

Endangered rural economies in the periurban area of Bosque La Primavera, Guadalajara, Mexico

Amenazas contra las economías rurales en el área periurbana del Bosque La Primavera, Guadalajara, México

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Received: 2023-04-25

Accepted for publication: 2023-05-22

Published: 2023-06-30

ABSTRACT

Urban expansion often replaces forest and farmlands. In Mexico, cities like Guadalajara have become metropolitan areas, and the nearest forest reserves are constantly menaced by urban expansion, loss of farmland and the increase of touristic activities. The aim of this paper is to analyze the main causes and consequences of the transformation of rural economies around the periurban fringe of Bosque La Primavera (BLP), focusing on three key elements: (1) the Metropolitan Area of Guadalajara (MAG) replacing rural areas; (2) the dispossession of rural farmland on the urban fringe; and (3) the environmental deterioration of BLP caused by touristic activities. The methodological procedure is based on the logic framework and the Theory of Change (ToC). The dataset 2020-2021 was obtained from the records of the program implemented by the OPD-BLP. In addition, qualitative data was obtained from 12 key actors interviewed. Findings show three menaces to rural economies: urban pressure on the forest interface is a consequence of fragmented planning in the MAG; agricultural economies are substituted by industrial practices and soil/water deterioration; the increase of touristic amenities into the forest area demand new services, generate new menaces, and modify rural ordinary lives.

Keywords: Rural economies, urban sprawl, urban forest, periurban forest, Guadalajara.

RESUMEN

La expansión urbana a menudo reemplaza bosques y tierras de cultivo. En México, ciudades como Guadalajara se han convertido en áreas metropolitanas, y la zona forestal más cercana está constantemente amenazada por la expansión urbana, la pérdida de tierras de cultivo y el aumento de las actividades turísticas. El objetivo de este artículo es analizar las principales causas y consecuencias de la transformación de las economías rurales en torno al bosque periurbano de La Primavera, centrándose en tres elementos clave: (1) la metropolización de Guadalajara y la desaparición de las zonas rurales; (2) el despojo de tierras agrícolas rurales en la interfase urbana; y (3) el deterioro ambiental del Bosque La Primavera por el aumento de las actividades turísticas. El procedimiento metodológico se basa en el marco lógico y la Teoría del Cambio (ToC). El corpus se obtuvo de los registros del programa implementado por el OPD-BLP 2020-2021. Además, se obtuvieron datos cualitativos de 12 actores clave entrevistados. Los hallazgos muestran tres amenazas para las economías rurales: la presión urbana sobre la interfaz forestal; economías agrícolas transformadas por la demanda urbana y la presión turística sobre la vida rural ordinaria.

Palabras clave: Economías rurales, expansión urbana, bosque urbano, bosque periurbano, Guadalajara.

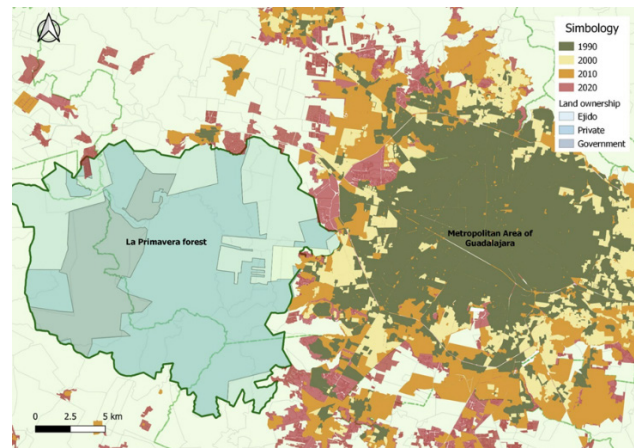
INTRODUCTION

Urban expansion often replaces forest and farmlands. The expansion of built environment on periurban forest modifies land use, hydrology, climate, and surface energy balance. According to some authors, urban sprawl will result in a loss of 1.8 - 2.4% of global farmland by 2030, with substantial regional disparities (Bren d'Amour et al., 2017). Under these predictions, in Mexico 683,000 hectares of farmland will be lost by 2030, which means a loss of 4,130 thousand tons of food production.

Since most of the urban expansion will take place in Latin America, Asia and Africa, governance of urban contention is a key element in securing the rural economies of the Global South. Containing urban expansion is crucial in managing urban areas and protecting forest buffers. Urban policy makers and planners must focus in preserving agricultural land and forest area by designing economic incentives and policy instruments that effectively protect agricultural activities, periurban green areas and rural development.

In Mexico, cities like Guadalajara have become metropolitan areas, and the nearest forest, Bosque La Primavera (BLP), is constantly menaced by urban expansion, loss of farmland and the increase of touristic activities. On December 27th, 2019, was published a decree whose content disclosed the budget of the Organismo Público Descentralizado "Bosque La Primavera" (OPD-BLP). Before the OPD-BLP, there was a Plan de Conservación y Manejo (Urban Conservation Areas Management Plan), but this instrument is obsolete, and every hazard is treated on de daily basis according to each particular incident, which could be different from those of other Natural Protected Areas (ANP). Because of the lack of agreement on which indicators should be used to evaluate the performance of the OPD-BLP, the monitoring and evaluation platform was never clearly established (figure 1).

Figure 1. Bosque La Primavera and urban pressure from Guadalajara Metropolitan Area



Source: Authors

The lack of interest of the ejidatarios, the legal figure for communal property, results in their little awareness of the transformation of the forest processes, their little presence in restoring practices, and the low benefits of the conservation budgets on their domestic economies. The aim of this paper is to analyze the main causes and consequences of the transformation of rural economies around the periurban forest of La Primavera, focusing on three key elements: (1) the metropolization of Guadalajara and the disappearing of rural areas; (2) the dispossession of rural farmland on the urban interfase; and (3) the environmental deterioration of Bosque La Primavera by the increase in touristic activities.

BACKGROUND

The most common approach to environmental planning of the periurban fringe does not respond to the specific problems of the peripheries. Adriana Allen (2003) affirms that "rural and urban characteristics tend to coexist more and more within cities and beyond their limits" (p. 135); then, the urban-rural dichotomy is inadequate to deal with planning system in the periurban area. Study cases in Calcutta and Kumasi, cities of the Global South, have revealed the periurban fringe as a loss of 'rural' aspects and the lack of 'urban' attributes. Moreover, periurban areas are usually surrounded by dense, generally impoverished slums and other forms of informal and/or irregular housing, characterized by inadequate infrastructure, low quality or no public services, and high rates of criminality (Mukherjee 2016; Simon, McGregor & Nsiah-Gyabaah 2004).

In Mexico, researchers have pointed to the role of the ejido in land policies, highlighting the legal and financial frames. Together with indigenous communities and immigrants, ejidos have resisted urbanization in Mexican territories with high rates of urban expansion, like Aguascalientes, Coahuila, Chihuahua, Oaxaca, Puebla, San Luis Potosí, Sonora, Veracruz and Yucatán. The strategies of resistance and negotiation are applied in a heterogeneous way, according to specific demands and the development of each one of the communities (Escobar et al, 2017).

Rural and urban features tend to co-exist within cities and beyond their limits. Some researchers have carried out a study with a sample of cases at the national level on the transformations of property relations and land tenure of ejidos and agrarian communities 25 years after the reforms to constitutional article 27 of 1992 (Torres-Mazuera; 2012; Torres-Mazuera & Appendini, 2020). There is a great heterogeneity within the ejidos and communities, despite sharing the same space, rural groups maintain different rights and interests, which puts at risk social ownership. The authors show the transformation of the ejido and agricultural communities at a time when neoliberal policies have left the field in the hands of the market.

Jean-François Prud'homme (1995), argues that Mexican agriculture has been subjected to constant pressures from agricultural policy reforms and land tenure legislation, impacting the economy of agricultural communities. The commercial opening and the deregulation of the economy displace the struggles for land tenure by the struggles for agricultural productivity. The 1990s are characterized by "crisis and adjustment" of the rural world in Mexico in the economic, social sphere and the network of micro and macro relations of the sector with the Agrarian Reform and the North American Free Trade Agreement (NAFTA).

Kirsten Appendini and Gabriela Torres-Mazuera (2008) point out that "peasants and the countryside are conceived as residual factors of a global, competitive, high-tech economy, in which small rural producers no longer have a place, being classified as inefficient and non-competitive" (2008, pp. 13–14). According to the authors, the agricultural dimension is characterized by the end of State action regarding the production, distribution, and consumption of agricultural products.

Urban forests are being considered for their environmen-

tal value that they offer to the city. With this item, the urban forest becomes relevant in terms of a rich variety of psychological, aesthetic, sociocultural, ecological, environmental, and economic issues (Ordóñez and Duinker 2014). Urban forests are necessary components for the general sustainability of a city, in this sense it is necessary to plan their management and their future (Steenberg, Robinson, and Duinker 2018).

RESEARCH STUDY

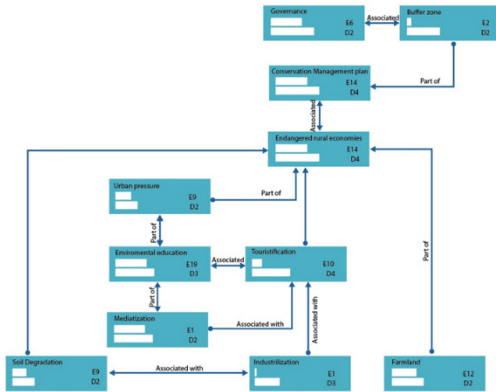
The methodological procedure is based on the logic framework and the Theory of Change (ToC). This method evaluates the designing of indicators, the sources of verification, and the final scores. The dataset 2020-2021 was obtained from the records of the program implemented by the OPD-BLP. In addition, qualitative data was obtained from 12 key actors interviewed, such as researchers from the scientific committee of the OPD-BLP (Marciano Valtierra Azotla, Jesús Gutiérrez Cacique, Josué Oliverio Alvarado Guzmán & Ma. Cruz Carrillo Rodríguez), public agents from the Secretaría de Medio Ambiente y Desarrollo Territorial (SEMADET) (Daniel Arcadio Gutiérrez Ramírez, Diego Eden-Wynter Blanco, Miguel Arturo Vázquez Aguilar & Marco Antonio Berger García), and scientific experts from the University of Guadalajara (UdeG) (Arturo Curiel Ballesteros, Carla Delfina Aceves, Salvador Peniche & Ana Isabel Rodríguez Quintana). Interviews were applied online between March and April 2022. The recorders were transcript and the final corpus includes official OPD-BLP documentation, geographical information, and translated interviews.

Once the interviews were done, the analysis of the collected data was processed by a qualitative software: ATLAS.ti This software generates a network analysis including five strategies:

1. Identification and classification of data source
2. Synthesis and clustering according to ToC
3. Labeling: selecting texts describing context, interactions, actors, and institutions
4. Coding: indicators associated with a theoretical category (a priori-deductive coding based on theory) and coding emerging directly from the case study (a posteriori coding based on fieldwork). As a result, a book of codes was built, where each code is assigned to a textual unit.
5. Networks creation: Linking categories (codes) and measuring the frequency of indicators verified in both, revised

documents, and the interviewed actors. Networks are formatted in diagrams, facilitating their treatment in a visual way (fig. 2).

Figure 2. Networks creation on Rural economies in the periurban forest of La Primavera.



Source: Authors

FINDINGS

Findings are organized into three main topics: urban pressure on the forest interface; agricultural economies transformed by urban demand and touristic pressure on rural economies.

4.1 Urban pressure on the forest interface

Although urban pressure is the first of the problems identified by the local government, the capacities of the existing governance structures are very limited. Urban sprawl in Guadalajara is caused by a city growing up “without any real planning”. Besides, the planning institute IMEPLAN has not intervene to stop land speculation form private owners nor informal settlers. Then, urban pressure has two main consequences for La Primavera: lack of a buffer-zone, and ineffective governance on the periurban forest and farmland.

4.1.1 Lack of a Buffer-Zone

Even though the Bosque La Primavera does not contemplate a buffer area, the government representatives of the OPD-BLP have tried to protect the forest perimeter in each of the municipalities. There are some unbuilt areas as buffer zones that could fulfill this function and mitigate the impact of the urban sprawl towards the forest (figure 2).

Figure 3. Urban pressure on Bosque La Primavera



Source: Authors

On the other hand, the weak articulation between municipalities, the metropolization planning of IMEPLAN and the scientific voices of academics limits the convergence in actions against urban pressure. First, because there is a disagreement on urban planning between the environmental primacy and the economic priorities. Therefore, the ecological problem of La Primavera, without an integrative political perspective is reduced to gardening (Peniche). Urban development as managed by IMEPLAN is not compatible with the interest of the sustainability of cities, so that the priorities of political entities tend to justify urban expansion (Curriel).

The existing alternatives to prevent the urbanization and agro-industrial activities from affecting the forest La primavera are determined by the following factors:

a) No one takes responsibility for a Buffer-zone. Everyone avoids responsibility, while state actors argue that the buffer zone is outside the perimeter of the forest, and then they can't do anything”, on the other side, municipalities sharing the border of the forest say that their competence is from the forest limits to the outside (Aceves). It is the power of the municipality to determine the land use, the municipal development plans regulate the land use in small and intermediate cities, [...] to the municipality it is not so much about giving incentives, but more about surveillance, control, supervision, and management (Vazquez). Therefore, [municipalities] have no interference in the forest but rather [the municipalities must] think about the needs of the population and the needs of the municipality (Aceves).

b) The buffer-zone is a closed file. The buffer zone is no longer an issue that could be added to another file within

new facts coming to light. Research and discussion on an intermediate space between urban, rural and forest areas have already been moved to the closed files (Vázquez).

c) There is no regulation for houses built inside the forest. There are two types of houses in the forest, one is associated to rich urban people within a high purchasing power, these houses are usually big luxury cabins, built in the middle of the forest (figure 3). The other type of house is a great contrast and expresses the social inequalities because those houses are built as informal settlements in the forest, living in poor conditions (Aceves).

Figure 4. Urban pressure on Bosque La Primavera



Source: Authors

4.1.2 Lack of governance on the periurban forest and farmland

The lack of governance is associated with the following problems:

a) Dissimulation and nepotism. Corruption, political patronage, and fraud are evident in many examples, but the most serious example is when they took away five thousand hectares of protection from the forest with CONANP doing absolutely nothing and that somehow created a precedent to violate the constitution, because protected areas are based on Mexico's constitutional article 27 (Curiel).

b) Lack of operating instruments. Legislation is not going to walk alone; it needs people to implement it [...] and obviously it needs a framework to be able to be applied (Aceves)

c) No public consultation and little citizen participation. When the Conservation Areas Management Plan was updated, there was not public consultation so that the docu-

ment had a consensus and acceptance by all the parties (Vázquez). Local people do not participate because urban elite groups discourage local periurban people; and local people are afraid of being prosecuted (Peniche). There is an ejidal commissioner that is renewed every 3 years, so there are many people who consider that it is complicated to have their own ejidal plans implemented in a short period of time (SEMADET).

d) Crime. There is also drug trafficking in La Primavera, which interferes and combines with environmental crime. Drug groups [...] limit not just government, but the landowners (SEMADET). There are places where drug traffickers are tentatively meeting or acting [...] So, La Primavera defends itself as best it can. But we can no longer think of the forest as a pristine area because it is also a crime scenario (Aceves).

4.2 Agricultural economies replaced by urban development

According to SEMADET, the two underlying problems in la Primavera are urban development and agricultural activity. The problem of agriculture is associated to three main determinants:

4.2.1 The industrialization of agriculture

More and more agricultural practices get closer to the transfer of agricultural production from rural economies to industrial levels, like avocado orchards, and agave production. Traditional farmland was conceived as a complete system where forest, little cattle ranching, and little agriculture coexisted. But nowadays the current population pressure defies forest because those activities have scaled through industrial massive production system.

Land ownership is also a problem because different types of ownership have also different goals. The landowners of La Primavera have different objectives. There is a large combination of land ownership related to different management of the territory. The complexity gets complicated, because there are some who do want to conserve the forest area, others who want to make sustainable use of their territory and others who have managed their property for public use and have an extra benefit by allocating their territory to public visitors (SEMADET).

The profitability of the land is the most important thing for

the landowners, who want to make usufruct of their heritage. This usufruct is closely linked to the popular idea of greater profitability in alternatives such as urban development (SEMADET). Besides, poverty and social exclusion are a constant problem in almost every ejido, and land sale is perceived as the solution to economic and social problems. Consequently, urban developable land is put for sale, not only the ejidal farmland, but the private farmland (Curiel).

4.3.2 Soil degradation due to water extraction and fire

Regarding the origin of the fire, SEMADET identifies that most of the fire accidents in the forest La Primavera come from outside the protected area and are generally linked to agricultural burning, because the fire goes away or is not controlled. In addition, fire incidents that occur in the spring season are very large and they are difficult to attend to due to the slopes and the topography of the place.

The second aspect refers to the OPD-BLP fire management plan by controlled burning. The geologist Arturo Curiel considers that it is a technique that has negative implications, because the surface layer formed by organic residues is fundamental for the forest soil. The biodiversity of the forest to fulfill the functions, in terms of water capture, in terms of regulation, and including cultural practices is lost when any type of fire happens. Any fire that destroys that surface substantially alters the ecological function in the forest, and therefore, it doesn't exist a beneficial fire because there can be no benefit when this layer is destroyed (Curiel).

Water appears as a problem that is often hidden in the management discourses of La Primavera. There are thermal waters in La Primavera, which are clearly interconnected with the forest life (Aceves). There have also been some reports of a water pollution. Tourism is concentrated in areas where there is water and touristic attractions are mainly associated with areas where there are sites with water.

4.2.3 Subsidized activities are rarely obtained by rural economies

The initial idea of the OPD-BLP program is that subsidized activities for restoration and conservation of Bosque La Primavera could benefit the rural communities among the forest area, favoring social ownership because in the ejido

there are many more people who benefit, who belong to the ejido, in such a way that the social impact ends up being greater (SEMADET).

Although there are large metropolitan areas where poverty is not present and the land values of the urban land are constantly growing, while more than 17,000 people live in places with the highest percentage of poverty (figure 5). Distributed in 12 different areas, the neighborhoods located within Bosque La Primavera, like Colinas del Tizate and Lomas de la Primavera are one of the urban zones with the highest rank of poverty and lack of public services. According to the Statistical Institute INEGI (2020), on these two neighborhoods between 90 and 100 percent of the houses lack basic services, more than 50 percent do not have decent housing spaces, around 40 percent of its population do not have access to health services, and 50 percent have some educational gap.

Figure 5. High poverty areas around Bosque La Primavera.



Source: CONEVAL, 2020

Even when there is a program to benefit landowners if they participate in conservation activities, the operation rules to become a beneficiary tend to privilege ejidos over small landowners without distinction of gender, race, ethnicity, religious creed, socioeconomic condition, or any other cause that implies discrimination. However, since most of the forest area is a private area, private individuals with small properties in the forest area have difficulties to receive federal public funds such as the programs of the National Forestry Commission, which generally focus on social property (SEMADET).

The Program has coverage for 11 ejidos with a potential

population of 2,991 people in the ejido property regime within the area, and 2 ejidos in its limits without endowment validation within the ANP with an estimated potential population of 187 people. In addition, it offers coverage to an undetermined number of private owners. The population benefited in the 2020 and 2021, in terms of ejidos, only 4 of 13 have participated. On the side of private owners, 9 of them have been subsidized by the program. In 2020, a subsidy was assigned to 8 projects, with the participation of 3 ejidos and 5 small owners. One activity for cleaning up trees infested with mistletoe and 7 for the creation of brigades for conservation and restoration actions, of which one assignment was not exercised. In 2021, a subsidy was assigned to 8 projects, with the participation of 5 ejidos and 3 private owners.

The results regarding the total requests and approvals show that in 2020 there were 3 requests for sanitation but only one was approved; while of the 13 requests for community brigades, 7 were approved. With the diversification of actions into 4 categories, in 2021 3 projects for sanitation were presented and 2 of them were approved; for brigades only 4 were presented and 3 were approved; for promoters 2 and 1 was approved; Regarding eco-techniques, of the 10 applications that were submitted, only 2 were approved.

As can be seen, one of the central factors for the distribution of the resource depends on the type of subsidy, with the privilege for investment in sanitation activities and the requests of ejidatarios and agrarian communities. However, the amounts that were exercised in 2021 diversified the actions to grant a percentage to other actions such as promoters and eco-techniques.

4.3 Touristic pressure on farmland and forest areas

Over the last decade, different attractions in Bosque La Primavera have increased the presence of visitors in the area. However, it is necessary to point out the touristification bias and the negative impact on rural and forest ordinary lives. There are 3 or 4 tourist service provider sites by the Mariano Otero entrance, and they are more aimed at these people who go up to do sports activities, more as individual visitors. On the other side of the forest, crossing La Primavera Village, there are rivers, cabins, picnic areas, aquatic parks, so it is more of a visiting as a group, a family of friends (figure 6).

Figure 6. Urban pressure on Bosque La Primavera



Source: Authors

The government budget to protect and restore La Primavera also promotes the generation of tourist services by subsidizing eco-techniques, seeking to strengthen those that receive visits from people, in places that are in high demand. Unlike the social and ejidal bias of the program, most of the benefits on tourist services are received by private landowners to adapt their houses for recreational use, terraces for social events, and Bed & Breakfast lodging. In contrast, ejidatarios require bigger support to implement tourist attractions in their territories, but they don't have the money to build touristic centers without risking domestic capital for their subsistence.

4.3.1 Negative impact from visiting and recreation activities

The Bosque La Primavera plays a fundamental role with respect to environmental education in the Guadalajara Metropolitan Area. However, environmental education has not been able to overcome 3 fundamental barriers: there is not a socio-environmental perspective in urban planning, it doesn't exist an eco-literacy in key authorities of different municipalities involved, and the programs have failed in promoting a healthy relationship between the Guadalajara inhabitants and their forest

Tourist attractions have omitted environmental education as a condition for visitors to enter in the forest area. There are park rangers and security patrols in certain areas, but it is more a plan to control negative behavior than introducing a socio-environmental perspective, not to help the forest, but

to preserve the forest because it plays an indispensable role for living conditions in Guadalajara (Aceves). The need for an eco-literacy in authorities is a key element in environmental education where forest programs have failed (Peniche).

Environmental education stays absent in the OPD-BLP, but a strong and consistent educational program is needed, because visitors will not always be the same, so it must be a permanent educative program (Aceves). The presence of visitors and leisure activities has a negative impact on La Primavera. First, because visitors are mainly weekend tourists, planning to have a picnic in the Río Caliente but who do not have an appropriate education to interact with the forest. Secondly, it is necessary to reinforce the control for cycling practices, because they leave the established routes and cause soil erosion. Motorcycling activities are even worse, because riders also leave the roads and generate erosion because the soil of La Primavera is not consolidated (SEMADET).

4.3.2 Introduction of exotic species

Fauna in La Primavera is constantly altered by exotic species introduced by visitors. People who enter for sporting activities like walking or hiking are almost always accompanied by pets. Other people who go to La Primavera to have a picnic there usually leave their pets going around and cause problems, they defecate, they bring bacteria infecting the fauna and sometimes they get lost and are left in the forest. The park rangers have detected the presence of different groups of dogs living in La Primavera that may be attacking the fauna in one way or another, but the problem should have also extended to other species, having a negative impact on the ecosystem.

V. DISCUSSION

The actual management initiatives of the OPD-BLP have had a positive impact in conservation and restoration of La Primavera, sometimes having also a positive economic impact on rural population around the forest. Listing some of the subsidized actions, there has been a control sanitation in public areas with local ejidatarios trained to do it and with a financial compensation of their work. As an example, in the Ejido San Francisco, there was a process of training a brigade of ejidatarios. They bought all the climbing and safety equipment and learned to climb with the appropriate measures to minimize the risks of climbing and pruning.

Training for climbing and pruning was provided by a group of arborists, and that is how the technical capacities were strengthened on landowners and ejidatarios, but different activities for restoring and conserving the Bosque La Primavera have specific skills needed which are usually absent in rural inhabitants of the periurban forest of Guadalajara. Among the negative impact on rural economies, the activities disposed by the plan present multiple barriers for local people to be eligible. First, timing for working in forest activities does not consider agricultural calendar and rural rhythm in farmland. Second, because the small landowners have it difficult to restore trees in their properties when it is localized in a hillside with very little accessibility, so it represents a lot of labor and the transfer of the same people to high places. Third, because many applications do not proceed due to lack of complete documentation, sometimes because they did not prove legitimate ownership, and sometimes because their properties are not in an area for public use.

Everything that happens in La Primavera is taken to the political arena (Peniche). The relevance of the Bosque La Primavera on public opinion is due to its media status and its closeness to the GMA, because it is the most important area in terms of social perception, it is highly visible to the public and there is very significant social and media pressure on every incident happening around the forest (SEMADET, Curiel). On the other side of the media and specialists, decisions on different actions towards La primavera are mostly imposed on landowners and ejidatarios. There is no public consultation of landowners and ejidatarios, who would be interested in protecting and preserving this natural area (Vázquez).

Rural landowners near the forest are underrepresented in tourist attention services because it often requires an initial capital to invest. Besides, the OPD-BLP considers that it is easier to work with private owners than ejidatarios, even if the aim of the program is that the collective benefit is greater than the individual benefit (Curiel). There would have to be a differentiated treatment, to begin with, for the use and enjoyment that each one has of the space. It is not the same to depend on the space to eat than to depend on the space to put your feet up on a cushion and watch the first steps on Saturday night. [...] it is very difficult for a totally abstract legislation to fit everyone, because in effect, within the forest not everyone is the same, there are some common needs, we should all understand the forest in a similar way, but it is a fact that we do not (Aceves).

CONCLUSION

Rural economies in the peripheries of metropolitan areas are constantly facing urban pressure and lack of governance. An approach is needed that contemplates the diversity of circumstances of the people inhabiting in rural areas close the cities, from farmers to those who have elegant cabins and weekend houses. There is a lack of economical support from the government to the landowners and ejidatarios of the Bosque La Primavera; the planning policies, programs and instruments are partially implemented due to the influence of private property over the social and rural landowners.

The Bosque La Primavera as a zone of impact and territorial influence on the rural/urban border reflects problems of urban pressure exerted by the city on the periphery in response to the demand for housing. The interaction between rural families and Bosque La Primavera is limited both in conservation activities and exploitation of resources. First, because subsidized activities to recuperate forest areas require technical training to be eligible. For example, there is a specific expertise for sanitation projects and conservation practices which is not from the common practices among rural and ejido-people from the area.

Furthermore, peri-urban area is characterized by the mixed use of the land, which implies tensions by interposing interests, norms, representations and values on the space. The regulations of land use and land values have a direct effect on socioeconomic dynamics. Besides peri-urban localities are strongly focused in their history, identity and traditions more than new economic opportunities on the touristic and forest sectors. As a result, precarization of rural areas and farmland are strongly related to the industrialization of agricultural production, the touristification of the forest area of Bosque La Primavera and in the unequal access to public programs offering financial benefits to people who preserve and restore green areas.

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