

Legislation and urban-environmental policies in the  
Cointzio sub-watershed of Cuitzeo

WB1 DESIRE  
**Desertification mitigation and remediation land**  
**A global approach for local solutions**  
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# CONTENT

## 1. Existing legal framework

- 1.1. Federalism in Mexico (competence system).
- 1.2. The legal framework of human settlements and environmental protection.
- 1.3. Laws, federal agencies and instruments of territorial planning and environmental protection.
- 1.4. Laws, state agencies and instruments of territorial planning and environmental protection.
- 1.5. Laws, municipal agencies and instruments of territorial planning and environmental protection.
- 1.6. Opportunities for social participation and territorial instruments and existing environmental protection in the watershed of the lake of Cuitzeo/sub basin of Cointzio

## 2. Environmental and urban public policy in the Cuitzeo basin/Cointzio sub-basin.

- 2.1. The regional ecological ordering of the watershed of the Cuitzeo lake.
- 2.2. Plan for the integrated management of the natural resources of the watershed of the Cuitzeo lake.
- 2.3. The urban development program of the population center of Morelia 2004.
- 2.4. Amendments proposed to modified the urban development program of the population center of Morelia 2004.
- 2.5. The draft program of a natural protected area in the southern part of the watershed of the Cuitzeo lake.
- 2.6. The draft program of the metropolitan area of Morelia.
- 2.7. Promoting programs for sustainable forest managements (conservation, restoration, protection and exploitation).

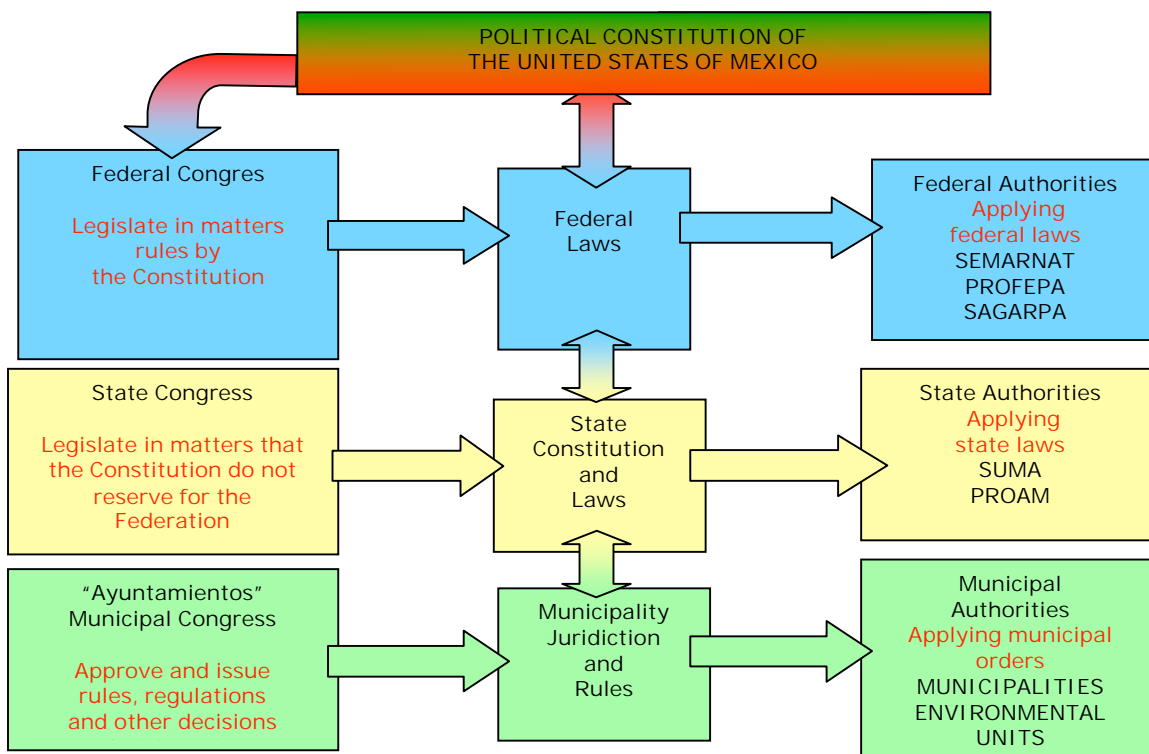
## 1. Existing legal framework

### 1.1. Federalism in Mexico (Competence system).

As provided in the Constitution of the United Mexican States, Mexico is a representative republic, democratic and federal state composed of free and sovereign states in all matters concerning their internal affairs, but united in a federation. Thus, the people exercise their sovereignty through the powers of the Union, where are the competence of these, and through the powers of the states, in what concerns their internal systems, according to the Federal Constitution and the constitutions of states, which in no case may contravene the provisions of the Federal pact (Articles 40 and 41 of the Constitution of the United Mexican States).

In regard to the responsibilities of each of the three levels of government, areas of expertise derived from the formula: the Federation has the powers expressly conferred by the Constitution to the federal powers, the powers not expressly granted by the Constitution to the federal powers correspond to the states, and powers of municipalities are set out in Article 115 of the Constitution.

Based on the foregoing, the areas of competence of the federal, state and municipal levels, could schematized as follows:



## 1.2. The legal framework of human settlements and environmental protection.

Regarding the legal framework of human settlements and environmental protection and natural resources of the country, the constituent power gave to the nation the right to impose on private property, rules dictate for the public interest and social benefit, as the use of natural elements capable of appropriation, to make an equitable distribution of public wealth, to care for their conservation, to balance development of the country and to improve the living conditions of the rural and urban populations. To achieve this, it was established that the necessary measures should be issued for managing human settlements and establish adequate provisions, uses, reserves and allocations of land, water and forests, in order to carry out public works and planning and regulating the establishment, maintenance, improvement and growth of population centers and to preserve and restore the ecological balance (Article 27, Paragraph Three of the Constitution of the United Mexican States).

Moreover, the Federal Constitutional determined that, in human settlements, environmental protection and preservation of ecological balance, should attend the Federation, states and municipalities, within their respective jurisdictions, and to that end, the Congress would issue relevant laws (Article 73, sections C and XXIX-XXIX-G of the Constitution of the United Mexican States).

With this constitutional basis, the legal framework in these areas is:

Laws, dependencies and federal instruments		
Laws	States	Municipalities
Political Constitution of the United States of Mexico	Política Constitution of the Free and sovereign state of Michoacán de Ocampo	Orders of the Municipalities
General Law of Ecological Equilibrium and Environmental Protection	Environmental and natural heritage protection law	Rules for environment protection
General Law of Sustainable Forest development	Law of sustainable forest development	Rules for the green areas
General Law of Human Settlements	Urban development code	Urban development code
Agrarian Law	Agrarian law	Agriculture lands code
Law of Sustainable Rural Development	Sustainable agriculture development law	Rules for agriculture development
General Law of Wildlife	Environmental and natural heritage protection law	Rules for environment protection
General Law of National Waters	Waters Law	Rules for water protection and management

### 1.3. Laws, federal agencies and instruments of territorial planning and environmental protection.

At the federal level, regulatory laws of the Article 27, paragraph three, and 73, fractions XXIX XXIX-C and-G in human settlements, environmental protection, waters and preservation of ecological balance, established the basic legal framework for concrete constitutional provisions, formalized the principles, tools and key objectives, identify areas of jurisdiction and the combination of the three levels of government, and defined the meaning and institutional strategies in the respective subjects.

The General Law of Ecological Equilibrium and Environmental Protection (LGEEPA), is implemented by the Ministry of environment and natural resources (SEMARNAT), with his dependencies : forestry national commission (CONAFOR), national commission of water (CONAGUA), mexican institute of water technology (IMTA), national institute of ecology (INE), national commission of natural protected areas (CONANP). His compliance is the responsibility of the federal attorney for environmental protection (PROFEPA).

Federal Laws, Agencies and Instruments		
Laws	Agencies	Instruments
General Law of Ecological Equilibrium and Environmental Protection (LGEEPA)	<ul style="list-style-type: none"> <li>Ministry of Environment and Natural Resources SEMARNAT</li> <li>Federal Attorney for Environmental Protection</li> </ul>	<ul style="list-style-type: none"> <li>Ecological territorial zoning</li> <li>Environmental impact assessment</li> <li>Protected natural areas</li> <li>Social participation</li> <li>People report</li> <li>Monitoring control and punishment</li> </ul>
General Law of Sustainable Forest development	<ul style="list-style-type: none"> <li>Ministry of Environment and Natural Resources (SEMARNAT-CONAFOR)</li> <li>Federal Attorney for Environmental Protection</li> </ul>	<ul style="list-style-type: none"> <li>Changes of the forest land uses</li> <li>Social participation</li> <li>People report</li> <li>Monitoring control and punishment</li> </ul>
General Law of Human Settlements	<ul style="list-style-type: none"> <li>Secretary of Social Development</li> </ul>	<ul style="list-style-type: none"> <li>Territorial zoning of human settlements and urban development</li> </ul>
Agrarian Law	<ul style="list-style-type: none"> <li>Ministry of Agriculture, Livestock, Rural development, Fisheries and Food (SAGARPA)</li> </ul>	<ul style="list-style-type: none"> <li>Agrarian court</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>
Law of Sustainable Rural Development	<ul style="list-style-type: none"> <li>Ministry of Agriculture, Livestock, Rural development, Fisheries and Food (SAGARPA)</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture territorial zoning</li> <li>Social participation</li> <li>People report</li> <li>Monitoring control and punishment</li> </ul>
General Law of Wildlife	<ul style="list-style-type: none"> <li>Ministry of Environment and Natural Resources (SEMARNAT-CONANP)</li> <li>Federal Attorney for Environmental Protection</li> </ul>	<ul style="list-style-type: none"> <li>Conservation of wildlife</li> <li>Sustainable uses of wildlife</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>
Law of National Waters	<ul style="list-style-type: none"> <li>Ministry of Environment and Natural Resources (SEMARNAT-CONAGUA-IMTA)</li> <li>Federal Attorney for Environmental Protection</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable management of waters</li> <li>Protection of waters</li> <li>Watershed organisation</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>

The agrarian law defines the owners and users of land in Mexico, meanwhile the sustainable rural development law is in charge of the agriculture production, rural development, fishing, and food trading.

Human settlements are rule by the general law on human settlements, and its applications depends of the Ministry of social development. The territorial planning tools provided by existing legislation are urban development programs (in population centers) and ecological land (outside of population centers).

The major environmental conventions, at the federal order, that affect the regulation of urban growth and its impact on the catchment areas of population centers, are contained in the LGEEPA, in the general law on sustainable forest development, in the national waters law, in the wildlife act and in the sustainable agriculture laws. This texts rule the most important: the ecological land ordering, environmental impact assessment, the water uses and protection, the development of a sustainable agriculture, the establishment of protected natural areas, the management and regulation of land use change in forest conservation and sustainable management wildlife, and the establishment of public spaces for social participation, public consultation, access to public government information and people report.

#### 1.4. Laws, state agencies and instruments of territorial planning and environmental protection.

To adapt the legal framework of the Michoacán de Ocampo state with the federal environmental legislation, the environmental and natural heritage protection law, the water and watershed management law, the sustainable forestry development law, the integral sustainable rural development law have been edicted. They are implemented by the Ministry of Urbanism and Environment and the Environmental Protection Office of the State of Michoacan, the Forestry Commission and the Ministry of rural development of the State of Michoacan, respectively.

As the sectoral legislation on environmental and natural resources in the state, was made according to the instruments and competencies identified in federal jurisdictions, the major environmental conventions under state law are also the ecological land, and evaluation of environmental impact, the establishment of protected natural areas and the establishment of public spaces for social participation, public consultation, access to public government information and popular complaint.

In human settlements, recently entered into force in Michoacan Urban Development Code of the State, which is implemented by the Ministry of Urbanism and Environment and by the municipalities.

In the state of Michoacán, the main instruments of spatial planning established by current legislation are urban development programs (in population centers) and ecological land (outside of population centers), and as a transverse instrument, the watershed committee.

**State laws, agencies and instruments  
Michoacán de Ocampo**

Laws	Dependencies	Instruments
Environmental and natural heritage protection law of Michoacán state (27/12/04, mod 23/08/07)	<ul style="list-style-type: none"> <li>Ministry of urbanism and environment (SUMA)</li> <li>Planning committee for the development (COPLADE)</li> <li>Attorney for Environmental Protection of Michoacán state</li> </ul>	<ul style="list-style-type: none"> <li>Regulations (Since 25/02/08)</li> <li>Territorial environmental zoning</li> <li>Environmental impact evaluation</li> <li>Protected natural areas</li> <li>Social participation</li> <li>People report</li> <li>Monitoring control and punishment</li> </ul>
Sustainable Forestry development act of Michoacán state (22/11/04, mod 23/08/07)	<ul style="list-style-type: none"> <li>Forestry Commission of Michoacán state (COFOM)</li> <li>Attorney for Environmental Protection of Michoacán state</li> </ul>	<ul style="list-style-type: none"> <li>Regulations (Since 28/03/07)</li> <li>Territorial environmental zoning</li> <li>Environmental impact evaluation</li> <li>Protected natural areas</li> <li>Forestation program</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>
Urban development code of Michoacán state (26/12/07)	<ul style="list-style-type: none"> <li>Ministry of urbanism and environment (SUMA)</li> </ul>	<ul style="list-style-type: none"> <li>Regulations</li> <li>State program of urban development</li> <li>Regionals, sectorials, conurban area programs of urban development</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>
Sustainable integral rural development law of Michoacán state (18/01/06)	<ul style="list-style-type: none"> <li>Ministry of rural development (SEDRU)</li> </ul>	<ul style="list-style-type: none"> <li>Regulations (Since 04/12/06)</li> <li>Rural development program</li> <li>Soil conservation program</li> <li>Irrigation districts</li> <li>Social participation</li> <li>People report</li> <li>Monitoring control and punishment</li> </ul>
Law of water and watershed management of Michoacán state (27/12/04 mod 23/08/07)	<ul style="list-style-type: none"> <li>Ministry of urbanism and environment (SUMA)</li> <li>State commission of water and watershed management (CEAC)</li> <li>Secretaría de Agricultura (SEDRU)</li> </ul>	<ul style="list-style-type: none"> <li>Regulations (Since 25/02/08)</li> <li>Watershed committees</li> <li>Hidrical programs for watersheds</li> <li>Irrigation districts</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>
Law of drinking water, sewage system and sanitation of Michoacán state (1994 mod 2002)	<ul style="list-style-type: none"> <li>Ministry of urbanism and environment (SUMA)</li> <li>State system of drinking water, sewage system and sanitation</li> <li>State commission of water and watershed management (CEAC)</li> </ul>	<ul style="list-style-type: none"> <li>Regulations</li> <li>Watershed committees</li> <li>State program of urban development</li> <li>Regionals, Sectorials, Conurban area programs of urban development</li> <li>Hidrical programs for watersheds</li> <li>Social participation</li> <li>Monitoring control and punishment</li> </ul>

1.5. Laws, municipal agencies and instruments of territorial planning and environmental protection.

Morelia is the capital of the state of Michoacán de Ocampo. The territory of this municipality is huge and occupied a town of nearly 1 million of inhabitants, as well as forest, volcanoes, lakes and fields... In spite that the town is located at the outlet of the Cointzio basin, 40% of this watershed belongs to Morelia. So, to understand the situation and improve correctly the development of this area, the urban as well as rural legislation

instruments and policies must be analysed and take in count.

According to the legislation of urban development and environment implemented by the ministry of urban development and environment, the main environmental and territorial planning instruments are the program of urban development and population center ecological zoning of the municipality as well as the Cuitzeo watershed management committee, in the case of Cointzio area.

The city of Morelia has authority to participate in the establishment of regional and sectoral plans for urban development as well for conurbation zones. Morelia is also able to decree the establishment of protected natural areas and to allow or not the use of water as well to condemn and punish polluter responsible of land, air or water contamination.

Municipal Laws, Agencies and Instruments Case of Morelia city		
Laws	Agencies	Instruments
Urban development code of Morelia city	<ul style="list-style-type: none"> <li>• Ministry of urbanism and environment (SUMA)</li> <li>• Planning committee for the development (COPLADE)</li> </ul>	<ul style="list-style-type: none"> <li>• Regulations</li> <li>• State program of municipal urban development</li> <li>• Regionals, sectorials, conurban area programs of urban development</li> <li>• Social participation</li> <li>• Monitoring control and punishment</li> </ul>
Regulations of the environmental protection	<ul style="list-style-type: none"> <li>• Ministry of urbanism and environment (SUMA)</li> </ul>	<ul style="list-style-type: none"> <li>• Territorial environmental zoning</li> <li>• Environmental impact evaluation</li> <li>• Protected natural areas</li> <li>• Forestation program</li> <li>• Social participation</li> <li>• Monitoring control and punishment</li> </ul>
Regulation of land uses	<ul style="list-style-type: none"> <li>• Ministry of urbanism and environment (SUMA)</li> </ul>	<ul style="list-style-type: none"> <li>• Territorial environmental zoning</li> <li>• Environmental impact evaluation</li> <li>• Rural development program</li> <li>• Soil conservation program</li> <li>• Irrigation districts</li> <li>• Social participation</li> <li>• Monitoring control and punishment</li> </ul>
Regulation of waters and watershed management	<ul style="list-style-type: none"> <li>• Ministry of urbanism and environment (SUMA)</li> <li>• Commission of water and watershed management (CEAC)</li> </ul>	<ul style="list-style-type: none"> <li>• Territorial environmental zoning</li> <li>• Environmental impact evaluation</li> <li>• Protected natural areas</li> <li>• Irrigation districts</li> <li>• Commission of the Cuitzeo watershed</li> <li>• Social participation</li> <li>• Monitoring control and punishment</li> </ul>
Regulation of drinking water, sewage system and sanitation	<ul style="list-style-type: none"> <li>• Organism in charge of drinking water, sewage system and sanitation (OOAPAS)</li> </ul>	<ul style="list-style-type: none"> <li>• Territorial environmental zoning</li> <li>• Environmental impact evaluation</li> <li>• Protected natural areas</li> <li>• Irrigation districts</li> <li>• Commission of the Cuitzeo watershed</li> <li>• Social participation</li> <li>• Monitoring control and punishment</li> </ul>



1.6. Opportunities for social participation and territorial instruments and existing environmental protection in the watershed of the lake of Cuitzeo/Sub basin of Cointzio.

Under federal, state and local laws, it is possible to identify the existence of permanent formal spaces of public engagement, from which citizens and organizations can influence the formulation and monitoring of environmental public policies and human settlements as well as the construction and application of instruments for environmental and urban spatial planning, on the growth of the population center of Morelia, and the protection and conservation of natural resources and ecosystems of the region and the environmental services that they provide to the city.

The public spaces of social participation operating in the area of the watershed of the lake of Cuitzeo and the sub-basin of Cointzio are : the core consultative council for sustainable development of SEMARNAT, the council of Cuitzeo lake basin, the council state forestry, state commissions and municipal urban development and planning advisory council of the municipal institute of urban development.

<b>Spaces of social participation and territorial and environmental instruments in the municipality of Morelia</b>		
<b>Permanent spaces of Social participation</b>	<b>Instruments for territorial management</b>	<b>Instruments for environmental policy</b>
<b>Consultative council for sustainable development</b>	<b>Forestry protected areas of Morelia and of the Chiquito river watershed (ANP's)</b>	<b>Evaluation of the environmental impact</b>
<b>Council of the watershed of the lake Cuitzeo</b>	<b>Territorial environmental management of the watershed of the lake of Cuitzeo</b>	<b>Change of the forest land uses</b>
<b>State council of ecology</b>	<b>Area of "La loma de Sta María" proposed to be an ecological conservation zone (ANP)</b>	<b>Access to the government public information</b>
<b>Forestry state council</b>	<b>Urban development program of the population center of Morelia city</b>	<b>Social participation</b>
<b>State and municipal commissions for urban development</b>	<b>Municipal environmental management of Morelia (Project in process)</b>	<b>People and citizens complains</b>
<b>Planning advisory board of municipal urban development institute of Morelia</b>	<b>Programme of the metropolitan district (Project in process)</b>	<b>Monitoring controls and punishments</b>

In the same region, there are instruments of urban land and environmental planning and protection of biodiversity, which are regulating the land uses within and without the

population centers as well as the activities carried out and that somehow may impact the environment: protecting forest areas of the Chiquito river basin and the city of Morelia, the ecological zoning of the Cuitzeo Lake, the protected area called area under the loma ecological conservation of St Maria and the urban development program of the center for population of Morelia 2004.

Currently, there is a consultation draft amendments to the urban development program of the center for population of Morelia 2004. The ecological land in the municipality of Morelia, and metropolitan area program are also in the process of consultation, and will probably take effect this year (2009).

During the second semestre of 2008 and the first one of 2009, the Cuitzeo lake watershed committee organized 4 workshops of 2 days with stakeholders of the Cuitzeo watershed. The objectives of this work is to define the problems and to propose solutions for a sustainable development of this watershed. The final document, presented to the authorities had been approved. A second phase start now and consist to translate the propositions in acts. Specific budget and actions star tat the end of 2009. It is important to mention that since the beginning, DESIRE is part of this process. That is also why, it was necessary to be sincronized with this dynamic to be sure that the DESIRE actions will be accepted and helped.

Besides the importance of permanent public spaces for social participation and urban and ecological planning instruments existing in the Cuitzeo Lake watershed, for the protection and conservation of ecosystems, there are also various public instruments whose purpose is regulate the environmental impact of the works or activities performed, regulate changes of forest land use, and transparent performance of public agencies providing access to government information and citizen participation through popular complaint.

It is noteworthy that in the process of environmental impact assessment, consultation public meetings and public information relating to works, projects or activities subject to assessment are required.

## 2. Environmental and urban public policy in the Cuitzeo /Cointzio sub-basin.

The Cointzio sub-basin located southwest of the Lake of Cuitzeo and the city of Morelia, plays a strategic role in the provision of various ecosystem services like water supply, flood control and food production.

Morelia city, irrigation districts, Cuitzeo lake and Cointzio reservoir depend for their water flows from the rio Chiquito and mainly from the rio Grande which is coming from the Cointzio watershed. However, this sub basin turn to be the reservoir for water and soil of Morelia city. This means that the urbanization process has been based in large part thanks to resources from the sub-basin of Cointzio. This generate high pressures on agricultural and forest lands to change the land use and also affect water bodies and sources of water supply.

Hence, continuing with the current trends of urbanization, that would attack the natural base (water, soil) that supports the range of ecosystem services that now benefit the city of Morelia and in general, the Cuitzeo watershed lake. Thus it becomes important to understand and evaluate public policies associated with urban growth, environmental protection and water management in the lake of Cuitzeo, and within the sub-basin of Cointzio, and their contribution to the solution or worsening environmental problems.

## 2.1. The regional ecological ordering of the watershed of the Cuitzeo Lake.

The regional ecological planning of the watershed of the Cuitzeo Lake, signed until now, by 13 of the 25 municipalities of the basin, is an instrument of political and technical planning of the territory, which aims to establish regulatory guidelines for use and occupation, considering the medium and long term. Of the municipalities signed the decree, two of them are part of the sub-basin of Cointzio: Morelia and Acuitzio.

In the watershed, in general, there are various problems related to conservation and natural resource management. The intense urbanization, water pollution, solid waste production, deforestation and soil erosion, are some of the major environmental issues that relate to the social problems of poverty, migration and family disintegration.

The ecological planning of the watershed of the Cuitzeo Lake, was developed with the purpose of planning the use and occupation of the territory of the Basin, consistent with the potentials and limitations of it and develop a strategy to respond to the specific problems of the watershed, to restore and conserve natural resources and restore ecosystem services generated there.

Specifically in the sub-basin of Cointzio, this instrument has defined environmental management units primarily forest land use with conservation policy, in areas that still retain significant forest cover, located between the settlements of Morelia, and agricultural extension, irrigation, and livestock of the sub-basin of Cointzio.

In spite that the regional ecological planning of Cuitzeo lake watershed diagnosis is based on recognizing the serious problems existing in the region, it still need to start from this level of planning, with strategies based on the use and occupancy of territory that the regional ordering provides, to concreate the local ecological planning of the 13 municipalities that signed it.

The above mentionned that regional ecological planning are instruments of inductive character, and local jurisdictions are planning territorial tools mandatory for the determination of land use and occupation. However, apparently only Morelia has the possibility to count in the short term, with a municipal territorial ecological organization, specifying and making formally, the strategies contained in the regional plan.

However, the existence of the regional ecological Cuitzeo lake watershed, represents by itself, an important value for the conservation of the région. It generates a scenario of

opportunities: regulation defines the criteria for ecological preservation, protection, restoration and sustainable utilization of natural resources in the region and for the productive activities. It is an instrument of territorial planning which must be considered in solving environmental impact assessment of the works or projects undertaken in the region and to address changes in forest land use. According to the provisions of existing federal and state legislation, urban development programs and local ecological planning must be consistent with the lines of the regional ecological planning.

## 2.2. Plan for the integrated management of the natural resources of the watershed of the Cuitzeo lake.

The Plan for the integrated management of the natural resources of the watershed of the Cuitzeo lake is the collegial answer to the demands of the stakeholders, environmental organizations, academia and society in general, in regard to the water and environmental issues suffered by this basin. It expresses also the interest of the authorities of the three levels of government to find solutions.

For the preparation of the Plan, the methodology of objective-oriented projects (ZOOB by its acronym in German) had been applied. It contains information on the environment in which sits the second largest lake in Mexico, as well as statistical data on socioeconomic, uses of water, forests and wildlife of the region. The plan presents the problematic of the Cuitzeo watershed in terms of water, forestry, environmental and social, and raises the possible solutions applicable to specific cases.

The main objective of the Plan for integral management of the natural resources of the watershed of the Cuitzeo lake is to become the guiding instrument of the Basin Commission Lake Cuitzeo and a tool which promotes the integrated management of water resources through the development, approval, monitoring, evaluating and modifying actions that promote the restoration, preservation and the rational utilization of all natural resources in the basin.

The specific objectives are :

- Showing the current status of the watershed, the state of its resources and alternative solutions in the short, medium and long term, which establish specific lines of action with tangible results that help to give impetus to improving the quality of the watershed the benefit of its inhabitants.

- Establishing a portfolio of basic actions, consistent with an integral management, aligned to the current policy in regard to watersheds with priority environmental issues, involving society and institutions.

- Providing management alternatives to reduce the damage, through the optimal management of natural resources, guaranteeing quality and quantity for future generations.

- Promoting a real implementation of programs and specific actions aimed to the region with the support of the regulation, control, monitoring and periodic assessment of integrated management plan of the natural resources of the Lake Cuitzeo watershed.

The Plan outlines the results reached by the members of the commission of the watershed of Cuitzeo lake , regarding actions for recovering the lake, identifying the activities and projects required to improve the quality of life in the watershed and the responsible for implementation. The Plan define a management plan with operational planning and stock portfolio or projects, which represent the integration of the annual operating program of the departments and agencies of the three levels of government.

This Management Plan had been accepted during the Ninth Session of the commission of the Cuitzeo lake watershed, held on 3 March 2009 in the town of Chucándiro, Michoacán.

### 2.3. The urban development program of the population center of Morelia 2004.

International efforts to promote urban planning that incorporates social and environmental criteria are dating from the letter of Athens in 1933 and Machu Picchu in 1977 to the United Nations Conference on Human Settlements (Vancouver 1976 and Istanbul 1996) and Environment (Stockholm 1972 and Rio 1992). In all cases, Mexico has signed such agreements with a commitment to implement its strategy of urban planning and environmental management. And in spite that the Mexican government has partially complied with these commitments, now international pressure is greater because there is a recognition that urban environmental problems have implications not only locally but also globally. Similarly, international agreements like the Rio 1992 and Istanbul 1996 highlight the central role played by local or municipal governments in improving the quality of people's lives and the environment protection as well as the importance of participation of other actors, including academia, private enterprise, social organizations and NGOs in promoting a strategy of sustainable urban development <sup>1</sup>.

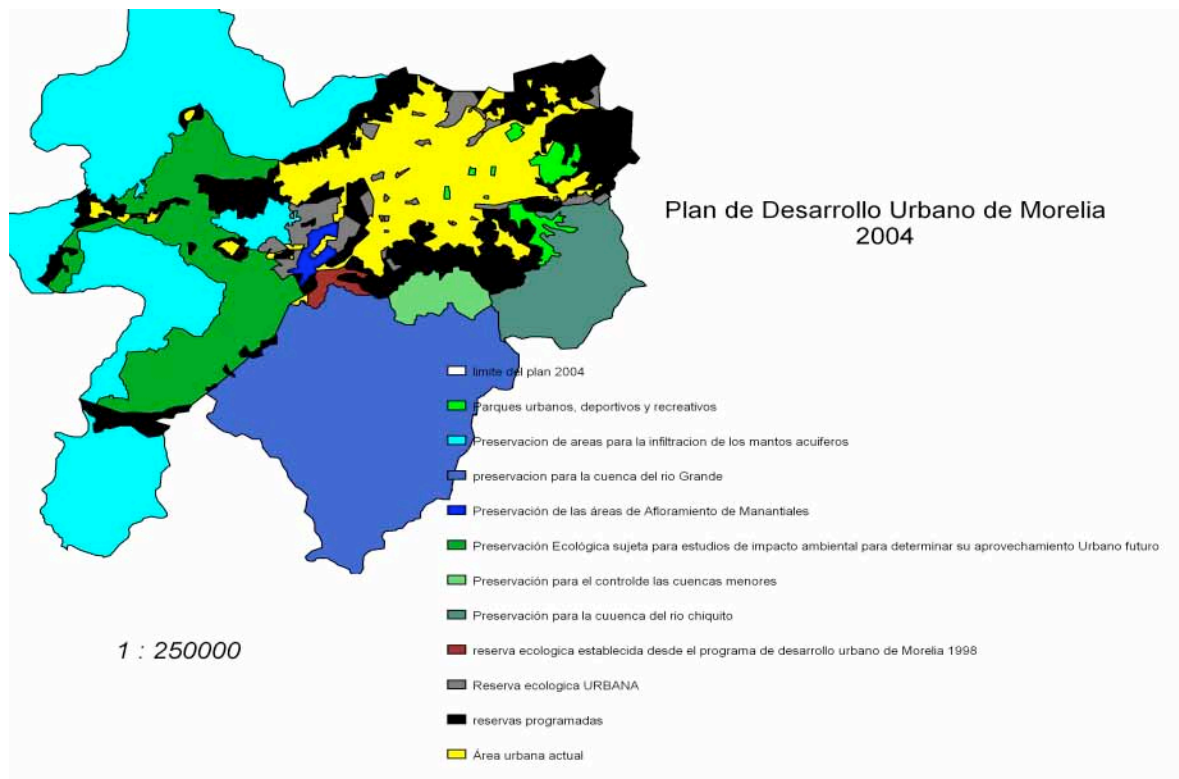
The constitutional and legal basis of urban planning in Mexico, is in the Constitution of the United Mexican States (Articles 27 and 115), in the general laws on Human Settlements (Articles 3, 5, 19, 28, 33, 40 and 43) and Ecological Balance and Environmental Protection (Articles 19, 20a 4, 20 a 5, 23, 28 and 32), state laws in urban development and environmental protection, and regulations municipal urban development, construction and environmental protection (ecological territory planning).

In regards to the municipal powers : "Municipalities, in terms of federal and state laws, are empowered to formulate, adopt and administer zoning and municipal urban development plans, participate in the creation and management of its land reserves, authorize, control and monitor land use within their territorial jurisdictions; intervene in the regularization of land tenure, grant licenses and permits for construction, and participate in the creation and management of ecological reserves. "(Article 115, section V, of the Constitution of the United Mexican States.)

It is important to note the fact that municipalities are empowered to establish land uses within population centers, according to the regulations referred to urban development, and outside the population centers through environmental policy instruments. That is why the applicable instrument for the population centers is the municipal urban development program, meanwhile for the outside population centers the instrument to apply is the ecological territory planning. <sup>2</sup>

The territorial urban land planning tool which have the highest impact in the sub-basin of Cointzio, is undoubtedly, the urban development program of the population center of Morelia 2004. In spite that the general law on human settlements states express that plans and urban development programs should consider the general criteria of ecological regulation of human settlements established in the general law of ecological equilibrium and environmental protection, and in the official mexican standards on environmental issues, in practice, these instruments, particularly in the case of Morelia, have been formulated from the requirements of real estate developers, as a response mechanism to speculation and interest from the major urban landowners, without any prevention or consideration of social or environmental <sup>3</sup>.

Another factor which affect the dismantling of the planning, was the economic and political pressure from local groups to expand the limits on urban sprawl. This is because urbanization is associated with huge economic gains for land speculators and parcel men, and considerable political benefits to leaders. Hence the regulación of the growth of the city was allocated to those who wanted to utilize their land and investments, and strengthen their political control over the territory.



The obstacles which during a time, were able to control the urban development plans for the expansion of the urban area, were overcome through its continuous modification and approval of changes of the land use. So, the urban planning since 1987 was aimed to expand the limits of urban growth area, legitimizing the expansion of the city in areas not defined for this purpose and releasing a greater number of acres to urbanization. It is during this period that planning losts its direction and purpose for which it was created and started a process of regression: each modified plan for urban development resulted in a more technically deficient and less social and environmental content.

In that way, the development programs of Morelia became instruments of legitimization of irregular growth and speculation in land use in the city and its surroundings.

In 2004, the urban development program of Morelia was approved by the city council and published in the official newspaper of the state, in spite to contain serious inconsistencies and excesses, and against the opinion of different social sectors. In this program, the polygon of the city of Morelia grew from 30 thousand to 90 thousand hectares, and areas of ecological reserve disappeared, establishing residential land uses in areas of high environmental significance or in areas with risks.

#### 2.4. Amendments proposed to modified the urban development program of the population center of Morelia 2004.

The city of Morelia has seen several urban development plans, each and every one of which are done considering the medium and long term, but they had a very limited effect and were replaced in very short periods: 1983, 1991, 1998 and 2004.

With this four different urban development programs, or perhaps as a result of such inconsistency or lack of continuity, the city of Morelia is still facing major problems in urban development, such as the proliferation of squatter settlements and lack of administrative capacity to deal with urban phenomena, the growth of the City to unsuitable areas as a result of pressure from large real estate speculators and, consequently, the increasing loss of forest areas originally considered as conservation areas or ecological reserves.

For this reason, instead of trying to consolidate urban development program regulating the growth of the population center and to avoid speculation and proliferation of irregular settlements and subdivisions, municipal authorities chose to modify the development agenda, the occupation and the use of urban land, to sort the mess caused by the economic and political pressures and the lack of responsibility in institutional performance.

Currently, the urban development program of the center of Morelia 2004, is subject to an amendment process. If this changes are accepted, this will encourage the growth of the City to the South - South West, particularly towards the forest areas of the Loma de Santa Maria, and to the sub-basin of Cointzio. This mean a new compatibility chart of land uses and roads projects with the objective to open access and to go through these areas. Moreover, among the changes proposed by the municipal authorities it was remarkable, the decision to increase the soil occupation and density factors of land use of the center of Morelia city, without a previous strategy of expansion and improvement of urban infrastructure, which generate traffic problems and greater demand for services particularly of water, which comes from the sub-basin of Cointzio.

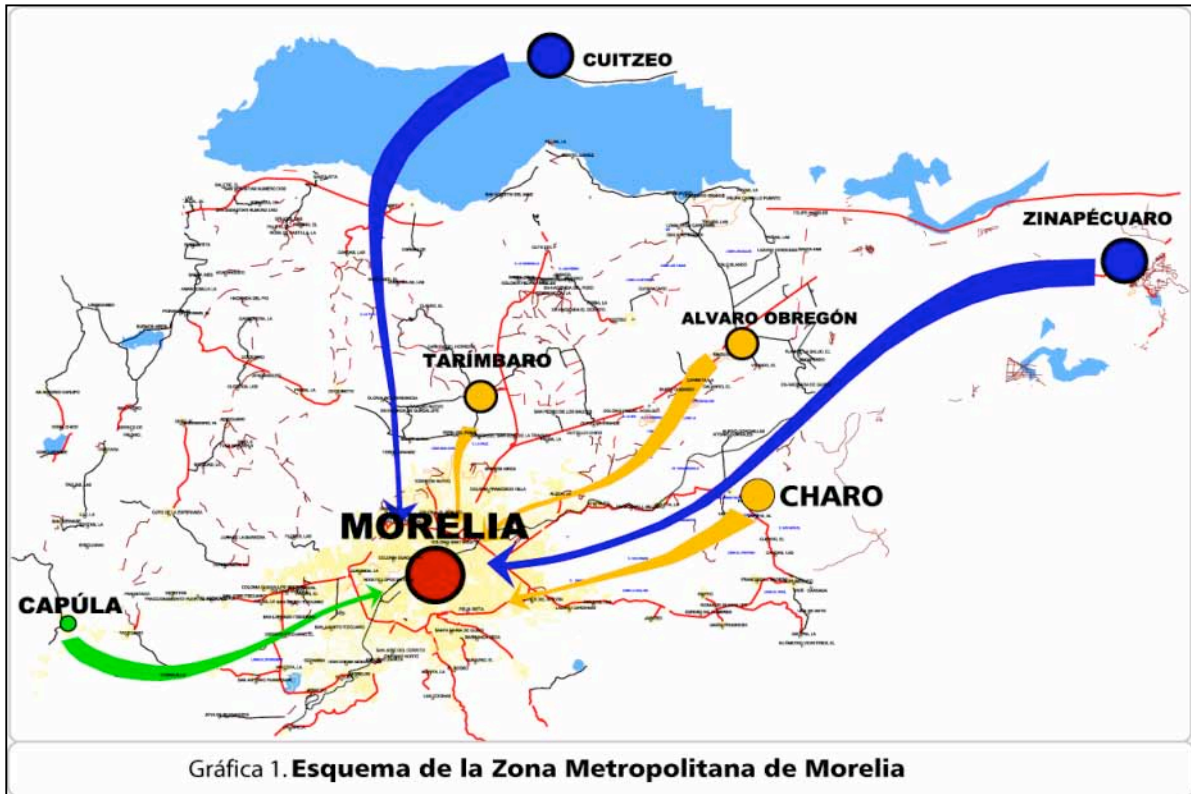
Highlights the fact that the maps of land use and of the primary and secondary zoning of the modification proposal of the 2004 program, do not have consistency with land use and occupancy criteria defined in the regional ecological zoning of the watershed of Cuitzeo lake, the draft of the ecological zoning of Morelia, or with the state protected natural areas and areas of federal forest protection.

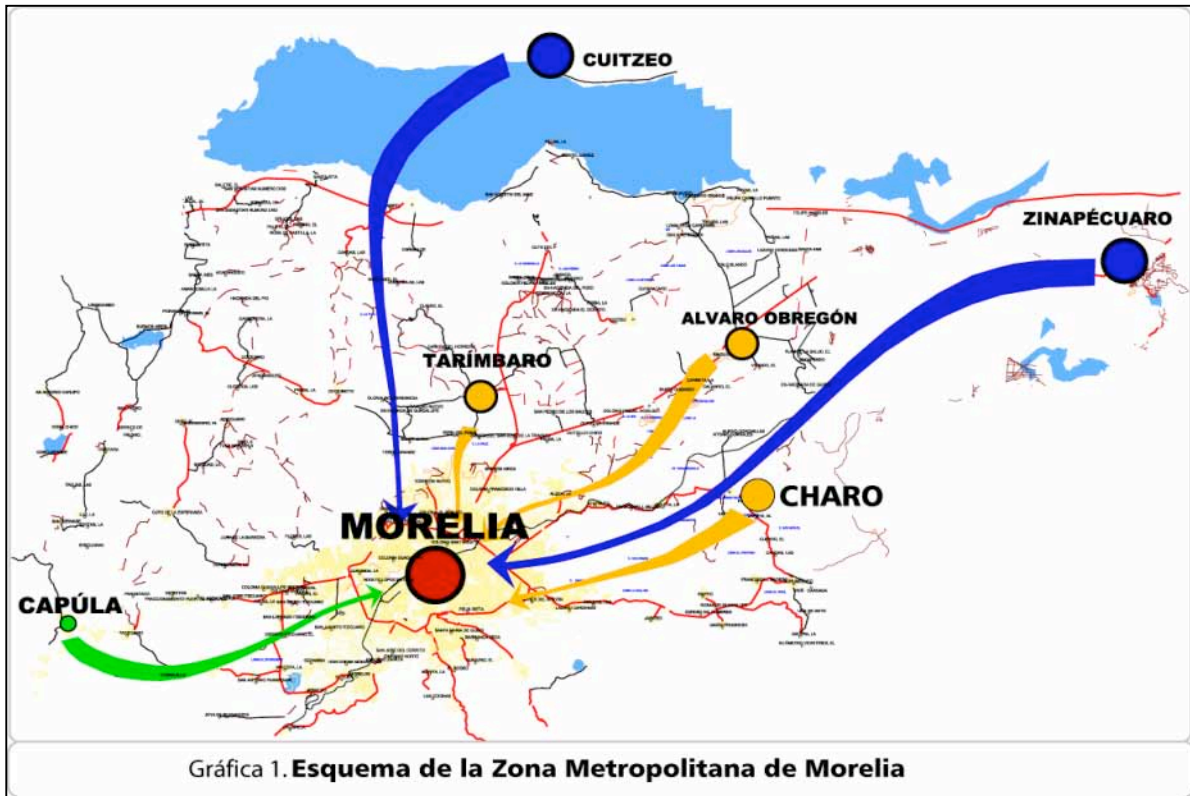




## 2.6. The draft program of the metropolitan area of Morelia.

One of the regional development strategies most important of the current state administration, is the creation of metropolitan areas, in order to integrate into a single administration and services strategy, different population centers, which by virtue of their growth, joined its urban nets and created large human settlements.





The strategy of metropolitan areas has the purpose of such cities, divided into two or more political and administrative jurisdictions, with two or more government authorities or state structures, each one managing its respective area, can standardize administrative, regulatory, urban planning, roads, public safety, transportation criteria as well as municipal services budget.

In Michoacán, Jacona Zamora, Uruapan, Sahuayo-Jiquilpan, and Lázaro Cárdenas have already signed agreements metropolitan areas meanwhile the population centers of the cities of Morelia, Tarímbaro, Charo and Álvaro Obregón will integrate the metropolitan area of Morelia.

In the case of the metropolitan area that aims to integrate in Morelia, the population centers proposed are not connected or united by urban nets, except the for the of the conurbation between Morelia and Tarímbaro. So, this does not explain either administrative or town planning integración.

However, in the case of the metropolitan area of Morelia, it is not just an agreement of administrative coordinations. In fact, state authorities are proposing land uses in all the territories of the signatory municipalities, making this intermunicipal coordination agreement, a regional urban development program, about a supposed and non-existent metropolitan area.

Under this project, there are some obvious negative effects. As urban development programs are the territorial planning instruments of population centers, the integration

settlements not connected into a single strategy, loose the possibility of applying regional ecological systems. Those one are the instruments of the territory planning outside of the population center, which are guiding the growth of cities and territorial development according to sustainability criteria and protection and conservation of environmentally important areas.

It is important to remember that there is already an instrument that establishes the criteria of occupation and land use in the Lake of Cuitzeo and the main part of the Cointzio basin, which is the Regional Ecological Ordering. It is compliance is already under the responsibility of the thirteen municipalities signatories, among them are Charo, Tarimbaro, Álvaro Obregón, Zinapécuaro, Acuitzio del Canje and Morelia.

## 2.7. Promoting programs for sustainable forest managements (conservation, restoration, protection and exploitation).

One of the opportunities presented in the sub-basin of Cointzio, in order to reverse the deforestation indicators and changes of the forest land use, is the recovery of forest resources, and development of strategies that give to the forest owners and holders, the benefit of their sustainable management.

Both the federal and the state government have programs of forestry development through which transfer funds to subsidize forest management in the state.

The Federal Government, through the National Forestry Commission (CONAFOR) implements the ProArbol Michoacan, which is a program to support the forestry sector in a single schedule orders, to grant incentives to the owners and landowners to take actions to protect, conserve, restore and use the resources in forests and arid zones in a sustainable way. The ProArbol seeks lower rates of poverty and marginalization in forest areas, generate development and economic expansion and boost forest planning and organization. This year's ProArbol received 2.308 requests of support for all the Michoacan state, and according to this, 137.8 million pesos have been payed. This resource is intended to promote forestry development, the establishment of forest plantations for the conservation and restoration of forest ecosystems and to enhance the capabilities of local producers and increase their competitiveness.

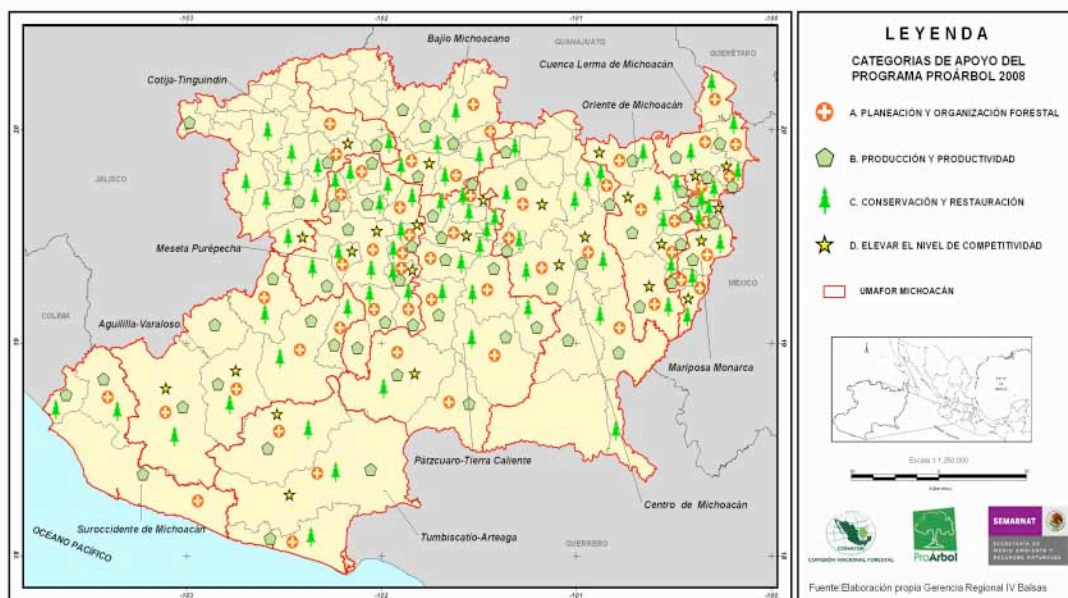
CONAFOR also operates in the State Community Forestry Program (PROCYMAF) led to ejidos and communities, mainly indigenous, who are owners or holders of forest land. The main objective of this program is to strengthen community schemes good forest management and to help owners and holders of these forest resources to increase their alternative incomes derived from this activity.

The PROCYMAF, supports the strengthening of social and human capital of agrarian woodland owners; actions for mitigation and adaptation to climate change as well as investment and forest management. PROCYMAF's investment in Michoacan, in 2009, will represents 9.3 billion pesos allocated for the subsidy of 149 projects. Also, to contribute to the preservation of rural and indigenous areas with high biodiversity, the Ministry of Urbanism and Environment of the state government (SUMA), and CONAFOR operate the

Biodiversity Conservation in Indigenous Communities program (COINBIO), which is the result of an initiative of indigenous communities supported by the federal government of Mexico which operated between 2003 and 2007 as a pilot project with financial support from the Global Environment Facility (GEF) through the World Bank.

The COINBIO supports the organization and community planning, training, identification of areas subject to management and conservation management of community conservation areas with high biodiversity; investment for community conservation of biodiversity, and regional strategic projects with a budget 4.5 million pesos during 2008.

*Distribution of supports of the Proárbol program in 2008 in Michoacán state.*



### Components of Forest Program Supports

- PROARBOL / PROCYMAF / COINBIO
- Soil conservation and restoration,
  - Reforestation,
  - Commercial plantations,
  - Payment for ambiental services,
  - Community strengthening,
  - Sustainable management of natural resources,
  - Production programs,
  - Community policing,
  - Community conservation areas,
  - Units of management and wildlife conservación,
  - Compensation for changes of forest land uses,
  - Ecotourism.