

# Country Report 2003

(Based on the PCGIAP-Cadastral Template 2003)

## Mexico

Country/state for which the indications are valid:	Estados Unidos Mexicanos (México)
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### I. Country Report

#### A. Country Context

##### *Geographical Context*

##### *Population:*

Total population up to 2000 97,483,412

##### *Size of country:*

Territory surface 1,964,375 km<sup>2</sup>  
Conterminous 1,959,248 km<sup>2</sup>  
Insular 5,127 km<sup>2</sup>  
Areas of urban use: 20,692,331 ha (approximately)

##### *Agriculture:*

Land use with farming surface:  
Only by irrigation 3.80 million ha  
Only by rainy season 23.20  
By Irrigation and rainy season 4.10  
TOTAL 31.10

## Mountains:

	PROVINCES	STATES THROUGH WHICH THEY RUN
I	Baja California Peninsula	Baja California and Baja California Sur
II	Sonora Plain	Baja California Sur and Sonora
III	Western Sierra Madre	Sonora, Chihuahua, Sinaloa, Nayarit, Durango, Zacatecas, Aguascalientes and Jalisco
IV	Northern Sierras and Plains	Chihuahua, Sonora, Coahuila de Zaragoza and Durango
V	Eastern Sierra Madre	Coahuila de Zaragoza, Nuevo Leon, Chihuahua, Tamaulipas, San Luis Potosi, Queretaro de Arteaga, Zacatecas, Guanajuato, Hidalgo, Puebla and Veracruz-Llave
VI	North America Great Plains	Coahuila de Zaragoza, Nuevo Leon and Tamaulipas
VII	Pacific Coastal Plain	Sonora, Sinaloa and Nayarit
VIII	Northern Gulf Coastal Plain	Nuevo Leon, Tamaulipas, Veracruz-Llave, Puebla and San Luis Potosi
IX	Central Plateau	Durango, Zacatecas, San Luis Potosi, Aguascalientes, Jalisco and Guanajuato
X	Neovolcanic Belt	Nayarit, Colima, Jalisco, Aguascalientes, Guanajuato, Queretaro de Arteaga, Hidalgo, Mexico, Puebla, Veracruz-Llave, Tlaxcala, Morelos, Distrito Federal, Michoacan de Ocampo, Guerrero and Oaxaca
XI	Yucatan Peninsula	Yucatan, Quintana Roo and Campeche
XII	Southern Sierra Madre	Nayarit, Jalisco, Colima, Michoacan de Ocampo, Guerrero, Oaxaca, Mexico, Morelos, Veracruz-Llave and Puebla
XIII	Southern Gulf Coastal Plain	Veracruz-Llave, Oaxaca, Tabasco, Chiapas and Campeche
XIV	Chiapas and Guatemala Sierras	Chiapas and Tabasco
XV	Central American Cordillera	Oaxaca and Chiapas

Source: INEGI. General Directorate of Geography

## Forests and areas populated with forest plants

TOTAL ha	FOREST SURFACE			OTHER FOREST AREAS			
	TOTAL	FOREST	JUNGLE	TOTAL	ARID ZONE VEGETATION	HYDROPHILOUS AND HALOPHILOUS VEGETATION	DISTURBED AREAS
141,745,169	56,873,954	30,433,893	26,440,061	84,871,215	58,472,398	4,163,343	22,235,474

More than **2.9 million hectares of inland water**, including **1.5 million hectares of coastal lagoons**.

## Historical Context

### Prehispanic Epoch [1600 B.C. - 1521 D.C.]

- Origins of Mesoamerica
- First civilizations in Mexico
- Empire Epoch: Toltecs, Tarascans and Aztecs

### Colonial Epoch [1521 - 1821]

- The Spanish Conquest or military occupation
- The Viceroyalty

### Independent Mexico [1821 - 1921]

- Consummation of Independence
- First Empire
- North American Invasion
- The Reform
- The French Intervention
- The Restored Republic
- The Porfiriato
- The Revolution

### Contemporary Mexico or Modern Epoch [1930 - 2004]

### *Current Political and Administrative Structures*

The State is constituted by a representative, democratic, federal republic formed by 32 free and sovereign states in reference with their inner regime, and joint together in a federation established according to the principles of the Political Constitution of the United Mexican States.

The States will adopt, for their inner regime, the form of a republican, representative, popular government, having the free municipality as their basic territorial division and their administrative and political organization.

### *Historical Outline of Cadastre*

The land is and has been one of the fundamental resources for any city, therefore, it is natural that since ancient times it has been studied and tried to be classified, registered and taxed with reference to the property.

The origin of cadastre in the prehispanic Mexico is reflected in the different systems of information used by the Aztec Empire, with respect to its complex political and social organization, according to its different tributary, record and cartographic relationships, which is the main antecedent of colonial maps and plans based on the Mesoamerican cadastral information in reference to the type of property. With the appearance of mine centers and huge properties it was necessary to give a legal support to the forms of regulation and control of land tenure as well as juridical safety.

From the independent period to the present time, the structural growth and the urban center development have allowed the evolution of systems and legislation of cadastre, within a normative framework that facilitates decision making in the administrative, economic, political and fiscal scope, becoming an essential tool for urban-rural planning of cities.

The first forms of land organization were determined by the geographic, economic and social frame of the prehispanic civilizations that inhabited Aridoamerica, and Mesoamerica influenced on, by example, the Aztecs whose lands belonged to the community and were divided in the **calpulli** lands; the institutions, churches, army, royal palace; the sovereigns and nobility.

In this period, the cadastral information is almost non-existent; nevertheless, there are pictographic codices specifying legal procedures related to land administration and land use (Santa Maria Asuncion codex, representative document of the cadastral and statistic system of population and land).

During the Colony, the land tenure was constituted by a complex territorial structure, therefore the Catholic King and Queen, in order to guaranty the possession of the discovered lands, appealed to the Pope Alexander VI who issued a **bull** by which the Crown of Spain receives the exclusive domain of the Western Indians, endowing to Spain the legitimate possession of the mentioned territory.

In this period, the property was conceded by the Spanish sovereign by means of a title called **grace** or **land graces** or **means for obtaining rural property**. Another form of land distribution was through the capitulation, a juridical title used to carry on expeditions in new territories marking the real authorization and rights and obligations between the parties.

Under this organization outline, the Spanish Crown issued some documents called **town ordinances** to ruled the places where new towns should be established, how to draw the cities, the land, lots and benefits distribution between the parties.

In the context of 1524, the Royal Council of the Indies was established and was in charge of issuing laws and ordinances for the colonies. En 1527, the Royal Audience of Mexico was instituted with the function of taking care of all the financial and tax collection matters.

The two types of property existent in this period were the private and the commune property. Before the immoderate trend of some individuals for amassing properties, in 1535 the king Charles V prohibited land possession for the clergy, through the **Royal letters of Mexico**.

Since the middle of XVIth Century with the ordinance of 1517, the **fundo legal** was instituted for the regulation of the programming of the native indigenous people in town units.

Al the beginning of the XVIIth Century, the land tenure was irregular and complex, then a juridical method called composition was applied, by which the uncultivated and royal properties illegitimate obtained were recognized by paying to the Crown.

The unfair distribution of land and the high index of rural property concentration by peninsulars and creoles produced a general discomfort that acted over the fight of the Independence, beginning with a stagnation of the cadastral order.

The cadastre in the independence period is characterized by the generation of the first dispositions of the legal antecedents of the cadastre in Mexico, reflected in the Law of Colonization that favored the colonization policies and the North American expansiveness.

Once consummated the Independence, the undeferrable necessity for promoting the demographic development and populating the ample regions of the territory was evaluated. The laws latter promulgated were based in three principles: uncultivated land distribution to army men, to foreign settlers and as plot adjudging to the town inhabitants, for which the Law on Occupancy and Transferring of Uncultivated Plots was promulgated.

This fight for organizing the country and promoting its development led to the promulgation, in 1824, of the first Political Constitution of the United Mexican States, with a republican government system and the territory divided in 19 states, 4 central dependent territories and a federal district.

In 1856, the Law on Disentailment of the Ecclesiastical Property was promulgated in order to commercialize the ecclesiastical, civil, town council and native indigenous town real estate.

With the promulgation of the Political Constitution of the United Mexican States in 1857, the country was organized as a republic, formed by 26 free and sovereign states, integrated in a federation that forced the governors to publish and apply the federal laws.

In 1859, with Benito Juarez, the Law of Nationalization of Ecclesiastical Property was decreed confiscating the clergy property, separating the Church and the State, and distributing the mentioned property.

In 1863, a law implanting the Metric System was issued for the land and water measures which will be estimated by engineers and surveyors for the land redistribution so reducing the measurement units used at that moment. Also, the Law stipulated that the longitudinal, itinerary and surface measurements would be, henceforth, the included ones by the tables approved by the Ministry of Justice, Promotion and Instruction published on November 10, 1862 and established by law on March 15, 1857.

With the French Intervention, this process was interrupted and, in 1866, Emperor Maximilian proclaimed two laws: the Law on Community Lands and Distribution, with the purpose of delivering the lands that corresponded to the town inhabitants; and the Agrarian Law of the Empire in order to grant fundo legal and ejido supporting the Juarez's liberal concepts, but they were not executed because of the opposition of the conservative government.

With Manuel Gonzalez, in 1883 the Law on Plot Delimitation and Colonization was decreed in order to include them in the economic life because they did not own to anybody.

The same year, the establishment of the General Direction of Statistics was decreed, charged with the compilation, classification and periodic publication of economy comparative statistics by the application of population census as well as cadastre of urban, rural and mine property in order to know the country wealth. Therefore, the legal bases for the cadastral measurement were found in the Special Law of Cadastre and the Regulation for the National Territory considering the surveying of municipality plans and private property.

The XIXth Century culminated with the first technical activities and the appearance of the first cadastral institutions with the promulgation, in 1894, of the Federal Law on Occupancy and Transferring of Uncultivated Plots of the United Mexican States; the country plots were classified as follows: uncultivated, surplus and excess; and the Grand Public Property Record was established so ensuring the rights of land owners and improving title deed delivery.

Modern cadastre began in the XXth Century, when the country was passing through a social movement, mainly based on agrarian roots. This led to the 1902 decree on the derogation of the country plot classification, conserving only the uncultivated plots, that the Executive could delimit by means of official campaigns; the dispositions authorizing the separation of uncultivated plots by surveying companies was annulled and the Grand Public Property Record was maintained.

All these facts modified the structure and organization of the land property in Mexico, and the president Venustiano Carranza considered as urgent the reorganization of the cadastre all wide

the republic, so in 1914 decreed a project of Agrarian Law establishing the bases for the arrangement of cadastre. This law established a assessing board in each municipality charged to register real property, determine its valuation and the sum of capital.

In 1915, the Agrarian Law was pronounced as regulating the procedure application in land restitution, delimitation and land donation to the agricultural communities, and to be really applied, Venustiano Carranza himself created the National Agrarian Commission that determined the ejido extent as 4 190 m per side. Next year, the Secretariat of Agriculture and Promotion was formed with the purpose of recovering the country properties and ruling the provisional possession granting, with the previous authorization of the Executive.

With the third Political Constitution of the United Mexican States, in 1917, the necessary legitimacy was conceded for a just land distribution with the creation of the ejido in Mexico, that with the reform to the Article 27 constitutional is determined that the nation is the only proprietor of the land and waters included in the national territory and has the right to cede its domain to individuals and legislates on land and water tenure, mainly with the communities and the small property.

In 1969, the General Law of National Property was issued for ruling the application exercised on the national patrimony of public and private domain, and in 1970 the Federal Law on the Agrarian Reform was issued for the consolidation of the juridical institution and the social organization of the ejido.

In the urban scope, in 1973 the Federal Executive, in order to solve the problem of land use created the Commission for the Regulation of Land Tenure (CORETT: Comisión para la Regulación de la Tenencia de la Tierra), dependent of the Secretariat of Agrarian Reform (SRA: Secretaría de la Reforma Agraria).

As a result of the modification made to the Article 115 Constitutional in 1983, the municipalities are empowered in two aspects: in the legal, federal, state and municipal scope to administrate the zonation and plans of municipal urban development and in reference to territorial reserves, the participation in plans for regional development with respect to land use and to intervene in the regulation of urban land tenure and the organization of their cadastres.

Our Constitution establishes the obligation of all Mexican citizen to register in the cadastre and, according to Article 27, the property is divided in: public, social and private, with a specific juridical regime for each.

Under this legislative and organizing frame of cadastre, in 1992 begins the Program for the Certification of Ejido Rights and Titling of Lots (PROCEDE: Programa de Certificación de Derechos Ejidales y Titulación de Solares) whose purpose is the certification and regularization of parcels and/or of common use right, as well as the titles of lots in favor of all and each of the individuals integrating the ejidos of the country.

The institutions involved in this project are: the Agrarian Law Office (PA: Procuraduría Agraria), the National Institute of Statistics, Geography and Informatics, responsible of performing the location, delimitation and measurement of the ejido limits, the cartography production and the corresponding database; finally the National Agrarian Record, which formalizes the regularization of the land tenure issuing the corresponding certificates and titles in order to provide a documental security. The World Bank, along with the SRA and the PA, concludes that this program has contributed to reduce land conflicts, strengthen the juridical security, improve the efficiency of agrarian agreements and move forward in the regularization of all the land tenure forms in the country.

Since 1993 in the frame of the Program of the 100 Cities, the Secretariat of Social Development started the Program of the Cadastral Modernization and, jointly with the National Bank of Public Works and Services, encourages the municipal and state governments which undertook their cadastral modernization in their legal, administrative and technological frame to strengthen the financial capacity and propitiating standard information so other public and private institutions may take advantage of this information for the urban planning and development in the territorial ordering within a sustainable development frame.

At last, there is a great agitation in linking the producers and the users of geographic information in cadastral matters with the purpose of homogenizing the mentioned frames and so feeding the

corresponding national information systems, therefore national and sector committees have been formed.

## **B. Institutional Framework**

### *Government Organizations*

#### **SECRETARIAT OF AGRARIAN REFORM**

Providing of juridical certainty in the land tenure to the object population, by impulsing the territorial ordering and the rural property regularization as well as elaborating public policies to foster access to justice and integral agrarian development, by permanent training and the organization of agrarian subjects as fundamental entities of the first link in the national productive process, in order to help social activities that may propitiate rural welfare, with the consequent care in the preservation of environment and natural resources.

#### **NATIONAL AGRARIAN RECORD**

It is a deconcentrated unit of the Secretariat of Agrarian Reform, in charge of the control of ejido and communal land tenure and of providing document juridical security, derived from the application of the Agrarian Law.

#### **AGRARIAN LAW OFFICE**

The Agrarian Law Office is an institution of social service in charge of the defense of individual and collective rights of ejido owners, part-owners, successors, communities, small proprietors settlers, agricultural laborers, possessors, colonists and peasants in general.

#### **FIFONAFE**

The National Fund Fideicommissum of Ejido Promotion (FIFONAFE: Fideicomiso Fondo Nacional de Fomento Ejidal) is an auxiliary public fideicommissum of the Federal Executive pertaining to the parastate public administration and located in the Secretariat of Agrarian Reform, with financial autonomy. Its mission is:

To receive, promote and deliver the common funds of the agrarian units; to verify the fulfillment of the cause of the public utility of the expropriatory decrees, so if necessary to practice the reverse action; to promote and finance the productive projects of Peasant Indigenous Women and Young Peasant Groups, in order to help the ejido promotion.

#### **PROCEDE**

The Program for the Certification of Ejido Rights and Titling of Lots, PROCEDE, is an instrument that the Government of the Republic puts into service of the agrarian units to perform the regularization of the social property. The Program main objective is to provide juridical certainty in land tenure by providing parceling certificates and/or common use rights certificates, or both as needed, as well as titles of lots in favor of individuals with rights that include agrarian units that so confirm and request.

It is an exceptional program because of the required levels of coordination. The institutions responsible for its execution are: the Secretariat of Agrarian Reform (SRA), the Agrarian Law Office (PA), the National Institute of Statistics, Geography and Informatics (INEGI: Instituto Nacional de Estadística, Geografía e Informática) and the National Agrarian Record (RAN: Registro Agrario Nacional), which in order to be operative require a very special degree of integration, besides the concurrence of other institutions in the three government scopes, of private professionals such as public officials authorized to attest documents, and mainly, the peasants.

### *Private Sector Involvement*

The Law only confers this responsibility to the State, that is, through its multiple governmental organisms the State is in charge of the property record tasks, and of cadastral record, by means of institutes and/or organisms of the municipalities which take care of the property record and of conceding the titularity of itself.

The private sector companies are important elements and support for the development and dynamics of the cadastral activity within the cadastre system in the national territory.

### ***Professional Organization or Association***

In reference with the existent surveyor organizations and associations in the country they were found registered only four via Internet, but for none of these associations, related with cadastre, was identified the number of members.

### ***Licensing***

According to a research made to the interior of the National Association of Universities and Institutions for Higher Degrees in Mexico, no specialized area for licentiate degree in cadastral surveying was identified. Source: National Association of Universities and Institutions for Higher Degrees (ANUIES: Asociación Nacional de Universidades e Instituciones de Educación Superior), Mexico, April 2004, <http://www.anuies.mx/index800.html>.

### ***Education***

In 2001, 3201 students received a licentiate degree in Civil Engineering, 29 for Engineers in Geography, 99 for Geography, 1 for Engineer in Geodesy, none for Geomatics and Geoinformatics Engineering, 185 for Surveyor Engineers. In 2002, 12 students received the licentiate degree in Automatized Cartography, and 6 a doctor degree in Geography. Source: ANUIES, ibidem.

## **C. Cadastral System**

### ***Purpose of Cadastral System***

Modern cadastres have seen the usefulness of cadastral information not only as a fiscal instrument for tax collections, but also as a valuable tool for urban planning, endowing of public services, regulation of land tenure, human settlements, territorial limits and urban land use. Therefore, it is considered as a multipurpose cadastre.

At present, the main purpose for the cadastral system is fiscal, followed by urban, legal, historic, socioeconomic and petroleum purposes.

Among other aims are urban development, planning, fiscal administration, rural development, administration of natural resources and protection of environment.

### ***Types of Cadastral Systems***

Nowadays, there is no cadastral system covering the whole national territory. Each federative entity has a very particular cadastral system, with different purposes and areas, such as social, private and public.

### ***Cadastral Concept***

Historically, the cadastre has been defined as the inventory, census or record of real estate, up to a more common meaning such as the record of farms, of their values and of their proprietors, initially established only for fiscal purposes, with no representation at all.

The concept of cadastre and its objectives have evolved through time, and now it is understood as a system of territorial information related to the real estate, whose main purpose is to obtain a census of the physical, qualitative, legal, fiscal and administrative features of the properties so allowing a multipurpose use.

### ***Content of Cadastral System***

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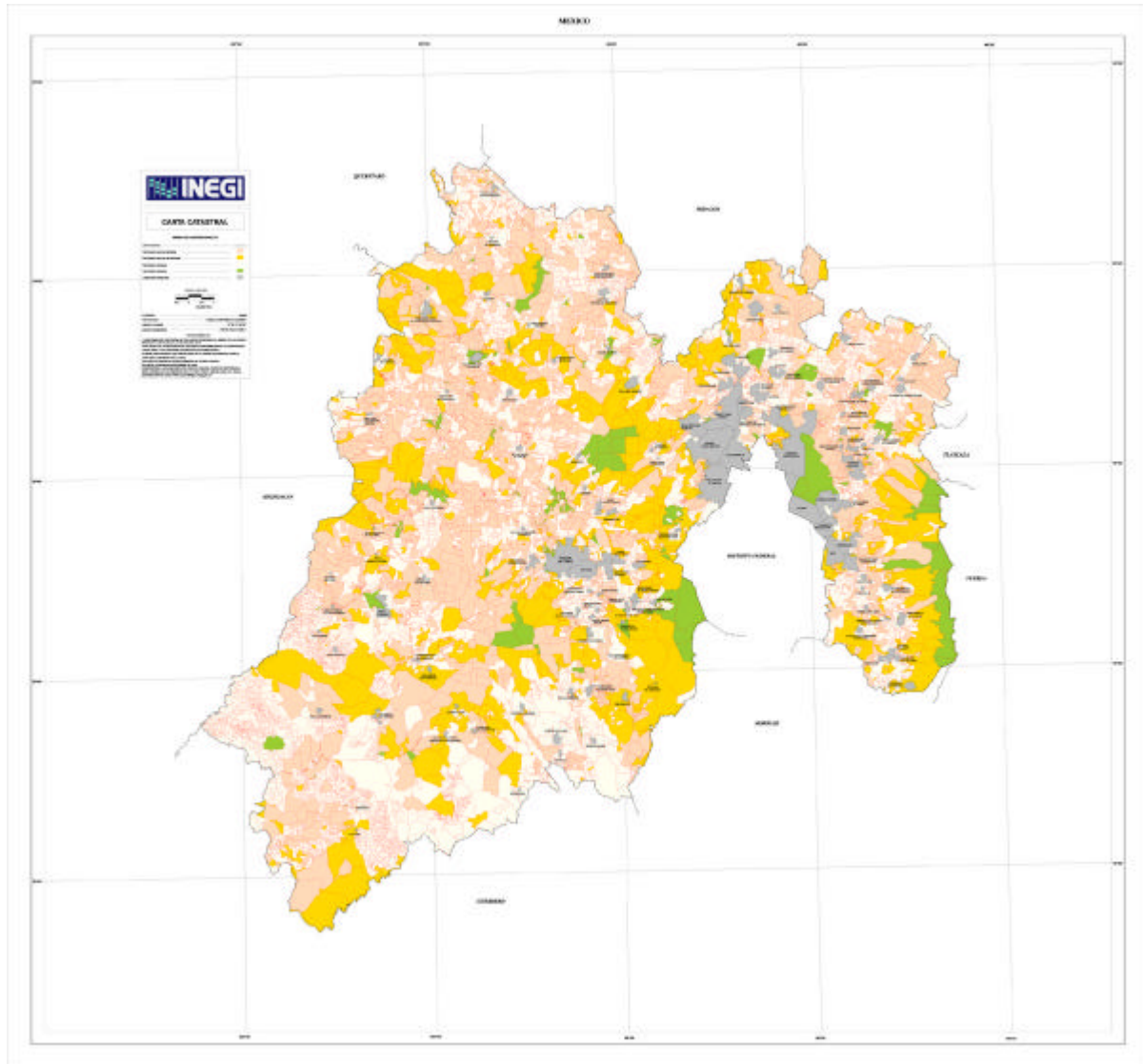
## **D. Cadastral Mapping**

### ***Cadastral Map***

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### ***Example of a Cadastral Map***

Attached is a representative copy in digital and physical formats.



### ***Role of Cadastral Layer in SDI***

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## **E. Reform Issues**

### ***Cadastral Issues***

At present, one of the principal problems of the cadastral system, among others the existence of a National Regulating Framework for the homogenization of information, is the lack of an information system that joins together the cadastral information at a national level.

### ***Current Initiatives***

Now, a National Regulating Framework is being elaborated and conformed, as well as its system implementation.

## **References**

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## II. Questionnaire

### 1. Cadastral Principles

#### *Deed or title registration*

1.1 Is your cadastral system based on deeds registration or on title registration ?

- deeds registration
- title registration
- other: .....

#### *Registration of land ownership*

1.2 By law, is registration of land ownership compulsory or optional ?

- compulsory
- optional
- other: .....

1.3 If felt necessary, please, comment on the actual practice and the legal consequences.

#### *Approach for the establishment of the cadastral records*

1.4 Are landowners required to register their properties systematically during the initial establishment of the cadastre or is registration sporadic, i.e. triggered only by specific actions (such as for example sale) ?

- systematic
- sporadic
- both
- all properties are already registered
- other: .....

## 2. Cadastral Statistics

### Population

2.1 What is the **population** of your country ?

97,483,412
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2.2 Please, estimate the **population distribution** between urban and rural areas.

urban:	...74.6... %
rural:	...25.4... %
<hr/>	
total:	...100... %

### Number and distribution of land parcels

2.3 Please, estimate the approximate **total number of the smallest uniquely identified land units**, often called "land parcels" in your country, including urban and rural areas ?

rural =	10,500,519
urban =	20,182,763
Total =	30,683,282

*The total number would include all freehold and state owned land, regardless of registered, non-registered or informal holding.*

2.4 What is the approximate **total number of registered strata or condominium units** ? This number would be in addition to the number of land parcels indicated in 2.3 ?

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2.5 For **URBAN areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

legally registered and surveyed:	...61... %
legally occupied, but not registered or surveyed:	...39... %
informally occupied without legal title:	...0... %
<hr/>	
total:	...100... %

*If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.*

2.6 For **RURAL areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

legally registered and surveyed:	..... %
legally occupied, but not registered or surveyed:	..... %
informally occupied without legal title:	..... %
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total:	...100... %

*If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.*

***Number of professionals***

Please estimate the total number of *academic professionals* that are active within the cadastral system and the proportion of the time that they actually commit for cadastral matters (as opposed to work outside of the cadastral system) ?

2.7	Total number of <b>professional land surveyors</b> , such as licensed surveyors active within the cadastral system:	10,000
2.8	Proportion of the time that these land surveyors commit for cadastral matters:	...90...%
2.9	Total number of <b>lawyers/solicitors</b> or equivalent active within the cadastral system or land market:	5,000
2.10	Proportion of time that these lawyers/solicitors commit for cadastral matters or land market:	...80...%

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***Remarks and Comments***

Please, identify the best aspect of this questionnaire ?

Please, suggest the area in the questionnaire that could be improved?