies such as Grupo Alfa, Industrias Resistol, Celanese Mexicana, and Química Borden, among others. This breaks the national production chain of the petrochemical industry, which has a direct impact on economic activity. As a consequence, the increase in the productive capacities necessary for greater endogenous development is impossible, and the beneficiaries are the transnational companies (Vergara, 2009: 100). Furthermore, the 1995 crisis unleashed inflation of 52%, resulting in the loss of approximately one million jobs, and plastics, which required a high composition of capital and technology for its production, experienced a contraction in its production rates (Corrales, 2010:168).

In May 1994, Mexico joined the Organization for Economic Cooperation and Development (OECD) (Tudela, 2004: 155). For Mexico, entry into the OECD meant important modifications in regulations and institutions, some reflected in the subsequent reform of 1996. Among a set of recommendations from the organization regarding environmental policy, the principle called "he who pollutes" can be highlighted. pays", the incorporation of economic instruments in environmental matters, and the search for decentralization through the principle of subsidiarity (Lezama, 2010: 49).

Both NAFTA and its incorporation into the OECD were decisive in the environmental regulatory update observed in Mexico in

4. In August 1992, petrochemical products underwent a new reclassification, dividing them into three categories: basic (ethane, propane, butane, pentane, hexane, heptane, carbon black and naphtha), secondary (acetylene, ammonia, benzene, butadiene, butylenes, ethylene, methanol, n-paraffin, propylene, toluene and xylenes) and deregulated (all others, see Conde [2006], "Value Added to Petrochemicals", in Ambiente Plástica magazine, México, year 3, number fifteen). Only PEMEX can produce and market basic petrochemicals, and secondary petrochemicals can be produced by the private sector, as long as they maintain 60% of the national investment (Vergara, D., 2022: 112-113).

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the 1990s. The incorporation of Mexico into the international economy, globalization through the North American trade bloc, and The incorporation into the club of OECD countries creates a legal framework that goes beyond national reality and capacity. It gives the impression of artificiality, or at least of little possibility of becoming effective.

In practice, many regulations were not met or were not carried out, however, the idea was that economic projects, as well as the economic policy promoted by the State and the environment, must seek conciliation through the coordination of their management instruments (Lezama, 2010:49)

ERNESTO ZEDILLO PONCE DELEÓN (1994-2000)

Mr. Zedillo came to power at the end of 1994. Despite the economic crisis inherited from the previous six-year term, this president managed to consolidate a government with bases that would last at least two more six-year terms, he stabilized the economy and opened himself to changes. institutional such as the reconstruction of the Supreme Court and the democratic reform of 1996 (Saavedra, 2019: 82).

Faced with the banking problem, Zedillo uses a good strategy to strengthen his government that had several axes, among them: a) distancing himself from the figure of Salinas de Gortari from the beginning; b) acquired control of the Supreme Court of Justice of the Nation by modifying its composition; c) government intolerance[5], the government once again acted with authoritarianism, preparing civilians to attack other civilians; d) political reform and alternation in the country. The Federal Electoral Institute (IFE) was formed, clear rules of political competition were defined and the Federal Electoral Tribunal (TRIFE) was created; and e) relations with the business sector, by privatizing those companies that were costly to the treasury, as well as sea and air ports, companies in the energy sector, mines, banks and other companies (Saavedra, 2019: 83-88).

In the National Development Plan 1995-2000, the chapter on economic strategy included the section on "Environmental policy for sustainable growth," which established the need to "stop the trends of ecological deterioration and move towards sustainable development." And it promised that the environmental and resource use policy would go beyond a strictly regulatory attitude, and would constitute a process of promotion and induction of investments in environmental infrastructure, creation of markets, and financing for sustainable development (Fernández, 2014: 474).

In this sense, the regulatory profile of the environmental policy of the late 80's begins to acquire a character in line with market practices, at the same time as the process initiated in the last administration of focusing on the environment as a social problem, It acquires its maturity in this six-year term (Alfie, 2011: 18-19). That is why in December 1994, under the focus of the concept of sustainable development that emerged at the 1992 Rio Summit, the Secretariat of the Environment, Natural Resources and Fisheries (SEMARNAP) was created, in addition to formulating various strategies such as the Program National Environment Program, the National Protected Natural Areas Program, the Conservation and Use

5. Faced with the uprising of the EZLN, the peasants began to organize in different ways to ignore a government that was not capable of understanding and improving the precarious living conditions they had. Zedillo's speech sought to pacify the country, but in practice the government He trained and armed paramilitary groups that dissolved these groups. One of the most notable events was in Acteal, Chiapas on December 22, 1997, where 45 people were massacred in a hermitage where they were praying for peace.

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of Wildlife Program, the Responsible Fishing Program, the Environmental Audit Program, the Integrated System of Regulation and Environmental Management of the Industry as well as the National Commission of Protected Natural Areas, among others (Center for Social Studies and Public Opinion, 2006; Carabias and Rabasa, 2017: 62). SEMARNAP would be responsible for regulating and managing the use of natural resources that belonged to the Federation, as well as promoting their sustainable use. However, the administration of petroleum, hydrogen carbides, liquids, solids and gases, as well as the mining sector, including radioactive minerals, remained outside its scope (National Institute of Ecology and Climate Change, 2007 (1).

On March 22, 1995, the first call for holding a National Consultation on Environmental Legislation was issued, which began an extensive process of public discussion in which various civil and governmental actors, academics, researchers and businesses involved in the issues participated. environmental issues (National Institute of Ecology and Climate Change, 2007 (1). Among other strategies, the 1995-2000 Environment Program was developed, under the affirmation that sustainable development required institutional changes in public administration, in the normative and regulatory framework, in cultural patterns, in the structure of participation and social co-responsibility, and in the sense of national sovereignty.

This change must allow the private conduct of individuals and organizations to be directed towards the sustainability of development under principles of prevention, subsidiarity, assumption of environmental costs by those who cause them, and equity (Metropolitan Environmental Commission, 2002: 53).

In 1996, in order for the new policies and institutions to find a solid legal basis, the*General Law of Ecological Balance and Environmental Protection*(LGEEPA). One of its main changes was the redesign of the chapter concerning the distribution of powers, in which federal, state and municipal authorities were assigned various powers for the development of policies, and the application of environmental planning and management instruments. at different scales, such as ecological planning programs. Thanks to this, currently the country's federal entities have framework laws on environmental protection, as well as local institutions are responsible for their application (Carabias and Rabasa, 2017: 61-62).

During the negotiation of the Kyoto Protocol in 1997, Mexico was subjected to pressure from developed countries to join Annex I of the United Nations Framework Convention on Climate Change (UNFCCC), based on its membership in the OECD. and, with this, make the country assume "voluntary" commitments of a quantitative nature, in relation to the greenhouse gas emissions regulated by this instrument.

Due to this issue, at the national level various coordination problems were experienced, regarding the commitments that the country must assume within the framework of the global climate regime, especially between the National Institute of Ecology and other internal departments of SEMARNAP (Tudela, 2004: 156). That is why, that same year, the Ministry of Energy, the Ministry of Commerce and Industrial Development and the Ministry of Foreign Affairs, among others, were unified in a single instance of SEMARNAP in the Intersecretarial Committee for Climate Change., which sought to create a space for intersectoral consultation with a view to international negotiations on the issue, the coordination of climate action by the public sector, dialogue with the Legislative Branch and the promotion of a national dialogue

(Tudela, 2004: 156). Although the objectives of said Committee were not achieved, this strategy radically transformed the treatment that Mexico received in international forums on climate change. From being accused of not assuming the responsibilities that corresponded to it, the country came to be considered as a responsible and constructive partner (Tudela, 2004: 157-158).

It is also highlighted that in 1999, article 4 and article 25 were included in the catalog of constitutional guarantees. The first includes the right of people to an adequate environment for their development and well-being. Article 25 establishes a mandate for the State to conduct a national process of sustainable development. This forces national authorities to guarantee the adequate protection of ecosystems and natural resources, in addition to including environmental sustainability in national economic planning (Carabias and Rabasa, 2017: 63). Besides,

> …made a significant historical contribution to Mexico's forestry sector, by launching, for the first time, a range of subsidies to support the development of the sector. Such a relevant fact was supported in Article 33 of the modification made in 1997 to the Forestry Law of 1992. (Caballero, 2017, 18)

Despite the advances in environmental policy, contradictions can be observed, which are reflected above all in the fact that the measures adopted (such as the ISO 14000 environmental standards[6]), which transfer and focus environmental adjustment policies on the business community. The structural change, both in this government and the previous one, worked as a perfect dumbbell for the national industry and its "environmental commitment." Ecological damage, clandestine dumping, illnesses or deaths caused by industrial projects were considered small market failures or sporadic cases of violation of environmental legislation (Alfie, 2011: 20-21).

In addition to this, environmental audits led to "Clean Industry" certification processes, with which the state obtained a certificate paid by the company to guarantee its concern for the environment, however, the significant sums of money To achieve these required technical and scientific changes, it gave rise to a discontinuous process that only few industries could maintain. Which favored large capitals, companies and consortia (Alfie, 2011: 21).

It must be said that, in relation to plastics, the growth rate in 1995 fell 11.8% more than the economy as a whole. This year 249 thousand tons were produced. This decrease occurred as an effect of the 1995 crisis, under the trade opening provided by NAFTA. However, in 1996, the plastics industry recovered and exceeded the production volume of 1994, with growth rates of up to 18.5%., to fall again in 2001 to 1.7%, after the September attacks on the twin towers in New York that year (Corrales, 2010: 170).

From 1990 to 2002, investments in petrochemicals were practically from the private sector, and only in those products that did not require integration with PEMEX. The capacity of thermoplastic resins in polypropylene, polystyrene, PVC, ABS and PET was increased. This was not the case with polyethylene, whose manufacturing made it impossible to operate with imported raw materials (Vergara, 2009: 101-102).

6. The ISO 14000 standard refers to a series of standards linked to the management of natural systems, which are related to the protection and prevention of pollution, linked to socio-economic needs, among them are ISO 14001 (which proposes the necessary criteria to carry out an Environmental Management System, also called EMS), 14004 (which contains general guidelines on support systems and techniques for the continuous improvement of an EMS), 14010 and 14011 (which establish general principles on environmental audits that are applied in environmental audit examinations), among others (ESGInnova Group, 2019).

VICENTE FOX QUESADA (2000-2006)

The year 2000 meant the fall of the single-party system, and with this a new administration and a political alternation with a new party in power (Lezama, 2010: 49). The electoral platform on which Mr. Fox supports his campaign, in alliance with the Green Ecologist Party, highlights the commitment of a government dedicated to issues related to nature based on various tasks, such as the need to conserve and develop the natural resources, generate benefits for environmentally affected communities, and emphasis on the sustainable use of resources. This meant an ecological government that combined environmental sustainability with economic growth, without putting the ecological balance at risk (Alfie, 2011: 22).

This plan to achieve these objectives was proposed under two lines:

> a) an institutional framework for sustainable development from an ecological approach, which sought to adapt the structure and government activities, through greater integration of public administration in environmental defense programs, where federal, state and municipal participation was seen, in the implementation of environmental policies, having sufficient resources for this and, b) a comprehensive tax reform, which would introduce tariff schemes and tax incentives on natural resources, and promote the use of non-polluting renewable energies. (Alfie, 2011: 22)

Furthermore, in the National Development Plan 2001-2006, sustainability was established as one of its twelve principles (Alfie, 2011: 22), and as one of the government's guidelines with the purpose of achieving "harmonious social development that safeguard the rule of law and the environment", and considered sustainability as one of the central criteria for the development of the nation, as well as one of the tasks to achieve economic growth and an effort to achieve social and human (Fernández, 2014: 474).

Since 2000, the issuance of general laws to promote the actions of the authorities has been the trend that defines the evolution of the Mexican legal system of environmental protection in Mexico. Among other laws of the six-year term, the General Wildlife Law was published, in 2003 the Federal Forestry Law was replaced by the General Law of Sustainable Forest Development. In addition, the General Law for the Prevention and Comprehensive Management of Waste is published (Carabias and Rabasa, 2017: 63). Although Mexican laws for waste management have been modernized since the 1980s, it was with this law that responsible waste management entered legislative discussions (Coprocesamiento.org, 2019). Two major national programs are basic: the National Crusade for Forests and Water, which seeks to recover these two resources that have been degraded for years in our country, and the National Crusade for a Clean Mexico, "whose objective was to stop and reverse the contamination of water, air and soil resources, in addition to reducing the environmental problems generated by the poor management of garbage and hazardous waste..." The results were not good and, according to Greenpeace, in Mexico only 0.11% of the federal budget was allocated to the forestry sector, and 3 million 600 thousand hectares of forests were lost, in addition to the deterioration of soil and water (Alfie, 2011: 23, 24). At the end of the six-year term, the Mexican Center for Environmental Law AC (CEMDA), denounces that Fox closes his six-year term with unfulfilled promises on environmental matters. The organization makes an analysis where it recognizes that there was an inclusion of the environmental issue in the economic aspect, but that there was no balance and environmental institutions were not strengthened (Norandi, 2006).

And notable is the establishment of the National Climate Change Strategy, from which the Special Climate Change Program emerges, and is institutionalized in the General Climate Change Law (Carabias and Rabasa, 2017: 63).

There was growth in some industries such as hotels, automobiles and the tourism sector. The latter generated 8% of the national GDP, so it turned out to be an important economic activity; however, tourism development plans did not take into account environmental protection. The damage caused by these initiatives includes the lack of basic infrastructure, irregular settlements, lack of drainage and sewage networks, non-existent or inefficient wastewater treatment plants, municipal garbage dumps outside of legislation, degradation and destruction of ecosystems, alteration and disappearance of landscapes, among others (Lira, 2016).

Data from the National Association of the Plastics Industry (ANIPAC), report that 2006 was the most prosperous year, with a growth rate of 4.6% and a sum of 4 million 24 thousand tons produced. Even so, to satisfy national consumption, large sums of imports were required, approximately 31.34% of the country's production (Corrales, 2010: 169-170). However, due to the lack of significant investments, only marginal innovations have been added, and process innovations that have been carried out in other countries around the world have not been incorporated. This situation results in the plants being less efficient in relation to those that participate in global competition (Vergara, 2009: 105). It is believed that the technological lag to transform oil, as well as to produce resins, especially plastics, was promoted by the Mexican State, as a strategy to privatize basic petrochemicals and the oil industry (Corrales, 2010: 170).

Within the framework of the scientific and technological policy proposed by said instrument, the plastics company undertakes a pilot project under the name of Management of Innovation and Technological Development, promoted by the National Association of the Plastics Industry, AC (ANIPAC). and CONACYT. Its main objective was to support plastics companies in the effective management of their technologies and innovation (Vergara, 2009: 88).

FELIPE CALDERÓN HINOJOSA (2006-2012)

From his first day in office, this president turned to the public force as his main ally, a fact that was demonstrated from the day he took the protest as president, where he was surrounded by security personnel. Another indicator was the way in which he repressed the Popular Assembly of Peoples of Oaxaca (APPO) movement. A few days into his administration, he undertook a strategy to combat drug trafficking, for which he took the army out of its barracks and sent it to the streets to fight it (Huitrón, 2001: 27).

The National Development Plan 2007-2012 had as one of its national objectives "to ensure environmental sustainability through the responsible participation of Mexicans in the care, protection, preservation and rational use of the country's natural wealth, and with This will help strengthen economic and social development, without compromising the natural heritage and quality of life of future generations." This plan addressed five axes to articulate the objectives and strategies of the six-year period, the fourth axis stated that "the sustainability of ecosystems is basic for a comprehensive human development strategy" and "proposes the transversality of environmental policies for effective inter-institutional coordination, and true integration between all sectors of government" (Alfie, 2011: 25-26).

It was until this six-year term that

environmental issues were placed at the top of the list of priorities of the National Development Plan, in addition to the Integration of Environmental Policy (IPA[7]), which showed that a first essential element at the level of public policies is transversality for inter-institutional coordination, which would allow quantifiable results to be produced (Fernández V., 2014: 474).

However, although the release of Genetically Modified corn into the environment has been prohibited since 1999, and on December 14, 2004, the Law on Biosafety of Genetically Modified Organisms was approved before the Chamber of Deputies, which considered taking measures to prevent corn contamination. Creole, it is during this six-year period that a total of 195 applications for Genetically Modified corn are approved. For the year 2012 in total, 3,457 hectares of these modified cereals were planted, with the respective risk to the environment, wild organisms, and human health (CEDRSSA, 2019: 3.6). In addition to the high costs they represented for farmers, who increasingly had to acquire seed to plant, since the seeds produced by GMOs are not useful for replanting.

In 2007, the Sectoral Program for Environment and Natural Resources 2007-2009 was launched, which established the set of sectoral, strategic objectives and goals, through which the Secretariat of Environment and Natural Resources would address the objectives and strategies of the Plan. National Development Agency on environmental sustainability (Alfie, 2011: 26).

Despite this "commitment to environmental sustainability," in 2008 the Spanish company Hansa Urbana presented an "environmental impact statement" to SEMARNAT to obtain authorization for the project called Cabo Cortés. This document, which had to consider all possible impacts to the ecosystem, was plagued by irregularities that would endanger the reef and the species in the area, however, said project was approved (Lira, 2016). The project was canceled a few years later due to pressure from organized communities, social pressure and the support of different organizations such as Greenpeace (CEMEFI, 2012).

In August 2009, the Comprehensive and Transversal Strategy was presented, which sought to mitigate emissions and adapt to global warming under the name of the Special Climate Change Program (PECC). It included specific measures, objectives and diagnoses, binding on mitigation and adaptation for this six-year period, and desirable mitigation trajectories towards 2020, 2030 and 2050 (Alfie, 2011: 26; Fernández, 2014: 477).

In 2011, a transformation was carried out in the constitutional regime of human rights, which established the obligation of all legal operators in the country to observe the international treaties signed by the Mexican State, such as the framework conventions of the United Nations on Biological Diversity and Climate Change, the Ramsar Convention on Wetlands and the Basel Convention on the Transboundary Movement of Hazardous Waste, among others. Under this context, in 2012 article 4 was reformed again to strengthen the protection of environmental rights. The duty of the State to guarantee this human right is explicitly established and, additionally, "adequate" environment is replaced by "healthy" with the objective of entering into the parameters established by the World Health Organization (WHO) (Carabias and Rabasa, 2017: 63-64).

Despite the commitment to sustainable

7. Integrated policy can be defined as one that recognizes its consequences as decision premises, adds them to a general evaluation and penetrates all levels of policy and all government agencies involved in its execution. In this sense, the integration of environmental policy can be defined as the principle through which state entities not dedicated to the environment adjust their policies when they harm the environment (Fernández V., 2014: 468).

development and Environmental Policy Integration (IPA), many of the most important sectoral programs are not put into operation. For example, the actions of the Ministry of Tourism, regardless of the growing threat that unsustainable tourism represents for the environment, did not include environmental provisions. The regional development programs included geographical, sociodemographic, economic and accessibility criteria, but not environmental indicators (Fernández, 2014: 474-475).

In the period between 2005-2010, the rate of loss of forest and jungle surface area was estimated at 155 thousand hectares annually, a fact that placed Mexico in 21st place in the world in relative loss, and the only OECD country with loss of their forests (Manuel A., 2018: 43; Alfie, 2011: 27). The average annual timber production was 6.02 million cubic meters of round wood (Caballero, 2017).

ENRIQUE PEÑA NIETO (2012-2018)

The entry into the presidency of Peña Nieto was marked by demonstrations and citizen movements against this new president, in response to which the tactic of the Presidential General Staff was to place an extensive and illegal military police fence around the Chamber of Deputies, and repress the different protests that occurred throughout the country. This begins a six-year period marked by authoritarianism and repression (Zamitiz, 2019: 3). Furthermore, this six-year term was characterized by corruption (Zamitiz, 2019:10; Nieto, 2020: 686). Another event that marked this six-year term was the forced disappearance of 43 students from the Ayotzinapa Normal School in Guerrero, in 2014. (Nieto, 2020: 292-293).

In 2014, the Buenavista del Cobre mine of the Grupo México company spilled 40 thousand cubic meters of sulfuric acid into the Bacanuchi River, which flowed into the Sonora River, seriously affecting 22 thousand people and 7 municipalities, which classified as the worst ecological disaster caused by mining in the history of the country(Lira, 2016). That same year, there were also two oil spills: one in Cadereyta, Nuevo León and the other in Huimanguillo, Tabasco.(Greenpeace Mexico, 2018).

In 2015, the Tajamar Project was launched in Cancún, Quintana Roo. This project proposed 58 hectares on which to build a commercial development, parking lots, offices, a church and a residential area, under the supervision of the National Fund for Tourism Promotion (FONATUR). In 2005, Semarnat granted authorization regarding environmental impact despite complaints from environmental groups.

In 2006, the change of use of forest land to residential area was authorized and, by July 2015, the companies that had acquired the properties began various construction works, significantly devastating the mangrove (Velázquez and Col., 2018: 46-47). These works led to the articulation of the Save Manglar Tajamar movement, made up of citizens and environmental organizations such as the Mexican Center for Environmental Law AC (CEMDA). As a result of these mobilizations, a definitive suspension of the project was reached on November 7, 2015. At the end of November, a court annulled said suspension, so the company Bi & Di Real Estate began the clearing of the mangrove again (Velázquez et Col., 2018: 49). Even though the demands and protest actions continued, on January 16, 2016, FONATUR officials, guarded by municipal police, entered the mangrove again to continue the work, and as a consequence 90% of the mangrove was damaged. The activists escalated the conflict to the international level, by requesting the UN to withdraw Mexico as the venue for the Conference of the Parties (COP 13), but it was not until 2017

that PROFEPA definitively closed the project and imposed a fine of around 500 thousand dollars to the company (Velázquez and Col., 2018: 49).

In 2015, Mexico adheres to the Paris Agreement to limit the increase in the average temperature on the planet, with which President Peña commits to reducing greenhouse gas (GHG) emissions by 22% and, in 51%, black carbon emissions within 15 years. Peña Nieto indicates that, to achieve this goal, the administration would increase the generation of electrical energy from clean sources(Presidency of the Republic EPN, 2018).

In 2018, the General Law of Sustainable Forest Development was promulgated, which established the legal framework promoted by SAGARPA and SEMARNAT to make agricultural development compatible with the care of forests, in addition to signing 10 Water Reserve Decrees(Presidency of the Republic EPN, 2018). The average annual timber production of this six-year period was 6.42 million cubic meters of round wood (Caballero, 2017).

The assessment carried out by Greenpeace in 2018, based on the last government report of this president, highlights that, although Peña Nieto proposes a strong impulse that he called inclusive green growth, throughout the six-year term there were devastating losses and effects on biodiversity and the ecological balance in the territory. Indeed, the investment for the environmental restoration of the mangrove was 3.3 times more than the previous administration, however, this administration was complicit in its destruction in Tajamar, whose loss is estimated at 57 hectares(Greenpeace Mexico, 2018). This presidential report also highlights the progress in fulfilling the commitments made before international forums on issues of climate change, reduction of emissions of compounds, and greenhouse gases; however, Mexico continued to occupy twelfth place among countries with the most GHG emissions in the world(Greenpeace Mexico, 2018).

Peña Nieto highlights the actions of the Conservation, Protection and Recovery Program of the Vaquita Marina (called Vaquita CPR), a species endemic to Mexico, despite this, under this administration there was a 72% decline in the population of the species, so it is considered practically extinct (Alvarado, 2018). In addition, during this period there were catastrophes such as the 300 sea turtles trapped in a net on the coast of Oaxaca, the massive death of manatees in Tabasco, the death of millions of bees in national territory, the impact on the spawning area.of turtles on Salmedina Island (part of the Veracruzano Reef System National Park Protected Natural Area). This confirms the negligence, lack of vigilance and apathy of the authorities who did nothing to comply with environmental legislation.(Greenpeace Mexico, 2018).

ANDRÉS MANUEL LÓPEZ OBRADOR (2018-2024)

The 2018 presidential election gave a large victory to Andrés Manuel López Obrador (AMLO) of the Morena party, with a vote of 53% of the voter registry.

In environmental policy, Andrés Manuel's team has presented two documents for the six-year term: 1) NaturAMLO: Mexico is on Earth, released by the person in charge of Semarnat on June 5, 2018, which analyzes environmental challenges and summarizes the environmental policy; and, 2) I AMLOVE my Earth: Environment Agenda 2018-2024, which is a document that outlines the axes of the environmental policies of the New SEMARNAT (Reyes, 2018).

As it was highlighted in the President's

Second Government Report (2020), environmental policy is aimed at compensating for the damage caused by existing consumption practices, based on ecological planning at the community and municipal scale. It is worth highlighting the National Strategy to Avoid Environmental Risks from Pesticides in Mexico, which in 2019 suspended permits for the import of glyphosate. Regarding environmental impact assessment, from 2019 to 2020, 280 projects were presented, of which 195 were authorized and 85 denied according to their environmental viability (La Jornada, 2020).

On January 31, 2020, the presidential decree establishing the gradual substitution of use, acquisition, distribution, promotion and import of glyphosate was published in the Official Gazette of the Federation. It is also noted that they will revoke and refrain from granting permits for the release of seeds into the environment and authorizations for the consumption of genetically modified corn. It is necessary to point out the Sixth Article that says "…the biosafety authorities, within the scope of their jurisdiction, in accordance with the applicable regulations and based on criteria of sufficiency in the supply of corn grain without glyphosate, will revoke and will refrain from granting authorizations for the use of genetically modified corn grain in the diet of Mexican men and women, until they completely replace it on a date that cannot be later than January 31, 2024…" This decree is the product of the struggle that, for more than 20 years, has made Mexican society against the planting of genetically modified corn in Mexico.

Since the planting of said corn began in the 1990s, there were reactions against it that forced President Zedillo to institute the moratorium, however, subsequent governments insisted on taking legal steps for this technology to be established in the country. (San Vicente Tello, 2021: 12; Ministry of the Interior, 2020).

Although he has a clear environmental commitment in his speech, there is still a lot of skepticism regarding the actions achieved by the president, because his two main projects attract investment and jobs, but reinforce the use of fossil fuels and constitute a threat to the environment(Garduno, 2020). Such is the case of the refinery in Dos Bocas, Tabasco, which has generated 34,000 jobs (Garduño, 2020), however, it continues to promote projects and works that are based on oil and, therefore, is not in line with environmental sustainability.

The other mega project, the Mayan Train, was projected to travel a distance of approximately 1,500 km, passing through the states of Chiapa, Tabasco, Campeche, Yucatán and Quintana Roo. This work seeks to boost the economy in the southern states. This poses a threat to 350 types of birds and 100 types of mammals, several endemic species, as well as a wide variety of plants and amphibians. One of the concerns is that tourist areas will become new urbanization centers, which will cause species to be stripped of their habitat and have to look for other spaces to survive (Garduño, 2020).

CONCLUSIONS

In relation to environmental protection, during these six-year periods analyzed we have seen that this protection went practically unnoticed, unless the damage represented a serious problem for the inhabitants of a certain locality and in many cases, despite this. It is not until the six-year term of Ernesto Zedillo that the issue of the environment really begins to be considered, although in a more theoretical than practical way, and this has continued to date.

Miriam Alfie believes that what has characterized the environmental dynamics in Mexico is "the lack of comprehensiveness in Mexican environmental management,

the vicissitudes of environmental policy, the late birth of public policies in the face of deterioration and the lack of spaces for participation, dialogue and commitment between authorities and society in order to expand co-responsibility for environmental management." For this author, there is no point in establishing projects if there is no transversality of the environment, and its correlation with all economic activities, and there is no evidence of their implementation. Citizen participation is consultative and clientelistic; she can be heard, which does not guarantee her intervention and deliberation in decision-making (Alfie, 2011: 29, 30).

According to Torre and Mendezcarlo, they propose some measures so that public policies and the Mexican planning system can establish solutions to the environmental problem. The first is conceptual in nature, and refers to the fact that the majority of public policies and environmental programs that have been established present an incomplete vision of what must be understood by nature, since it is continually related to consumption. of raw materials, inputs for production, and natural resources. The second reason (and on this point they coincide with Miriam Alfie's vision), has to do with the fact that the implementation of these policies lacks a transversal vision, which allows intersectoral decisions to be made that go with the integral nature of environmental problems. On the other hand, the problem of public policies on environmental matters in Mexico "does not crystallize with real, concrete, measurable and tangible advances that truly achieve the pursued objectives; that is, the conciliation between economic growth, conservation, reproduction and restitution of nature, democracy and social justice" (Torre and Mendezcarlo, 2019, pp. 13).

They add that the agencies in charge of enforcing the laws have not managed to consolidate the coercive power they need, nor create the spaces and fiscal economic instruments that encourage compliance with the law. In order for the instruments to improve the environment, it is necessary that "these be structured, implemented and applied in congruence with the public plans and policies established by the State, and not in isolation as has been done, that is, only with sanctioning effects…" (Torre and Mendezcarlo, 2019, pp. 14).

It is necessary to "consider environmental taxation instruments (taxes, rights or fees, comprehensive schemes and economic incentives), which imply the establishment of a payment obligation to the State, by the individual who carries out polluting or potentially polluting acts in proportion to the environmental damage produced. " (Torre and Mendezcarlo, 2019, pp. 15).

Another of the important issues that the country has had to face in recent years, and that also has to do with the environment, refers to forestry production, and according to Miguel Caballero "The decree creating the Industrial Forestry Exploitation Units (UIEF) issued by President Manuel Ávila Camacho, based on the Forestry Law of 1943, laid the foundations for a sustained increase in the timber harvest throughout five public administrations (Caballero, 2017, 23). For this same author, the circumstances that have had a complementary impact on maintaining timber production at the low level of the last public administrations:

1. The current low productivity of commercial coniferous forests, which shows the effect of decades of overexploitation, as well as the deterioration caused by the continuous change in land use for agricultural purposes.
2. The fragmentation of forest management, currently confined to small properties and reduced forest areas.

3. The uncontrolled increase in illegal exploitation of forests and illegal competition in the national forest products market.
4. The commercial opening that provides imported wood cheaper than that produced in the country.
5. The limited effectiveness and limited impact on national forest production that subsidy policies for the sector have had (Caballero, 2017, 23).

According to this author, for Mexico's forestry sector to take off to become a true piston of economic development, it is important to create an attractive environment for investment that awakens the interest of the private sector. For this purpose, a change in forestry legislation is essential, which promotes authentic corporate forestry activity, creating an agile, efficient and dynamic administrative structure, which leaves behind the overregulation that throughout history has been associated with the administration, constituting a brake on forestry development. The above must be accompanied by effective information and communication systems, financing, industrial reconversion, training, etc. (Caballero, 2017, 24).

On the topic of the evolution of plastics in Mexico, we must say that its production began to evolve to the extent that PEMEX evolved, in addition to the fact that industrialization always received a strong boost from the presidents. Despite this, the technology lagged behind, limiting its ability to compete in international markets. The issue of plastic production is definitely linked to the restrictions that could arise due to environmental care, due to the great pollution that they produce and that we discussed in the introduction. So while these measures did not exist, plastic production advanced significantly. It is foreseeable that in the future there will be a decrease in this production due to growing environmental concern, or that new ways will be created to take advantage of discarded plastics.

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