Informal settlements’ needs and environmental conservation in Mexico City: An unsolved challenge for land-use policy

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Abstract

The aim of this article is to analyze the effectiveness of land-use policy in Mexico City in controlling the expansion of informal human settlements in peri-urban zones of high ecological value. It is argued that Mexico City’s land-use policy has been reactive and internally inconsistent, failing to take informal settlements into account, has not offered the poor access to housing with adequate services and greater security in terms of land tenure, and lacks the necessary financial resources and institutional capabilities for providing solutions to these problems. Through a case study of informal settlement management policy in the Tlalpan Delegation, applied in what has been termed SC or “Conservation Land,” we conclude that local government exhibits an inability to confront the new challenge of urban sustainability, that it resorts to conventional solutions which give rise to contradictory situations where political decision-making prevails over ecological considerations, so land-use policy is permissive and does not halt informal urban expansion in areas of high environmental value.

Introduction: informal settlements and urban policy

One of the most dramatic manifestations of poverty conditions and inequalities in Latin American cities is the persistence and even increase of informal human settlements (IHSs). It was estimated that in 2005, there were 134 million people in Latin America and the Caribbean living in such settlements – this figure represented a bit more than 30% of the total urban population –, and that from 1990 to 2005 there was an increase of slightly more than 23 million people living in this type of settlement in the region (UN-HABITAT, 2006, Table 1.2.1). Despite this growing number of inhabitants with illegal and precarious living conditions, land-use policies have been unable to find solutions for these settlements, and that has a direct repercussion on Latin American cities’ lack of social justice and environmental sustainability. Urban policies have generally failed to address the fundamental determinants of informality and have evidenced a lack of orientation for the purpose of mitigating the impacts of social and economic vulnerability among the urban poor and meeting their basic needs (Winchester, 2008:28; McGranahan et al., 2008:77, Smolka and Larangeira, 2008:100).

The main contribution intended by the authors of this study is an analysis of what possible solutions local government can offer for a challenge that is currently most significant: how do we reconcile the protection of ecological conservation areas and the needs of informal settlements in a peri-urban zone? New urban development patterns should implement measures to cut local, regional, and global environmental costs and, therefore, are in need of effective policies for managing urban expansion.

Conceptually this paper deals with how urban policy confronts the challenge of working with new innovative schemes not only to address the traditional needs of informal settlements such as housing, basic services, and land tenure security, but also to incorporate the conservation of the environment where these settlements are located. The upgrading and environmental conservation of IHSs have become very important areas to focus on, and the emphasis and operational support given to these areas through more innovative mechanisms show the present effectiveness of land-use policy in each city.

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1 The term “delegation” refers to a subdistrict or municipality within the Federal District (D.F.). The Tlalpan Delegation is one of a total of 16 delegations that comprise the D.F.

2 In Spanish, SC refers to Suelo de Conservación, or literally, “Conservation Land,” which is land of high ecological value.
Several analysts in Latin America have used a wide variety of terms to refer to informal settlements, among which we could mention the following: informal housing, irregular settlements, squatter settlements, self-help housing, colonias populares (lower class neighborhoods), etc. (see Turner, 1965; Magin, 1967; Portes, 1972; Cornelius, 1975; Burgess, 1982; Gilbert and Ward, 1982; Connolly, 2009). Naturally, none of those terms fully conveys all the dimensions of the problems affecting those settlements or the heterogeneity among them. In essence, what they all attempt to describe is that poor people try to find housing solutions on their own; they occupy urban land, in most cases illegally; and engage in the settlement process in the absence of public services, albeit the conditions of their dwellings can improve over the years.

The precarious nature of dwellings with insecure land tenure is as serious and severe as is inhabitants’ poverty according to their income and employment status. In Latin America, estimates vary from one country to the next, but it has been found that in some cities, a significant share of the population—which could be as high as 50%—lives in informal conditions in terms of land tenure, occupying public or private land illegally (Winchester, 2008:33). Unfortunately, the inability of urban policy to resolve the urban poor’s lack of access to land or affordable housing led to a high degree of tolerance by urban governments as regards informal settlements. Urban governments were forced to “accommodate” a large number of poor inhabitants in the urban space. This “accommodation” was not only expressed in the form of great tolerance, but also facilities for occupying urban land illegally and thus increasing the number of precarious dwellings (Smolka and Larangeira, 2008:101). One strategy that has remained constant in efforts to deal with this issue has been land tenure regularization, a strategy that has been criticized because it leads to land price rises and promotes greater irregularity in land occupation. Many of the settlements that are regularized give in to new pressures for incorporating even more dwellings at greater densities through a large number of informal occupations in surrounding areas, since infrastructure provision helps to encourage more informal settlements (Smolka and Larangeira, 2008:103). In fact, regularization programs are focused on dealing with the consequences, rather than with the causes, of informality. Regularization is an “easy way out,” being a short-term, relatively inexpensive solution for urban governments. It is politically advantageous because it facilitates manipulation of inhabitants and provides a certain degree of control over an illegal city (Durand-Lasserve, 2006:287).

Recently, informal human settlements (IHSs) have been the object of renewed interest because solving this problem has become a new challenge from the perspective of urban sustainability: it is imperative to cope with rapid urban growth in many cities, to endow them with infrastructure and health and educational facilities, as well as to improve living standards among the urban poor because it has been claimed that ameliorating conditions of poverty will surely have a positive effect upon the urban environment.

Throughout this decade, the problem of poverty and IHSs has been closely linked to the Millennium Development Goals (MDGs) (www.un.org/millenniumgoals). For example, for MDG Goal No. 7, Ensure Environmental Sustainability, its Target 4 proposes by 2020, “to have achieved a significant improvement in the lives of at least 100 million slum dwellers.” This puts pressure on the international community to tackle a specific feature of urban poverty which heretofore has not been adequately captured in national statistics, much less in urban ones. By overlooking the problem of IHSs, governments are indirectly adopting urbanization models that are neither sustainable nor acceptable (UN-HABITAT, 2006:50).

Any city that undergoes a certain degree of economic development and population growth has a series of complex, changing demands for non-urban land, particularly in adjoining areas located in what has been called the “urban fringe” or “peri-urban area.” As regards environmental impacts, several different changes and processes characterize peripheral urban spaces. Some important processes related to the environment are: encouragement of a scattered pattern of urban occupation for housing and infrastructure; the emergence of informal settlements for groups of poor inhabitants with precarious dwellings and a deficit of public services; disposal of solid and toxic waste; extraction of building materials and surface water and groundwater; and alteration of river courses; flooding and landslides; and environmental stress in conservation areas, green areas or recreational spaces (Douglas, 2006:18; Aguilar, 2008:134). To a large extent, the aggravation of urban problems such as environmental damage is derived from the inability of local governments to manage rapid urban growth, to offer public goods and services to all social groups, and to evidence suitable technical and political capacities (Aguilar, 2008:133). On this issue, two relevant questions arise: How are cities moving towards more ecologically sustainable patterns of production and consumption and land-use policy? And: How can zoning and development controls be used not only to protect environmental quality for the rich and powerful but also for the most socially deprived groups?

In short, it is obvious that conventional approaches to informal settlements need to be transformed. As McGranahan et al. (2008:93) point out, looking to the future it is clear that steps need to be taken now to avoid a new generation of IHSs from forming, not by halting urbanization, but by accommodating urban growth more efficiently and equitably: local governments should stop regarding IHSs as a symptom of over-urbanization and stop utilizing land-use policies as a means of curbing urban growth. Instead, these governments need to: work constructively with IHSs dwellers, design and apply measures for informal land and housing markets, and develop physical and financial strategies for future growth.

To this issue, our paper will attempt to make a contribution by analyzing the effectiveness of land-use policy in Mexico City in controlling the expansion of informal human settlements in peri-urban zones of high ecological value. Our study explores this challenge in the Talpan Delegation, which recently established a specific policy to attempt to cope with this problem in the city’s “Conservation Zone (SC).” This strategy functions as a pilot plan worth assessing in order to determine the effectiveness and repercussions of a policy of this nature at the local level.

Following this introduction, the paper briefly outlines the relevant position taken by urban policy towards illegal occupation of private and ejido and communal land, and the application of land tenure regularization as an ex-post solution. It then goes on to emphasize the importance of the SC in the Federal District, but also...
the lack of consistency of urban and environmental zoning in this area, as well as the absence of a policy to manage informal settlements. Subsequently, the authors provide a detailed review of this strategy’s weaknesses in terms of managing informal settlements in the Tlalpan Delegation. The paper concludes with a number of reflections on the significance of this investigation for urban and environmental land-use policy in Mexico City.

Research for this article has been based on information derived from the following: existing studies on the topic; census data; a review of documentary material and urban planning regulations in the Federal District; statistical data and cartographic material provided by officials of the Tlalpan Delegation on informal settlements and the strategy for managing them; fieldwork in the SC and in several informal settlements to observe the application of the pilot plan; a series of semi-structured interviews with different officials of the Tlalpan Delegation in charge of managing informal settlements in the second half of 2008 and first half of 2009; a revision of the Official Gazette of the Federal District to identify regularized lots in the 2000–2007 period; and calculations of urban expansion in the SC based on satellite images taken between 2003 and 2007.

Urban policy and informal settlements in Mexico City

According to official figures, Mexico City had a total of 19.2 million inhabitants in 2005. At this time, its metropolitan zone has expanded over three different entities: the Federal District, the State of México, and a small portion of the State of Hidalgo. Although the city was founded and started to grow in the territory of the Federal District, nowadays this entity concentrates less than half of the total population (45.3%). Due to this expansion, its metropolitan zone is comprised of a total of 60 municipalities and 16 delegations (see SEDESOL, CONAPO, and INEGI, 2007).

In general terms, the population of the city over recent decades has been characterized by a diminishing growth rate. In the 2000–2005 period, the data shows that demographic growth maintained a slow pace, at a rate of 0.89% for the whole city. However, it has to be emphasized that there are wide variations in demographic growth within the different components of the metropolitan zone. On the one hand, the Federal District exhibited a growth rate of 0.27% in the same period, while on the other, the rest of the metropolitan periphery in the states of México and Hidalgo had a growth rate of 1.43% for the same years. Much of the higher peripheral growth is linked to poor neighborhoods and informal settlements that develop in these areas, a process that occurs even in the periphery of the Federal District, which has a growth rate doubling that of the whole entity (Aguilar, 2008:136).

Since the second half of the twentieth century, informal settlements multiplied in Mexico City’s urban space. From then on, Mexico City’s land-use policies have failed to effectively solve the problem of informal human settlements occupied by the poorest inhabitants. Thus, the peripheral and diffuse expansion of informal settlements that we can observe in the country’s largest metropolis is attributable, to a large extent, to the lack of access of a major share of the low-income population to affordable housing or lots. Several studies have analyzed this issue at different points in time (Iracheta, 1984: Chapter 6; Varley, 1987; Aguilar, 1987; Ward, 1998: Chapter 6; Pezzoli, 1998).

We note two important features characterizing this lack of effectiveness in policy application: first, urban policy has had to take a tolerant position towards illegal occupation of private land and also ejidal and communal land. Secondly, once these informal human settlements have been established, urban policy has found it necessary to resort to land tenure regularization as an ex-post solution to this problem and that, in turn, has encouraged the increase of informal settlements.

Tolerant policies and occupation of communally owned land

The most common method used for occupying ejidal and communal lands is to purchase lots from a supposed owner who has not complied with all the legalities pertaining to such transactions. In this case, the owner is the one who has broken the law, and what we find here are clandestine land divisions whereby the owners of the land in question usually agree to them and there is complicity on the part of political actors. This type of land tenure was instituted in 1917 by Mexico’s Agrarian Reform, which granted property rights not to individual peasants, but to rural communities (called “agrarian nuclei”) and so, the community is the proprietor of all the land, while each individual has a piece of land that he or she has the right to work. The rights of a nucleus to the land were inalienable. Until 1992, ejidos could not be sold or the lands used for other purposes; i.e., the sale of ejidal land was legally considered as “non-existent” (Tomas, 1997:26; Azuela, 1997:222–224; Ward, 1998:194–195; Duhau, 1998:150–151).

However, despite the above-mentioned considerations, due to the great housing demand among the urban poor, thousands of hectares of communal and ejidal land on the outskirts of the city were occupied illegally. With this, the existence of IHSs has meant that – as has been pointed out by Azuela and Duhau (2006:191) – the city is divided into “legal” and “illegal” areas. This has profound implications for society as a whole for it is then not possible to claim there is a single “public order” that includes legal norms which all members of society must obey, but rather, this situation demonstrates that a significant number of inhabitants have access to urban land by way of (illegal) processes different from those followed by the rest of society. Therefore, it is clear that not all individuals are bound by the same rules and, at the same time, an illegal land market is legitimized.

During the 1970s and 1980s, this kind of occupation of ejidal and communal areas was quite commonplace; although it was not in line with urban policy, it was protected by Mexico’s Agrarian Reform. This is contradictory because, in fact, the city was expanding and land devoted to agriculture and/or with certain environmental value disappeared.

As of 1974, CORETT (Comisión para la Regularización de la Tenencia de la Tierra, or Commission for Land Tenure Regularization) (see Diario Oficial de la Federación [Official gazette of the federal government, published daily], November 8, 1974) became the only federal agency to assume responsibility for regularizing ejidal and communal lands. Thus, the issue of illegal urbanization via this kind of property became a federal matter and local authorities were cast aside because they no longer could be involved in the issue of land tenure regularization and therefore have little control over this type of urbanization.

Two points are crucial for explaining why this informal urbanization process still persists. First of all, regularization of these informal settlements has served as a mechanism for maintaining political stability within the urban political context (Ward, 1998:195; Varley, 2006:209); this has come to comprise a strategy of the Mexican State to achieve “social integration” of the urban poor, a process that accelerated mainly in the 1970s as a cliental-

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6 The only way a settler who bought land from an ejidatario (member of an ejido) can secure a deed to that land is through a presidential decree that expropriates the ejidal land and transfers it to CORETT, an agency in charge of land tenure regularization at the federal level; subsequently, CORETT sells the land to each settler on an individual basis.
Land tenure regularization

Once the rise of IHSs has been allowed, a process of land tenure regularization has been applied to them, by means of which their property rights to the lot are acknowledged and urban government recognizes the settlement in legal terms. However, several studies have affirmed that a sense of “tenure security” is more important than the property deed itself, and that legal tenure is not necessarily a prerequisite for housing improvements. De Soto (1989) has coined the term “expectation of property rights” (see also Varley, 1987; Macedo, 2000).

In the case of Mexico City, as of the 1970s, land regularization became a common form of government action in IHSs where the poorest strata of the city lived. This conveyed a very clear message to those social groups: that eventually, the federal government – jointly with the local government – would support the regularization of informal urbanization; evidently, this encouraged the existence of IHSs.

As regards the political and social effects of tenure regularization policy upon lower class neighborhoods, it has helped increase the persistence of informal settlements and, in addition, has involved a “privatization” of lands that are “socially” owned. This in turn sets off urban land speculation, which jeopardizes settlers’ chances of keeping their lots (Iracheta, 1984:414–419; Duhau, 1998:256–257). In other words, regularization has prevented urban policy from being innovative, searching for its own solutions to the problem of the urban poor. Moreover, it has failed to help control the urban expansion process and tends to perpetuate and protect the illegal land market (Azuela and Duhau, 2006:204).

Thus, urban land problems and regularization related to ejidal and communal land (which have existed for decades in Mexican cities) have been governed by agrarian policy at the national level, rather than by the implementation of an ad hoc policy in each state of the country (Azuela, 1997:230). This situation reveals the lack of autonomy and effectiveness of local urban policy to resolve the matter of land tenure in informal settlements.

Informal settlements and ecological conservation

A critical issue is that many informal settlements occupy land that is unsuitable for urban development, which has resulted in the destruction of environmentally sensitive areas. For example, such settlements occupy hills to the south of the city in zones designated for ecological conservation (see Pezzoli, 1998; Schteingart and Salazar, 2005; Aguilar, 2008); this situation links the land-use question to the concept of sustainability, as well as to issues about livelihood opportunities for the urban poor; it therefore poses a key challenge for land-use policy.

Mexico City has entered a stage in which, on the one hand, there is a great need for public works, housing, and service infrastructure for the urban poor. And, on the other, huge social pressures are being exerted to conserve the surrounding environment. Trends in urban growth have indicated that this city is continuing to expand towards the periphery despite the fact that, since the 1980s, Mexico City’s government has implemented stricter norms in the southern part of the city with cyclone fences to establish the boundaries of the urban zone and of environmentally valuable areas, and has also instituted a more sophisticated zoning system. Nevertheless, previous analyses have shown that political negotiation has the upper hand over urban and environmental standards. That is the case of the so-called “zero-growth agreements” implemented in the Tlalpan Delegation as of the 1990s, which were an outcome of a negotiation between local officials and inhabitants of informal settlements for the purpose of avoiding future urban expansion, so as to later attempt to regularize plots of high ecological value (Schteingart and Salazar, 2005:136–146).

The ecological implications of these tendencies have been a source of enormous concern due to ecological degradation caused by the persistence of informal settlements lacking basic services (sewerage, water, waste disposal) or effective policies for protecting ecosystems. This set of realities calls for a new approach towards formation of the built city since cities should assume the responsibility of protecting local ecosystems and regenerating their natural resource bases. It is essential to see to it that the growing demand for land, housing, water, and food is reconciled with the urgent need to maintain the city’s ecological base. Efforts to promote sustainable human settlements should go beyond mere administration of their growth with dividing lines or zoning standards. The main task is not to propose treatment for two separate realities: urban space and environmentally valuable space. Such a vision virtually rejects the notion that both spaces can be viewed in an integral fashion, and that urban inhabitants are just one more component of ecosystems.

Tolerance for illegal land occupation has persisted due to the role it plays in political mediation and social control, which has aided the local government in its efforts to maintain political legitimacy and social stability. This approach towards informal settlements has undoubtedly been useful in the past, but the social and environmental costs currently related to this type of solution have been increasing dramatically.

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7 The existence of IHSs affects urban policy because there is negotiation with politicians and the exchange of favors for votes. In the end, those favors turn into economic benefits for the invaded land through the services it comes to acquire. Some politicians even encourage illegal occupation of public lands (Macedo, 2000).

8 During President Luis Echeverría’s administration (1970–1976), close to 28 000 ha of ejidal land throughout Mexico were expropriated, whereas during that of Carlos Salinas de Gortari (1988–1994), a little over 58 000 ha of this type of land were expropriated (Varley, 2006:210).

9 In Mexico City, neighborhoods or districts are called colonias and have specific names.

10 According to Duhau (1998:206), from 1980 to 1990 ejidal lands in the Mexico City Metropolitan Area (MCMA) accounted for 30% of land included in the urbanized area through the formation of lower class neighborhoods (colonias).

11 These “zero-growth agreements” failed to curb urban expansion, but did help consolidate settlements (Schteingart and Salazar, 2005:142).

12 Pezzoli (1998:346–348) points out that the main drawback is that recent government regulations and agencies related to environmental protection are more interested in this traditional objective of social control and political mediation than they are in truly protecting the environment.
Urban policy and informal settlements in the Conservation Land of the Federal District

The concept of Suelo de Conservación (SC, to be understood as Conservation Land) in the Federal District arose in the early 1980s, when in the Federal District's Urban Development Plan primary zoning was established, dividing its territory into two major categories: urban and non-urban. In turn, two subzones were approved for the latter: a Buffer Zone, or transitional area between urban and rural realities, and a Preservation Zone, under a strict policy for protecting its environmental assets and prohibiting urban occupancy there. The Federal District’s Preservation Zone was the antecedent of the SC (Departamento del Distrito Federal, 1980); it covers a total of 88,442 ha, representing 59% of the Federal District’s territory.

The SC shows two main characteristics for the purpose of this analysis: first, from an ecological point of view, the SC includes most rural areas to the south of the city and large portions of the mountain slopes of the Chichinautzin, Las Cruces, and Ajusco ranges. And second, it currently contains within its limits 36 rural villages that have existed there since the beginning of the twentieth century, and a high number of informal settlements, 804 in 2002, the majority of which (approximately 47%) are concentrated in two delegations: Tlalpan and Xochimilco (PAOTDF, 2003:11).13

The SC is of great significance for Mexico City, particularly as regards the principal environmental challenges faced by the city’s inhabitants. In the last two decades, urban expansion has entailed high environmental costs because of the destruction of natural resources, the deterioration of city dwellers’ living standards, and the fact that different urban zones are so environmentally vulnerable. It has been reported that the city’s urbanized area increased from 1500 km² in 1990 to 1800 km² in the year 2000. Similarly, it has been estimated that average annual deforestation is between 240 and 500 ha in the Federal District due to illegal cutting, forest fires, irregular occupation, and changes in land use (Programa General de Desarrollo Urbano (published in the Official Gazette of the Federal District) 2003:8–9, 25).

Given the urban pressure on the SC, the biological diversity existing in its ecosystems is severely threatened. This biodiversity includes over 1800 plant and animal species, as well as other natural resources which provide environmental services and goods to the Federal District, among which the following are particularly important: recharge of the aquifer from which 57% of the water consumed by the city is withdrawn; capture of suspended particles; carbon fixation and the production of oxygen thanks to the presence of wooded areas; the cultivation of agricultural products; ecotourism activities based on the scenery/landscape, all of which is essential for the sustainability of the whole city and the quality of life of its inhabitants (PAOTDF, 2005:4; Secretaría del Medio Ambiente, 2007:19–21).

Although the major problem emphasized in planning regulations in the SC is related to halting urban occupation, the fact is that there are other problems which, as a whole, comprise a very complex situation for environmental conservation. In the first place, there has undoubtedly been a loss of ecologically valuable land in the SC due to new illegal urban occupation in the form of new IHSs or the densification of existing ones. Secondly, environmental damage can be noted in illegal deforestation or in the destruction of other types of plant cover not always associated with urban occupation. In the third place, informal settlements cause soil and aquifer pollution because they lack the most basic services such as water, sewerage or solid waste collection. For these reasons, an essential part of the environmental agenda for the SC should consist of improving and consolidating poor and informal settlements, as well as enhancing inhabitants’ living conditions.

At present, there are two main regulations in the Federal District setting down the major rules for land use in the SC. In environmental terms, we have the General Program for Ecological Planning in the Federal District (Programa General de Ordenamiento Ecológico del Distrito Federal) issued in 2003, which is based on the Environmental Law of the Federal District (published in the Official Gazette of the Federal District on January 13, 2000) (Ley Ambiental del Distrito Federal, Gaceta Oficial del Distrito Federal). And from an urban standpoint, there is the General Program for Urban Development (Programa General de Desarrollo Urbano (published in the Official Gazette of the Federal District on December 31, 2003) which, in turn, is grounded on the Urban Development Law of the Federal District (Ley de Desarrollo Urbano del Distrito Federal) issued in 1996 (published in the Official Gazette of the Federal District on August 11, 2006). For its part, each delegation (see note 2 of this article) has a Delegation Development Plan also applied to the SC. Nevertheless, there are additional norms at the federal level that also operate in the SC. Two examples of these are: the Forestry Law, which regulates the utilization of forest resources, and the Agrarian Law, which sets the norms for regularizing tenure of land owned collectively (ejidos and communal areas). So the SC is actually “over-regulated” and rather than favoring its regulation, this tends to lead to a lack of coordination and to fragmentation of the actions taken by the different tiers of government. Evidently, that weakens local land-use policy in this area.

Our analysis of current regulations concerning land-use policy in the SC of the Federal District reveals two major inconsistencies with regard to informal settlements: on the one hand, urban and environmental zoning are not mutually consistent; and, on the other, the absence of an explicit policy for managing informal settlements is particularly evident.

Lack of consistency between urban and environmental zoning

In Mexico City, environmental zoning began as of the mid-nineties as a response to concerns among social groups regarding environmental deterioration and, particularly, among owners of land in the SC about preserving forests and areas devoted to agriculture and livestock. The aim was to continue to maintain these areas’ productive capacity and also the environmental services they provide for the inhabitants of the Federal District. However, urban regulations have existed since the late 1970s with the Urban Development Law and the zoning that created the SC in the early 1980s; since then, urban regulations for this zone have been updated, always with a view to containing urban expansion and preserving the ecological characteristics of this zone. All these “politics of containment,” as Pezzoli (1998:3) has called them referring to the official regulations, unfortunately have aimed at reinforcing a sharp division between urban and environmental space.

Environmental norms related to land use essentially focused on the rural zone, in view of the fact that the General Program for Ecological Management in the Federal District set as a main objective to determine land use in the rural area of the Federal District, as well as to regulate and promote productive activities there (Programa General de Ordenamiento Ecológico del Distrito Federal 2000–2003). And although this program mentioned an interest

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13 It is worth mentioning that not only poorer groups occupy SC land. There are cases of formal housing developments in the SC. Schteingart and Salazar (2005:147–172) have documented how a bank obtained an official permit to construct a housing development in the SC which, in the end, was detained due to reports from local neighborhood committees of failure to comply with environmental regulations in the Cuajimalpa Delegation. Another example refers to developments called Obelisco, Bosques, and La Punta, which invaded slopes and river beds, and are having negative effects on environmental conditions (La Jornada [newspaper], August 22, 2005, quoted by Aguilar, 2008:144).
in counteracting urban sprawl, it was clear that this was not one of its main functions. The program defines for the SC six major types of land-use zones: Forest under Conservation, Forest for Protection, Agroforestry, Agroecology, Protected Natural Areas, and Rural Towns and Villages (see Table 1).

Urban zoning in the SC is included in the General Program for Urban Development and concentrates on two aspects: first of all, on the 36 rural villages and towns maintaining rural characteristics, with policies for conserving cultural heritage areas (churches, haciendas, etc.) and urban improvement and also measures for curbing urban sprawl. Secondly, Areas for Specific Action are established. These areas define the priority to be assigned to different zones of the SC to be subject to a specific kind of treatment. In the SC there are three such areas: Ecological Restoration, Ecological Preservation, and Rural and Agroindustrial Production. The areas are spatially distinct from the six zones defined in the General Program for Ecological Planning in the Federal District (see above).

These two types of zoning involve two totally different approaches to land use in the SC. Environmental regulation is of a more strict nature, is formulated in terms of the natural and ecological features of the different environmental zones or units, and is more concerned with environmental characteristics such as maintenance of productive activities, aquifer recharge or biodiversity preservation than with the social complexities of urban occupation and informal human settlements. In contrast, urban regulations on land use appear to respond more to social pressures, defining more general zoning in which human occupation is incorporated and expected (Aguilar, 2008:136–137).

Observing these two approaches, we find that land-use policy has created a division between rural areas of occupation and urban ones. Thus, legal and technical instruments have been developed to separate these two spheres – rural and urban –, zoning and assigning different policies to each. Hence there is a major contradiction in the SC: while there is overregulation of it, the regulations are not sufficient in terms of controlling productive activities, environmental deterioration, and informal settlements (Aguilar, 2008:137; PAOTDF, 2005:24–26).

However, the existence of the two above-mentioned types of zoning reveals a clear disagreement over the way to interpret sustainable development in the Federal District. Instead of having a single zoning plan and thus dealing with urbanization in just one urban-environmental position, a fragmented, disjointed view of the city continues to prevail, more in line with the interests of each sector of local government. All that was accomplished was to add an environmental dimension to norms, but no single set of principles was furnished to address the concept of urban sustainability (see Burgess, 2003:196–197).

Table 1

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<th>General Program for Ecological Planning in the Federal District</th>
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One of the most significant shortcomings of urban-environmental policy is that it has overlooked the existence of IHSs in the territory of the Federal District and has failed to establish specific policies or strategies for managing and resolving the problem of these settlements. Up to 2006, the stand taken by the Government of the Federal District in this regard has been quite evident. Nevertheless, in the new administration of the Head of Government of the Federal District that began in 2007, there are indications that new regulations are trying to include the issue of IHSs in the contents of new development plans.

Recent studies clearly reveal the magnitude of the problem of informal settlements. According to the Commission for Natural Resources and Rural Development (Comisión de Recursos Naturales y Desarrollo Rural, or CORENA), in the 1990s a total of 4796 ha of Conservation Land (SC) was lost due to the appearance of new settlements. From 2000 to 2001 alone, 213 ha of such land were lost because of occupation by informal settlements. Because of this, for every 100 ha that are urbanized, the aquifer loses an amount of water equivalent to that consumed by 2400 dwellings in a year (PAOTDF, 2003:7). At present, the Government of the Federal District itself admits that there are 846 IHSs throughout the SC (Secretaría del Medio Ambiente, 2007:25), the majority of which are concentrated in delegations such as Tlalpan and Xochimilco.

In practice, the SC has functioned as a land reserve allowing poor groups to concentrate in informal settlements, which involves another shortcoming of urban policy because, given the lack of land reserves in the Federal District, there is not only a need for a redensification policy closely geared to the poor but also a metropolitan-level policy to find areas for channeling the Federal District’s future growth and the urban ways and means of doing so. But this dual strategy with both a local and metropolitan vision does not exist.

It is relevant to mention that in the 1990s, there was a restructuring of the housing financial system in Mexico to provide subsidized mortgage credit to guarantee effective demand for developers (Connolly, 2009:13). This reorganization led to a boom in social interest housing in the periphery of Mexico City; between 2000 and 2007, some 168 new housing developments were authorized, totalling about 380 000 dwellings (Godínez, 2008, quoted by Connolly, 2009:15). However, poor groups did not have access to those housing developments, which rather were built for middle- and low-income employees in the formal sector, in the

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14 One of the major effects of aquifer overexploitation is differential subsidence of the city’s land; this sinking leads to a fracturing of its drinking water networks and a loss of slope in its sewerage networks. In addition, 37% of all drinking water is lost because of leakage (Jiménez et al., 2004:17). All of this is part of the broad environmental challenges confronted by the city.

15 This position is held by Mr. Marcelo Ebrard, who belongs to the Partido de la Revolución Democrática (PRD) (Party of the Democratic Revolution), which is considered to be left-wing.

16 The rate of proliferation of informal settlements increased when the Picacho-Ajusco highway was built in 1975, facilitating access by poor groups to the upper parts of the mountains. There are studies as of the 1980s showing that the local government was most tolerant with regard to the establishment of IHSs in the SC (Aguilar, 1987; Schteingart and Salazar, 2005).

17 About 60% of the mortgage loans for middle- and lower-middle-income groups was provided by payroll funds for private and public sector workers, and the rest came from lending institutions created after 1993; the main function of all these institutions was to reactivating the housing industry (Connolly, 2009:13).
outskirts of the city of the State of México. In the Federal District, large-scale developments like those were not possible for two reasons: one, there was no reserve of available land; and, secondly, in late 2001 the Government of the Federal District prohibited any formal housing developments outside the four central delegations, and that channeled investment, above all, towards apartment buildings geared to high- and middle-income groups, redensifying those central areas.

Given the above, it is evident that the existing IHSs located in the SC of the Federal District have functioned as land reserves attracting poor groups in the absence of adequate housing alternatives that should be provided for them by local government; due to these settlements’ low densities, a gradual densification has occurred in their urban perimeter, exacerbating environmental damage. This process has been confirmed by an analysis effected by Connolly (2009:24–25), who has pointed out that the most important land reserves for the urban poor have been those very IHSs. She also has indicated that properties on communal and ejidal land are still responsible for a major proportion of land for IHSs: of the 19.5 km² of new informal settlements created between 2000 and 2005, approximately 70% were on ejidal land.

Despite the increase of IHSs and their environmental impact, in the last 10 years urban and environmental policies have simply failed to mention this issue in their regulations. The main regulations in the Federal District during that period are analyzed in Table 2, including their most important provisions regarding informal settlements. In general, we can note that prior to 2007, neither urban nor environmental regulations incorporated any diagnosis of informal human settlements; only superficial mention is made of the existence of this type of informal occupation, without figures indicating its significance. Moreover, they failed to include specific strategies for addressing this problem, although – as we have indicated above – the new regulations of the current administration of the Government of the Federal District are attempting to embrace this issue.

One relevant question is why, in practice, the Government of the Federal District has not established any policy for dealing with the problem of IHSs. A plausible explanation of a political nature is that this problem is very delicate from a social standpoint and affects clientalist alliances within the Government of the Federal District. Strict control of those settlements would do away with the exchange of favours between political groups, as well as trading promises for public services or land tenure regularization with votes. Undoubtedly, if such control existed, there would be protests among society, which would be an “inconvenience” for the Head of the Government of the D.F., to say the least, because in recent years he has expressed a desire to run for President of Mexico in 2012. Another explanation is more related to a real concern for the environment and expansion of the city. In the Government of the D.F., there are radical stands taken by those totally opposed to regularizing IHSs who, above all, wish to preserve the SC in its entirety. Regularizing existing IHSs in the SC – as has been the case in previous years – would be tantamount to encouraging more illegality and sending a “message of impunity” to the owners of ejidal and communal lands, where property rights are considered to be more important than the public interest, and also accepting the loss of large expanses of land of high ecological value. In any event, both positions entail a reluctance to recognize the social reality of Mexico City’s urbanization process, in which informality plays an essential role.

Policy for managing informal human settlements in the Tlalpan Delegation

The Tlalpan Delegation is located in the southern part of the Federal District and is the second most populated delegation in this section of the city after Alvaro Obregón. It had 607 545 inhabitants in 2005 and a growth rate of 0.8% from 2000 to 2005, which is average for the Federal District as a whole. Approximately 85% of its territory belongs to the SC (Conservation Land) and is characterized by the presence of large expanses of forest communities and agricultural land that function as areas for aquifer recharge. In the last 25 five years, this delegation has experienced a great amount of pressure on the land for urban occupation and has seen the development of informal settlements along main roads such as the Picacho-Ajusco highway and the federal road to Cuernavaca (Aguilar, 1987; Pezzoli, 1998; Schteingart and Salazar, 2005).

In this section we present a case study of informal settlements in the Tlalpan Delegation, where the highest number of this type of settlements can be found in all of the Federal District’s SC: 191 settlements in 2009. This delegation was selected for two main reasons: first, we feel that in view of its large number of IHSs, it is a suitable “laboratory” for ascertaining what strategy has been adopted for dealing with them. Secondly, instead of ignoring the problem of IHSs like the majority of the other delegations in the Federal District have done, this delegation (Tlalpan) devised a spe-

### Table 2

<table>
<thead>
<tr>
<th>Source</th>
<th>Lacks diagnosis of IHSs</th>
<th>Section on threats to SC mentions land-use changes from agricultural to urban use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Program for Ecological Planning of the Federal District, 2000–2003</td>
<td>No diagnosis of or specific section on IHSs</td>
<td>In Objectives, only indicates “Counteracting Urban Sprawl”</td>
</tr>
<tr>
<td>General Program for Urban Development in the Federal District, 2003</td>
<td>Only mentions informal occupation in the SC</td>
<td></td>
</tr>
<tr>
<td>Tlalpan Delegational Urban Development Program, 1997</td>
<td>Does not include diagnosis of IHSs, but does contain data regarding total number and how many will be relocated</td>
<td>In Objectives and Strategies, there is an indication to recover land occupied by IHSs, and to control and manage IHSs</td>
</tr>
<tr>
<td>Mexico City Environmental Agenda, 2007–2012 Environmental Program</td>
<td>Undergoing the approval process</td>
<td>In Programs, a Program for Attending to IHSs is created, with zero-growth projects, and others for monitoring and taking an inventory of IHSs (846 IHSs, 150 of which are to be relocated)</td>
</tr>
<tr>
<td>Tlalpan Delegational Urban Development Program, 2009</td>
<td>Includes urban area and expansion rate. Zero-growth strategy. Actions and goals, sociopolitical pact, surveillance, recovering spaces through relocation</td>
<td></td>
</tr>
</tbody>
</table>
specific policy to attempt to cope with this problem in the SC. We view this strategy as a pilot plan worth assessing in order to determine the effectiveness and repercussions of a policy of this nature at the local level.

In the proposal and implementation of a management policy for IHSs in the Tlalpan Delegation, the year 2003 was crucial; a new administration took office and it was noted that there was a definite need to curb informal urban growth in the delegation, to which end an action plan was proposed. This coincided with a gradual strengthening of the recently created Head Office for Ecology in the delegation government’s structure. The Tlalpan Delegation set a goal to obtain funding from the Legislative Assembly of the Federal District for a specific policy to manage informal settlements. In 2006, that policy finally took shape and a year later, the Assembly granted this delegation 100 million pesos, which have been used to manage and attend to the needs of those settlements.

This new strategy for managing informal settlements in the SC defined two major stages:

In the first stage, all IHSs were subject to the same specific actions (see Diagram 1): a diagnosis was prepared of all the IHSs within the territory of the delegation. This was an interinstitutional diagnosis conducted within the Federal District, with the participation of agencies directly related to the SC such as the Department of Urban Development and Housing (Secretaría de Desarrollo Urbano y Vivienda, or SEDUVI), the Department of the Environment (Secretaría de Medio Ambiente, or SMA), and the Commission for Natural Resources and Rural Development (Comisión de Recursos Naturales y Desarrollo Rural, or CORENA), as well as the Tlalpan Delegation itself. In the diagnosis, each IHS was analyzed according to three criteria: (i) environmental, stressing the principal characteristics of the site where the settlement is located and carrying out an analysis of the physical features of the SC in order to determine priority zones favorable to the provision of the most important environmental services; (ii) urban, which delved into factors having a direct bearing on urban development and land-use planning, among which the following are outstanding: feasibility of service introduction, availability of urban infrastructure, relationship with the rural community to which the settlement belongs, risk of conurbation, soil suitability, and physical risk; and (iii) legal which, most importantly, provided a diagnosis of the problem of land tenure and conflicts arising over its ownership, a socioeconomic diagnosis, and the opinion of the agrarian nucleus (see Diagram 1).

In the second stage, and in keeping with the diagnosis conducted, the feasibility of consolidating each settlement was determined. In this regard, two types of settlements were defined: (i) settlements with a Territorial Management Model, for those that qualify for remaining in their original location and for being consolidated via actions to mitigate environmental impacts according to specific studies; the settlements in this group will be allowed a change in land use so they may occupy them; (ii) informal settlements Proposed for Relocation, which will not stay in the place where they are currently located, and do not qualify for consolidation because they are in areas of high environmental value; for settlements which are more than 5 years old (the majority), an alternate location proposal will be prepared (see Diagram 2); those less than 5 years old are to be removed.

So as to have a strict scheme for controlling the growth of informal settlements, in the second stage instruments were worked out for existing settlements of this type, where the central aim has been to curb expansion of current built areas through the formulation of Building Control Forms, which consist of a document with the technical specifications of each lot, including all information regarding

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18 We should point out that the other delegation which also worked out a scheme for managing informal settlements was Xochimilco. The scheme finally was detailed in the 2005 Xochimilco Delegational Plan for Urban Development. In this regard, these two delegations are exceptional cases.

19 At that time, Carlos Imaz became the new delegate for Tlalpan and gave the issue of the environment a major impetus with the creation of the Head Office for Ecology.

20 In 2008, the delegation received additional funding from the Legislative Assembly of the D.F., in this case a lower amount (90 million pesos).
occupancy and construction; this document is signed by the occupants of each of the lots who prove their rights over them, making a commitment to no further building on the lot in question. After that, the endowment of provisional services is ensured; to that end, each case is analyzed and provisional services will be furnished only to inhabitants who prove that they have been there a certain period of time (for at least 5 years). Those services are usually: water supply by tanker trucks, introduction of biodigesters, maintenance of unpaved roads, and facilities for introducing electricity (see Diagram 2).

To manage informal settlements, the following specific actions were taken: (i) a commitment was made with inhabitants so that there is no further construction, the polygon21 of the settlement was signed, and work was initiated for building a metal mesh fence to enclose it; (ii) the environmental impacts of a lack of drainage were mitigated with biodigesters and enzymatic plants so as to diminish environmental impact as a whole; sidewalks, borders, and stone pavements were constructed, and all of this has improved the inhabitants’ quality of life. Evidently, new construction was not permitted.

A significant proportion of the funding granted by the Legislative Assembly has been utilized to acquire lots for inhabitants of settlements classified for relocation: in 2007, two such lots in the village of Topilejo were purchased to build small houses and relocate inhabitants; in 2008, a lot in Picacho Ajusco for apartment buildings; and a lot in San Andrés in 2008, also for apartment buildings. PROVIVAH is the NGO that builds these small houses; PROVIVAH22 usually builds on government land and does construction work for the low-income sectors of the population. The beneficiary is asked to pay $8200 Mexican pesos for the home,23 on a 120-m² lot, with 34 m² of built area (two bedrooms, living/dining room, kitchen, and bathroom). Credit for them is provided by the Instituto Nacional de la Vivienda (National Housing Institute, or INVI in Spanish). The houses have solar panels and harvest rainwater; dwellers must continue to live in the housing they acquired for a minimum of 5 years.24

This strategy arose because the new officials of the Tlalpan Delegation urgently needed some sort of instrument for managing these

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21 The term “polygon” is a technical measurement term that refers to the perimeter of each informal settlement. In consequence, both terms (“polygon” and “settlement”) are equivalent.


23 In June 2009, that amounted to $612.40 U.S. dollars; at that time, the exchange rate was 13.39 pesos per dollar.

24 During this stage, officials of the Tlalpan Delegation calculated that they would need around 1.25 billion pesos to make improvements in 60% of all the IHSs in that delegation in a 5-year period, which meant some 250 million per year.
settlements due to great pressure by the population to occupy this zone. According to census questionnaires in a survey of informal settlements, we found that most of the population which resides in this type of settlements comes from the Tlalpan Delegation itself, living either in the SC or urban zone, and most were born in the Federal District (see Table 3.1 and 3.2). This population is in a poor stratum, but evidently they are not among the extremely poor; in other words, they are people earning between 1 and 2 minimum wages and, in other cases, 2–3 minimum wages (see Table 3.3).

We believe that this policy’s greatest achievement was to create a Territorial Management Model, which is based on dialogue with the population and a proposal for teamwork geared to improving each settlement. Thanks to this model, delegation officials were able to achieve a scheme in which the delegation and inhabitants each contributed 50% of the necessary resources: the delegation supplied materials and/or machinery, while the inhabitants sometimes cooperated by providing money or labor.

However, the principal shortcoming has been a failure to curb IHS expansion, which arises due to several different factors and evidences local governments’ inability to halt this process. Even though there are no longer major land invasions, there is still clear expansion of built areas through what has been called urbanización hormiga (literally, “ant urbanization”), which is a gradual process of very disperse occupation calling for constant surveillance throughout this delegation’s territory. By means of this process new, isolated buildings spring up or annexes or additional rooms are added to existing ones, although the inhabitants have already pledged to maintain “zero growth” (see Map 1). To assess whether this was true or not, we made our own calculations based on satellite images for the 2003–2007 period. We found that urban expansion in the entire SC of the Federal District amounted to 5298.6 ha, approximately 1324.6 ha per year. In the specific case of the Tlalpan Delegation, urban expansion during the above-mentioned period was 1567.8 ha, i.e., some 392 ha per year (see Table 4).

This slow but constant growth has continued essentially for two reasons: first, subdivision of lots and illegal land sales persist; and second, local officials lack the authority to halt new construction. With regard to subdivision and illegal land sales, there is widespread poverty in the SC and that is why “socially owned” agricultural land is subdivided and sold because it no longer has sufficient yield and lacks proper support mechanisms. On the other hand, we have low-income urban inhabitants living outside the SC who purchase a piece of land there because they are unable to afford land on the formal market, which is much more expensive. According to censuses taken of informal settlements in the Tlalpan Delegation, a total of 94% of the population buy a lot to live on and because they live in conditions of poverty.

New occupations are attributable to two main types of actions: (i) sale of agricultural land near informal settlements and rural towns and villages; (ii) a redensification of settlements already in place within which dwellers enlarge their houses or build new housing due to the continuous sale of land within the boundaries of the settlement. In this delegation, we find a predominance of communal property, and communal land owners (comuneros) decide on the sales within their community and assembly, and sales are effected through private contracts. They have chosen not to regularize their properties, preferring to keep the property communal. Naturally, this situation benefits them and they are thus able to go on subdividing and selling their land illegally.

As to the second point, local government is unable to stop new illegal building. Here we should describe the procedure that officials of the Tlalpan Delegation must follow to halt construction

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25 These census questionnaires cover all dwellings in two informal settlements in the Tlalpan Delegation, namely Ocotla Chico and Ayometitla; these questionnaires were furnished by the Office for Informal Settlements of that delegation.

26 Interview with the Director of Territorial Management in the Tlalpan Delegation, January 2009.
of a new building or enlargement of an existing one in a settlement. A process of this type requires an average of approximately 7 months, and we list below the most important steps that have to be taken:

1. In the field, an on-site report is made on the technical specifications of the illegal construction, and later, in their office, officials issue an environmental impact assessment (approximate time: 2 weeks).
2. An administrative procedure is begun in the legal office of the delegation; notification to the occupant(s) in question must be prepared (approximate time: a little more than 10 days).
3. The occupant(s) in question should appear before authorities of the legal office to be informed of his/her/their corresponding sanctions (approximate time: 1 month).
4. Then, there is a waiting time for a resolution, including an Order Calling for Measures, according to which the construction can be closed down and building materials withdrawn from the site (approximate time: 5 months).

In view of the above, we can conclude that this is an extremely complex, lengthy process which, in the end, is ineffective in halting construction; there is a very high number of new constructions and it is useless to report each of them because when the resolutions finally arrive, most of those constructions have already been completed. In addition, in the Tlalpan Delegation, police are not available to assist delegation officials in conducting closures or evictions since the latter have to request help from the Department of Public Security of the Government of the Federal District and, in that case, wait their turn according to priorities for these services throughout the entire Federal District.

Moreover, we have been able to observe that the Government of the Federal District has kept on promoting regularization of land located in the SC. We identified this process by inspecting regularized lots in the Tlalpan Delegation located in the SC, and found that during the 2000–2008 period, land tenure was regularized for a total of 349 lots, representing an area of slightly over 95 000 m² (see Table 5). A number of these lots sprang up as informal settlements.

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27 Interview with officials of the Office for Informal Settlements of the Tlalpan Delegation, in consultation with its Legal Office.

28 To identify all these regularized lots, a revision was made of the Official Gazette of the Federal District (Gaceta Oficial del Distrito Federal) for the above-mentioned time period.
Table 5

<table>
<thead>
<tr>
<th>Colonia</th>
<th>Location</th>
<th>Total no. lots</th>
<th>Total area (m²)</th>
<th>Average lot size (m²)</th>
<th>Date of decree</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Palma</td>
<td>Village of San Andrés Totoltepec</td>
<td>1</td>
<td>210.95</td>
<td>210.95</td>
<td>03/30/2004</td>
</tr>
<tr>
<td>La Palma</td>
<td>Village of San Andrés Totoltepec</td>
<td>67</td>
<td>18,825.25</td>
<td>300</td>
<td>3/12/2004</td>
</tr>
<tr>
<td>Tlalpuente</td>
<td>Village of San Andrés Totoltepec</td>
<td>10</td>
<td>4854.16</td>
<td>400</td>
<td>3/12/2004</td>
</tr>
<tr>
<td>Tlalmille</td>
<td>Village of San Andrés Totoltepec</td>
<td>1</td>
<td>100.76</td>
<td>100.76</td>
<td>3/12/2004</td>
</tr>
<tr>
<td>Village of San Andrés</td>
<td>Village of San Andrés Totoltepec</td>
<td>50</td>
<td>16,370.42</td>
<td>300</td>
<td>3/12/2004</td>
</tr>
<tr>
<td>Totoltepec</td>
<td>San Miguel Topilejo</td>
<td>24</td>
<td>5746.59</td>
<td>200</td>
<td>10/2/2006</td>
</tr>
<tr>
<td>Village of San Andrés</td>
<td>Village of San Andrés Totoltepec</td>
<td>14</td>
<td>5687.86</td>
<td>400</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>Totoltepec</td>
<td>La Palma</td>
<td>19</td>
<td>4546.69</td>
<td>250</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>Nuevo Renacimiento de</td>
<td>Village of San Andrés Totoltepec</td>
<td>8</td>
<td>1643.59</td>
<td>200</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>Axalco</td>
<td>San Miguel Topilejo</td>
<td>2</td>
<td>1539.77</td>
<td>750</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>La Palma</td>
<td>Village of San Andrés Totoltepec</td>
<td>23</td>
<td>8524.36</td>
<td>300</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>Village of San Andrés</td>
<td>Village of San Andrés Totoltepec</td>
<td>43</td>
<td>12,944.97</td>
<td>250</td>
<td>07/19/2006</td>
</tr>
<tr>
<td>Totoltepec</td>
<td>San Miguel Topilejo</td>
<td>49</td>
<td>10,984.12</td>
<td>200</td>
<td>08/28/2006</td>
</tr>
<tr>
<td>San Miguel Topilejo</td>
<td>San Miguel Topilejo</td>
<td>38</td>
<td>2952.68</td>
<td>75</td>
<td>04/25/2007</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>349</td>
<td>95,332.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


on communal lands several years ago, and recently were allowed to be regularized\textsuperscript{29} (see Map 2).

This confirms two important aspects: for one, land regularization still serves as the most common solution for informal settlements, continuing to be a corrective process which legalizes, in juridical terms, situations that have previously been tolerated or even encouraged by local government through instances of political clientelism. For another, according to the PAOTDF (2003: 8; citing CORENA), one instrument by means of which informal settlements in the SC have been regularized consists of the so-called Partial Programs for Urban Development (Programas Parciales de Desarrollo Urbano) (previously ZEDECs,\textsuperscript{30} Zonas Especiales de Desarrollo Controlado, or Special Controlled Development Zones), which were created to cope with this series of social, economic, and urban problems. Via this mechanism, up to the year 2002 a total of 86 informal settlements had been regularized. Subsequent regularizations under the Partial Programs for Urban Development included 20% of all families living in informal settlements in the SC (12,257 families). Thus, in the Tlalpan Delegation, urban policy – through its regulations and norms – has searched for ways of effecting land regularization.\textsuperscript{31}

Conclusions

The analysis we have presented here shows how, despite constant growth of informal settlements in recent years, urban policy for managing them in the territory of the Federal District has exhibited several indications of its ineffectiveness in offering a solution for this problem. This can be observed on two different scales: the Federal District itself, and the Tlalpan Delegation in particular.

In the Federal District, we have noted that in the past few decades, land-use policy – both urban and environmental – has ignored, or at least failed to include explicitly in its plans and regulations, a strategy for managing informal settlements, and has also not defined land reserves for relocating poor groups in the future. However, at the same time, officials have evidenced tolerance towards informal occupations because they are unable to offer these groups affordable housing and land. Such tolerance indicates there is still interest in maintaining the clientelist system, which provides a short-term response to sociopolitical pressures exerted by the poor and their organizations, rather than ensuring a real determination to find imaginative, long-term solutions for an issue that is an essential part of the urbanization process. In other words, a problem that is a quite regular and frequent social phenomenon is ignored and generally tolerated; furthermore, this tolerance persists despite the knowledge that urban expansion takes place on land aimed for ecological preservation.

Continuous promotion of the land regularization process would seem to point to a prevalence of traditional solutions which not only encourage new informal occupations but, in addition, lead to losses of land of high ecological value and the fragmentation of the SC. The evidence appears to indicate that an explicit strategy for dealing with informal settlements constitutes a political risk that the government is still reluctant to take because this would jeopardize informal negotiations between local government officials, neighborhood leaders, and political parties interested in getting votes and other kinds of support in local elections.

In the case of the Tlalpan Delegation, we found that the local government at this level is most concerned with sustainable urbanization, but lacks the capacity to confront this challenge. Although there is interest in searching for a solution to the problem of informal settlements, there are various limitations hindering this: a lack of financial resources to tackle an issue of this magnitude; local officials’ inability to curb informal urban expansion both due to their lack of authority to control the sale and subdivision of communal property because this is a federal matter, and also to supervise the entire SC and use the police to stop new building. Continued land regularization in this delegation has been maintained as a corrective mechanism legalizing informal situations that the local government itself initiated and tolerated, a situation that now is encouraging new occupations. But this has exacerbated the loss of land in a zone with urbanization restrictions and impeded moving forward towards a model of urban sustainability.

The scheme proposed for managing informal settlements in the Tlalpan Delegation is grounded, above all, on the level of consolidation and age of those settlements, i.e., the greater that level and the older the settlement, the more likely that people will remain in their homes at their original site. In other words, political and social considerations seem to be more important than environmental ones; this formula reveals that settlements are allowed to remain in a zone of high environmental value instead of prohibiting them. What considerations should prevail? That is the critical challenge for land-use policy. On the environmental side, strict norms should establish, in principle, zero growth; forbid new regularizations; and avoid the sale and subdivision of communal land, as well as devise strategies to channel the high demand for land among the poor. But in this case, great consideration is given to the social pressures for having access to a house or piece of land, and so land-use policy becomes permissive, despite environmental regulations indicating the contrary. One important finding is that, despite the political nature of the so-called “zero-growth agreements,” these do not halt urbanization in ecologically valuable zones; and zoning instruments like the Partial Programs for Urban Development are employed as land-use mechanisms to legalize informal settlements. These solutions show how sustainability discourse is a convenient means for hiding the political nature of decision-making on land-use policy.

It is important to have a more innovative policy on informal settlements that eliminates some of the contradictions found here: that of prohibiting their expansion and at the same time tolerating more occupations; that of regularizing or legitimizing their presence but, at the same time, constantly reiterating the ecological damage attributable to them; and the existence of a scheme that formalizes the informal. Only in this way will urban policy regain credibility as an instrument for regulating land occupation and ensuring environmental conservation in the periphery of Mexico City.

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This article was translated from Spanish by Susan Beth Kapilian (subeka2000@yahoo.com).

\textsuperscript{29} In the Tlalpan Delegation, approximately 80.5% of the land is ejidal and communal (Delegación de Tlalpan, 2007: 48–49). We should note that these regularizations can violate local zoning in the Federal District.

\textsuperscript{30} These are a type of zoning that existed in the prior Urban Development Plan of the Federal District.

\textsuperscript{31} But there is also interference in local urban policy by the federal government; for example, the implementation of programs run by the Ministry of Social Development, most specifically, the Programa de Piso Firme (Firm Floor Program), which grants funds so dwellings may enhance their level of consolidation; for example, in 2008, this program was applied in the Los Zorros informal settlement in the Tlalpan Delegation.
References


