

# The Cadastral Survey and Land Registration System Development in Mongolia

M. SAANDAR, Mongolia

## Key words:

## SUMMARY

The new Land Law and Land Privatization Law in Mongolia will become effective in January, 2003 and their purpose is to regulate ownership, possession, use and other rights to land by citizens, economic entities and organizations. The total area of State-owned land that the new Land Law makes available for privatizing is restricted to less than 3 million hectares and consists of cultivated farm land and land within the city and settlement limits.

The Government of Mongolia recognizes that access to land is a constraint to infrastructure, agriculture and urban development in Mongolia. Investors seeking land for commercial, agriculture, tourism and industrial development are all constrained by the difficult process of securing land title and the need for a more efficient cadastral survey and land registration system.

The Government also considers it crucial to develop an enabling legal and institutional framework to implement its policy agenda for land related issues and the strategic importance of the development of a fully functional and transparent land market economy.

A new National Geodetic Reference System, MONREF 97, globally aligned with the ITRF 2000 epoch 1997/8, has been established in Mongolia. All future cadastral surveys will be based on this system. Also the proposed national land information system (NLIS) data base will be developed in an open GIS environment so that any utilities or other land-related agencies can interchange information through the NLIS network.

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## 1. INTRODUCTION

### 1.1 Background

Mongolia covers a vast territory of over 1.56 million square kilometres. In comparative terms it is the size of the combined countries of France and Spain. This great wealth of land belongs to only 2.3 million people.

The reason for Mongolia's sparse population is that much of the land is inhospitable desert and steppe or high and inaccessible mountain ranges. This hostile terrain combined with a harsh and severe climate has allowed only the hardiest of nomadic people to exist in such an environment.

For hundreds of generations in the past, the nomadic people of Mongolia have grazed their livestock more or less at will, depending on the seasons and availability of pasture and water. The land was like the air and sky for all to use with equal rights within certain territorial limits, which prior to 1924 were known as *hoshuu*, meaning banners.

In recent years tremendous social changes have taken place. Nowadays more than 50 percent of the population has become urbanised. Cities and settlements have expanded. Reserves and national parks have been established. Areas of arable land have been set aside for farming.

This has resulted in a large reduction in the traditional pasture land. The numbers of livestock have continued to increase and have now almost reached the projected sustainable maximum of 30 million animals. These great herds of animals are now tending to congregate in areas around the settlements in the northern and central Aimags surrounding Ulaanbaatar; an area of hills and plains some 1,500 metres above sea level containing much of the best available grazing and farming land in the country.

Part of the reason for this migration is the general decline in public services in the outlying regions since the collapse of State maintained systems in 1991 and the consequent increasing shortage of water supplies, particularly in the southern regions.

As the numbers of livestock increase and the nomadic families gravitate towards the settlement areas, tensions are arising over the availability of pasture land; livestock is invading farmland and the fragile quality of the grassland is becoming degraded because of overgrazing.

These pressures are being exacerbated by the increasing tendency for subsidiary economic enterprises to invest in additional livestock herds which they arrange to be grazed in lands surrounding the cities, either by employing their own herders or sub-contracting this work out to nomadic families already camped out in the area.

It is apparent that, despite a succession of severe winters causing the death of millions of livestock, the pasture land in the central part of the country and particularly around the cities and towns, is under continually increasing pressure. Tensions are rising and conflicts will ensue in the coming years if the invasion of traditional grazing lands is not controlled and the customary owners are not given improved conditions of land tenure.

## **1.2 The Farm Land**

The officially designated area of agricultural farming land is less than 2 million hectares and of this only 1.2 million hectares is actually farmed; 50 percent of this is left fallow on a rotational basis. Although this area is minute in comparison to the pasture land, it is subject to severe pressures, but of a different nature.

Traditionally, Mongolians are not farmers. For the few private farming companies, co-operatives and individuals who endeavour to produce mostly cereals or potatoes, there are few incentives. Because of lack of capital many subsist on a system of barter. As a consequence, wheat production has reduced since the collapse of the State farms to the extent that the 8 flour mills spread around the country are now under-productive and in danger of closing. By 1996, only 320,000 hectares of land was used for wheat production. This is 50 percent less than previous years and about half the required amount needed to feed the country. The Government is now subsidising the import of flour, the price of bread is increasing and unemployment will increase as a result of these short-falls.

One of the reasons for the slow-down in crop production is the poor financial return. There are no Government farming subsidies and no effective agricultural extension service. Loans which may be available from the commercial banks cost in excess of 10 percent per month, generally beyond the means of small farming co-operatives.

A State administered system of land registration which would provide public evidence of ownership to land is essential and would provide farmers with the guaranteed title they need as legal proof of tenure. Such collateral is needed to give the banks confidence to negotiate more reasonable conditions for longer term loans at lower interest rates.

## **1.3 Cities and Settlements**

In the urban areas the pressure on land is no less apparent as the urban population continues to rise and a more affluent and commercial sector of society emerges. The demand for legal rights to land from the private sector is increasing from commercial organisations both local and international, needing sound title to land before making long term investments.

Planning of development zones and appropriate infrastructure needs to be improved and controlled to prevent the present seemingly uncontrolled spread of squatting and the expansion of the “ger settlements” or shanty towns. Similarly, the ad hoc building of new and expensive modern private residences also needs to be better controlled and both high and low cost housing development areas identified in the suburbs of the city to allow for more organised residential expansion.

More land needs to be made available within the confines of the city limits by, for example, razing derelict industrial sites for subdivision and future commercial investment.

Privatisation of apartments in the many apartment blocks in the City has taken place since 1999 and ownership rights registered in the newly established State Immovable Property Registry, however, there is no legislation covering strata title and the land upon which buildings stand presently remains the property of the State.

During 2003 a new Law on Land and a Land Privatization Law will become effective, but as yet the cadastral and land registration system is still in its infancy.

For these and other reasons the need for a rapidly improved land management systems, in all sectors, is of immense importance to the future development of Mongolia.

## **2. CADASTRAL SURVEY AND LAND REGISTRATION DEVELOPMENT**

### **2.1 Introduction**

The introduction of Cadastral Survey and Land Registration in Mongolia is creating an institutional environment for the administration of land titles and land-lease certificates, for collection of land fee payments, property taxation and for urban and agricultural development. A systematic nationwide cadastral survey will provide the basis for the legal description for land title and land registration by Ulaanbaatar City and the 21 Provincial Governments. As the cadastral programme proceeds and more cadastral data becomes available it is proposed that this information will be networked to Central Government where a National Land Information System (NLIS) will be developed.

There are two components to the Cadastral programme as follows:

### **2.2 Component A: Cadastral Survey and Mapping**

This component will be implemented by the National Land Management Agency (NLMA) in close cooperation with City and Provincial governments. The component consists of two major activities:

- Collection of geodetic field survey data to identify and record the location and size of all identifiable land parcels in Mongolia. This data will be presented in the form of cadastral index maps of all urban, settlement and cropped farmland areas.

- Collection of basic textual attribute data about each land parcel concerning its ownership, use, or occupational status.

These two data sets will be merged to create a cadastral database that will provide the basis for land information systems (LIS) for each City and Provincial Government.

The two inter-relational data sets: (i) Graphic Spatial Data consisting of digitized cadastral index maps of all urban and cropped farm land and (ii) Textual Attribute Data consisting of information about each parcel concerning rights to land, including name of the owner, possessor, user or occupier. Additional data will include servitudes, basic land category, indication of land use, land valuation, and estimated land fee payment. Relational database management software will amalgamate graphics with land parcel attribute data as the basis for City and Provincial LIS, to support applications such as the issuing of title, transfers, equitable collection of land fee payments, land use reports and land administration activities.

In total about 3 million ha. will be surveyed and mapped by geodetic engineers using state-of-the-art equipment. Modern aerial photography systems employing GPS navigation and position-fixing techniques are already being used to provide the raw data necessary for the production of orthophotos for cadastral mapping of cities and settlements at a scale of 1:2,000. For cropland, new satellite imagery, combined with existing topographic mapping plus ground surveys using GPS will provide the data for mapping farm boundaries at a scale of 1:50,000.

Cadastral surveys and map data acquisition will be undertaken by licensed commercial survey companies, contracted and supervised by the National Land Management Agency in close collaboration with City and Provincial land management departments. The land management officers of these departments accompany the geodetic engineers during their fieldwork and are responsible for providing all the attribute data required for each land parcel, as well as public relations and the settling of disputes. The duties and responsibilities of the National Land Management Agency, the Ulaanbaatar City and provincial land management departments is specified in a Memorandum of Agreement (MOA) between the Central Government and the local governments concerned.

Cadastral survey under the Project is undertaken by survey contractors engaged and supervised by the National Land Management Agency (NLMA) who will be responsible for the tendering and evaluation of contracts and quality control for field survey activities. NLMA provide the contractors with relevant geodetic control data, maps, satellite images and aerial photographs of the contract area to be surveyed. In close coordination with the Ulaanbataar City and provincial land management officers, the contractors will undertake all necessary work to produce the cadastral database and maps, in a standardized digital form (*Autocad*) that can be checked and processed by NLMA. NLMA will become the sole authority for implementing changes to boundaries (geographics), for example, on instruction from the State Immovable Property Registry (SIPR) after legal application for subdivision of a parcel.

Aerial photography of the urban and settlement areas will continue to be undertaken through international competitive bidding and supervised by NLMA.

### **2.3 Component B: The NLIS**

The NLMA is the government authority for national land management issues and monitors and provides policy for land management activities for the Cities and Provincial land management departments and will therefore be responsible for the implementation of the NLIS.

The NLIS will incorporate each City and Provincial cadastral database (LIS) as this data becomes available under Component A.

The NLIS will consist of a central land information system to be established at the NLMA. This will be networked to local land information systems (LIS), established under Component A, in the Ulaanbaatar City Lands Department and in the lands management departments offices in each of the 21 Provinces. Detailed NLIS network design, supply of software, hardware, and training will be supplied on a turnkey contract basis, under overall supervision from NLMA with advisory assistance provided by the Asian Development Bank under a Technical Assistance project.

### **2.4 Coordination**

A high-level project coordination committee (PCC) has been established and is chaired by a Cabinet Minister. The PCC includes senior representatives from MOFE, MOI, MOJ, MNE, Ministry of Agriculture and Industry, Ulaanbaatar City Government, the NLMA and senior representatives from city and provincial governments. The PCC is responsible for overall policy guidance, interagency coordination, and monitoring of implementation. The PCC meets at least once every three months and reports to the Cabinet.

### **2.5 Resources**

To support the cadastral programme to date, contracts have been approved for aerial photography, cadastral surveys, equipment and vehicles purchase etc. for the cadastral survey and mapping of Ulaanbaatar City and Central Province's central township. Further contracts will be negotiated as the programme develops in the Provinces.

The NLIS (including detailed system design, installation, and training) will be procured on a turnkey basis through international competitive bidding.

### **2.6. Implementation Schedule**

The Cadastral programme will be implemented over six years in three two-year phases:

**Phase 1** will give priority to Ulaanbaatar City, its satellite towns and Central Province for a cadastral survey and establishment of their respective LIS.

**Phase 2** will cover Selenge, Bulgan, Orhon, and Darhan Provinces.

**Phase 3** will cover the remaining 16 Provinces in order of their potential revenue contribution with priority being given to Arhangay, Dornod, and Uvorhangay Provinces.

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