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**STAFF APPRAISAL REPORT**

**REPUBLIC OF MOLDOVA**

**FIRST CADASTRE PROJECT**

March 24, 1998

Infrastructure Sector Unit  
Europe and Central Asia Region

## CURRENCY EQUIVALENTS

(as of January 31, 1998)

Currency Unit	=	Leu (Lei)
Leu 1	=	US\$0.21
US\$1	=	Lei 4.70

## MEASUREMENT

Square feet 1	=	0.09 Square Meter (sqm, m <sup>2</sup> )
1 square mile (27,878,400 square feet)	=	2.588 square kilometers (km <sup>2</sup> )
1 acre (43,460 square feet)	=	0.405 hectare

## ABBREVIATIONS AND ACRONYMS

CAS	Country Assistance Strategy
BTI	Bureau of Technical Inventory
EEF	Extended Economic Facility
FY	Financial Year
GDP	Gross Domestic Product
IBRD	International Bank for Reconstruction and Development
IDA	International Development Agency
IMF	International Monetary Fund
INGEOCAD	Instituté for Geodesy and Cadastre
INGEOTECH	Institute for Technical Engineering Surveys
IRCIM	Institute for Engineering, Geodesy and Land Surveys
LAS	Land Arrangement Service
MAF	Ministry of Agriculture and Food
MOF	Ministry of Finance
MOLDGHIPROZEM	Land Survey Institute, subordinated to NAGCC
MOP	Ministry of Privatization
NAGCC	National Agency of Geodesy, Cartography and Cadastre
PHRD	Policy and Human Resources Development Fund (formerly Japanese Grant Facility)
PIO	Project Implementation Office
PIP	Project Implementation Plan
PPF	Project Preparation Facility
SAL	Structural Adjustment Loan
SDR	Special Drawing Right
TA	Technical Assistance
TCO	Territorial Cadastre Office
USAID	US Agency for International Development

## Moldova - FISCAL YEAR

January 1 - December 31

Vice President:	Johannes F. Linn
Country Director:	Roger W. Grawe
Sector Director:	Ricardo A. Halperin
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# STAFF APPRAISAL REPORT

## REPUBLIC OF MOLDOVA

### First Cadastre Project

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**MAP** IBRD No. 24285R3

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This report is based on the findings of preparation missions and an appraisal mission which visited Moldova in 1996 and 1997. Mats Andersson (Team Leader) and Monika Weber-Fahr (Co-team Leader) were assisted by several teams including consultants and World Bank staff with expertise in areas related to the project components. A large number of Moldovan officials participated in the design and preparation of the project. Country Director: Roger W. Grawe, Sector Director: Ricardo A. Halperin. Peer Reviewers: Ms. Khundavi Kadiresan (ECSRE); Mr. David Vetter (LCSPR), and Mr. Lynn Holstein (Consultant).

## REPUBLIC OF MOLDOVA

### FIRST CADASTRE PROJECT

#### CREDIT AND PROJECT SUMMARY

<b>Borrower:</b>	Republic of Moldova
<b>Implementing Agency:</b>	National Agency for Geodesy, Cartography, and Cadastre (NAGCC)
<b>Beneficiaries:</b>	Moldovan Property Owners, Existing and Prospective; Users of Real Estate Information; Private Sector Surveyors, Notaries, and Valuers.
<b>Poverty Category:</b>	Not Applicable
<b>IDA Credit Amount:</b>	SDR 11.5 million (US\$15.9 million equivalent)
<b>Credit Terms:</b>	Standard IDA terms, payable in thirty-five years, including ten years of grace, with an expected disbursement period of five years.
<b>Commitment Fee:</b>	Variable rate between 0.00% - 0.50% (set annually by the Executive Directors of IDA) on undisbursed credit balance, beginning 60 days after signing, less any waiver.
<b>Project Objectives:</b>	The project's objective is to develop and implement a national unified real estate registration program for urban and rural land, and thereby to establish a system of clear and enforceable ownership rights, so as to promote the privatization of land and the development of real estate markets in Moldova. The real estate registration system established under the project should provide: (a) property owners with security of ownership rights such that they can sell or rent real estate at fair market prices and pass on their holdings as inheritances; (b) commercial banks with the confidence necessary to give secured credit against real estate; (c) the real estate market with information on ownership and location of property as needed for the market to function effectively; (d) government agencies and institutions with basic information for urban planning and land management; (e) the real estate market with selective information on property values; and (f) the private sector with opportunities to develop in areas related to real estate registration (surveyors, notaries, valuers).
<b>Project Description:</b>	The proposed project would consist of the following four components: (a) Mapping Program; (b) Urban Cadastral Services Program; (c) Rural Cadastral Services Program; and (d) Institution and Capacity Building Program, including a Project Implementation Office (PIO). Component (d) will support relevant stakeholders in implementing the project,

including registration and data administration staff, private surveyors, notaries, and valuers. As part of the institutional strengthening, several legal and policy studies will be undertaken to develop recommendations for government legislation and policy regarding key issues in land administration, e.g. mortgage laws, real estate valuation, etc.

**Project Benefits:**

The direct and immediate beneficiaries of the project will be existing and prospective private owners of real property. However, in providing Moldova with the institutional, legal and technical basis for effective land administration, the project will have a positive impact for the economy as a whole, as well as for its most direct beneficiaries. The project will spur economic growth through: (a) providing guarantee of ownership and security of tenure; (b) facilitating the functioning of real estate markets; (c) supporting privatization in the agricultural sector by providing mechanisms facilitating the restructuring of collective farms (kolkhozes); and (d) supporting effective urban planning. The project will also encourage private sector development in those areas that are directly involved in project implementation, in particular the development of a private surveyor industry, private notaries, and possibly private real estate valuers. At the same time, activities under the project will lay the basis for: (a) the establishment of a fiscal cadastre, and (b) effective environmental land management.

**Project Risks:**

There are technical/organizational, institutional, and financial risks associated with the project, as well as risks related to project acceptance. Technical/organizational risks are mainly related to NAGCC's implementation capacity, and the capacity of its regional offices and contracted surveyors to perform project tasks according to targets. On the basis of a pilot program, and with financing through a Project Preparation Facility (PPF) and PHRD grants, NAGCC has undertaken appropriate technical and organizational capacity strengthening. Also, continuous performance monitoring will play an important part in mitigating capacity risks. Institutional risks are that legal and institutional changes necessary to fully exploit the opportunities of the registration system may not be adopted, e.g. appropriate mortgage legislation, or regulations for land valuation, urban planning, etc. To mitigate these risks, appropriate conditionalities and covenants to the Credit Agreement have been developed. Financial risks relate mainly to the availability of Government counterpart funds. This risk was mitigated through agreement during negotiations on an appropriate cost recovery strategy. Finally, there is the risk that property owners may: (a) lack confidence in the registration system, and (b) not understand the benefits of land registration, and thus may not make appropriate use of it. This risk would be addressed by keeping the project and the system as simple as possible, utilizing public information instruments whenever possible, including an open, transparent process aimed specifically at informing the public about the benefits, procedures, and costs of land registration.

- Public Participation:** Project preparation involved a wide range of stakeholders through participatory events which sought feedback on proposed project activities. Feedback from these seminars, and workshops were integrated into project design. Project preparation was carried out jointly with the National Agency for Geodesy, Cartography and Cadastre (NAGCC). Other Government agencies, such as the Ministry of Agriculture and Food (MAF), local offices of Land Arrangement Service (LAS), the Ministry of Privatization, the Ministry of Finance, the Ministry of Justice, the Bureau of Technical Inventory (BTI), commercial banks and notaries, and several municipalities were consulted. In order to establish consensus among different Government and foreign financing agencies involved in the sector, a Memorandum of Understanding was drawn up and signed by the Prime Minister, the Bank, and USAID in mid 1996. Extensive public information activities, including regular radio and television broadcasts, accompanied a pilot program.
- Environmental Aspects:** The project has been rated as environmental screening category C.
- Poverty Aspects:** The project will have no direct impact on the poor as a group. However, as the poor lack access to finance, but typically own their residence, the project will help create collateral, and possibly capital, and therefore will increase their opportunities for improved living standards.
- Rate of Return:** An economic rate of return has not been calculated for the project as a whole, given its “public good” character. Based on a cost recovery strategy through fees for registration and information, the project’s financial rate of return is estimated to be about 8.5%. Given the nature of this project, the economic rate of return will be substantially higher than this, justifying a public sector intervention.
- Map:** IBRD Number 24285R3
- Project ID Number:** MD-PA-35771

Estimated Project Cost by Project Component:

Components	Project Costs			% Foreign Exchange	% Total Base Costs
	(US\$ Million)				
	Local	Foreign	Total		
1. Mapping Program	0.8	5.4	6.2	87	28
2. Urban Cadastral Services Program	3.2	4.5	7.7	59	35
3. Rural Cadastral Services Program	2.5	0.8	3.3	23	15
4. Institution and Capacity Building	2.0	2.8	4.8	59	22
<b>Total BASELINE COSTS (excl. taxes)</b>	<b>8.5</b>	<b>13.5</b>	<b>22.0</b>	<b>61</b>	<b>100</b>
Physical Contingencies	0.6	0.9	1.5	60	7
Price Contingencies	0.4	0.7	1.1	64	5
<b>Total PROJECT COSTS (excl. taxes)</b>	<b>9.5</b>	<b>15.1</b>	<b>24.6</b>	<b>61</b>	<b>112</b>

Note: According to the Moldovan budget law, World Bank and IDA financed projects are exempt from taxes, customs and duties.

Financing Plan:

	Estimated Project Financing		
	(US\$ Million)		
	Local	Foreign	Total
Government of Moldova	4.0	-	4.0
Donors	-	4.7	4.7
IDA	5.1	10.8	15.9
<b>Total</b>	<b>9.1</b>	<b>15.5</b>	<b>24.6</b>

Note: US\$2.8 million have been committed by the Government of Switzerland for financing of mapping and surveying equipment. Additional donor financing for the Institution and Capacity Building component has been obtained from Sweden (US\$1.8 million) and Norway (US\$0.1 million).

Estimated IDA Disbursements:

Disbursements Estimates by IDA Fiscal Year (US\$ million)						
	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total:
IDA	2.6	3.8	2.5	2.9	4.1	15.9

## REPUBLIC OF MOLDOVA

### First Cadastre Project

## STAFF APPRAISAL REPORT

### I. SECTORAL BACKGROUND

#### A. THE COUNTRY AND ITS RECENT ECONOMIC DEVELOPMENT

1.1 Since independence, the Republic of Moldova has shown a strong commitment to stabilizing and restructuring its national economy. Having overcome divisive ethnic tensions and lack of agreement on approaches to economic reform in the months directly following independence in August 1991, late 1993 ushered in a wave of market-driven reforms which continue to this day. The establishment of a national currency, the leu, in November 1993, and its subsequent stabilization, has given further evidence of Moldova's success at stabilization. Inflation declined sharply to 11.2% in 1997, from 116% in 1994, following the implementation of tight financial policies. The leu has continued to appreciate sharply against the currencies of its three major trading partners, Russia, Romania, and Ukraine, and stabilized at an exchange rate to the US\$ at around 4.7 lei. Economic stabilization has come at the expense of standards of living as reflected in a falling GDP. Between 1991 and 1994 output and real wages fell by 60%. Negative growth slowed down to a negative 8% in 1996. In 1997, GDP grew at an estimated 1.1%. Agricultural production, accounting for nearly half of GDP, fell by 13% in 1996, due to poor weather and slow reforms in the sector. Average monthly wages in Moldova in 1997 are estimated at about 190 lei (US\$42)<sup>1</sup>. Officially recorded unemployment remains grossly underestimated because it does not include those on unpaid leave. A recent household survey indicates that real unemployment may be close to 28% of the labor force. In 1997, Moldova became a blend Bank/IDA country eligible for IDA financing. References to the Bank in this document should be read to include both IDA and IBRD.

#### *Box 1: Country Profile*

The Republic of Moldova shares borders with Romania in the West and Ukraine in the North, East and South. Its area is 33,700 km<sup>2</sup>, of which 84% are rural and 16% urban. 47% of Moldova's 4.4 million inhabitants live in urban areas, mostly in large apartment blocks. Two-thirds of the population are ethnic Moldovans, 14% Ukrainians, 13% Russian, 4% Gaguz (a people of Turkish descent), and 2% Bulgarian. The status of Transnistria, a region bordering with Ukraine, has not yet been settled. This mainly Russian speaking region has set up its own Government which does not report to the Moldovan Central Government. Transnistria accounts for about 16% of Moldova's territory and 17% of its population. Its economy accounts for roughly one quarter of GDP.

1.2 Moldova's economic reform program has been supported by the IMF through one EEF and two stand-by agreements (totaling SDR245 million), and by the Bank through a US\$60 million Rehabilitation Loan and a US\$60 million Structural Adjustment Loan. Bank operations amounting to US\$332 million have been approved for Moldova, US\$187 million of which have been disbursed. The first IFC project, involving a loan and equity of US\$9 million, was approved in December 1996.

<sup>1</sup> Officially published wage data are based on the Government's monthly household survey, the methodology for which was improved in 1997 with assistance from the Bank.

## B. THE REAL ESTATE SECTOR IN MOLDOVA

### Property Ownership, Privatization and the Market for Land and Buildings

1.3 Moldova's economic development is seriously impeded by insecurity about property ownership and related institutional arrangements, resulting in a lack of collateralized credit and problematic real estate transactions. Private ownership of land or buildings is, as a principle, not in question. However, order and stability needed for the various actual and potential uses of land are lacking; these can only be provided by a land administration system that creates security for property owners and their partners, as well as for national and international investors and lenders, traders and dealers, and Governments. Currently, such a system does not exist in Moldova.

1.4 *Privatization.* The degree to which real property has been privatized in Moldova varies depending upon its location (urban vs. rural), use (private vs. commercial) and type (buildings vs. land). Real estate, in most Moldovans' eyes, is still understood as buildings, not land. Land used to be regarded as an entirely separate concept from buildings, more related to agricultural use than to property in general, and 'land ownership' would translate in a long-term 'right to use'. Values for land, be it urban or rural, are still drawn up according to principles of fertility and use, rather than in terms of location and market price. Only with privatization is an understanding slowly growing that both buildings and land should be part of one concept, namely real estate<sup>2</sup> or real property. However, government regulations currently in place, albeit changing rapidly, still discourage privatization of land (see below) to follow the successful privatization of buildings.

1.5 *Privatization of the housing stock* has been very successful in Moldova. It started in 1991, increasing remarkably after removal of several bureaucratic obstacles in 1993. By end of 1997, more than 85% of the housing stock was privatized, ownership mostly having been turned over to the inhabitants. Privatization of buildings belonging to enterprises has proceeded much slower, mostly due to higher cost of purchasing buildings. As of 1997, approximately 2,200 enterprises were in private hands, corresponding to approximately one-third of revenue generating activities. Most of these enterprises have by now obtained ownership of their buildings, and some have purchased their land.

1.6 *Privatization of land* is dramatically lagging behind the privatization of buildings, mostly due to government regulations defining a cumbersome and costly process for registration and titling (for more details on procedures, see para. 1.8 below). Land was only recently included in the Government's efforts to gear the economy towards market orientation. To date, approximately 90% of all land parcels in Moldova are still owned by the state even though land underneath residential buildings is allocated for free to households (or homeowners' associations) owning a residential building (or apartment block). Until very recently, privatization of agricultural land was slowed down by registration procedures aggravated by restrictions specific to the split-up of cooperative farms (kolkhozes). Land underneath dachas, and garden plots, is being sold to dacha association members, as is land underneath private enterprises' buildings, the latter, however, at relatively high prices<sup>3</sup>

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<sup>2</sup> The English word 'real estate' refers here to the Moldovan word 'bun imobil', defined as "the land parcels and the goods related to these parcels (soil, water, forests, buildings, construction, etc.) whose removal is impossible without causing direct damage to their usage" (Land Code, Article 2).

<sup>3</sup> The high prices set by the Government for land underneath commercially owned buildings was in 1997 considered one of the main reasons for slow privatization of commercially used land.

While about 20,000 dachas and garden plots have been sold to date; due to complicated registration procedures only about 3,000 title certificates, as evidence of ownership rights, have been issued.

1.7 Real estate markets, though not functioning efficiently, exist in Moldova to some degree, in particular for residential housing. Facilitated by massive privatization, transactions involving apartments and buildings in urban areas increased enormously, mostly due to migration related to ethnic and economic changes. In 1996, approximately 12% of all residential properties in Chisinau changed hands, and the trend does not appear to be falling. Mechanisms used by the real estate markets, however, are characterized by high transaction costs due to lack of information and lack of title security. In the larger cities, real estate information is obtainable through specialized weekly newspapers and through a few real estate agents. In the smaller towns, no such intermediaries exist. Prices for residential housing in Chisinau vary between US\$6,000 (1-room apartment) and US\$35,000 (3-room apartment). Prices in rayonal towns are 30% - 40% lower than in the capital.

#### Real Estate Titling and Registration

1.8 Titling and registration of real estate in Moldova has, in its present form, contributed little to order and stability in the real estate market. Buildings and land are still registered separately, data bases are not coordinated, methodologies are not conducive to real estate market development, and procedures are costly and cumbersome. There is no registry for mortgages or other encumbrances that is coordinated with registration of legal rights on land and buildings.<sup>4</sup> Procedures and systems are set to be unified and coordinated by the National Agency for Geodesy, Cartography and Cadastre (NAGCC), established for this purpose in 1994. The Agency's activities have recently gained momentum due to increasing recognition of the importance of functioning real estate markets for the country's economic development. However, system reform is by no means completed (see also para. 1.16, and Annex 3.1 for an overview of involved institutions and agencies).

1.9 *Ownership titles for buildings* are issued by offices of the Bureau of Technical Inventory (BTI), until early 1997 under the Ministry of Privatization, now subordinated to NAGCC, following a Government decision of December 1996, implemented in April 1997. There are seventeen (17) such offices in Moldova, one in each of the five major cities and twelve offices across the regions. Ever since privatization of buildings started, these offices have been in charge of verifying ownership, sometimes, but not always, involving survey activities, providing titles, and registering ownership. They also register all transfers (due to sales or inheritance) of buildings and apartments for a fee related to the nominal market value thereby covering most of their operational cost. Registration follows ownership and location verification which sometimes involves surveying. Manual records are kept in all seventeen offices and are classified according to building/apartment. Throughout Moldova, BTI offices employ about 400 staff. The offices charge for their services and operate largely on a self-financing basis.

1.10 *Ownership titles for rural and urban land* are issued by Land Arrangement Services (LAS) offices located in rayonal administration and in local public authority (primaria) offices, until recently subordinated to the Ministry of Agriculture (MAF) and, following Government Resolution No. 166 (February 24, 1997), transferred under NAGCC's jurisdiction. There are 44 rayonal and about 3,000 local such offices throughout the country, the latter staffed with one or two agriculturalists.

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<sup>4</sup> Currently, mortgages are registered with the local notary office. Such registration of mortgages upholds in court, however, other information on ownership is not available there.

Registration follows surveying of plot demarcations which the owner has to request from MOLDGHIPOZEM, a rural planning institute subordinated until recently to MAF, also transferred to NAGCC, and located in Chisinau. Ownership titles are issued only once: (a) a landholder is registered in a registry of landholders (formerly under MAF and now under NAGCC); (b) the boundaries of the plot have been demarcated; and (c) the qualitative and quantitative data (e.g. land fertility points, information on crops, etc.) on the land plot have been entered in the central land registry. Manual ownership records are kept and maintained in local LAS offices, some of which are starting to computerize their information, and in MAF's central computerized data base. NAGCC has recently reviewed these procedures and proposed changes and simplifications.

1.11 Obtaining ownership titles for agricultural land is further complicated by the procedures regulating the restructuring of kolkhozes (collective farms). As of early 1997, more than 20% of land for agricultural use had been distributed to more than 100,000 individual farmers. However, only about 10,000 title certificates were issued, representing about 10% of total land distributed. Initially, members of collective farms (kolkhoz) were allocated, from their kolkhoz, "equivalent land shares". The word "equivalent" here refers to the fact that all former kolkhoz members were supposed to receive land shares of equivalent *value* (not necessarily size). When allocated an "equivalent land share", the former kolkhoz member knows the size of the surface area of his/her land plot but neither the boundaries nor the location. Once the local mayor's office issues a title, confirming a farmer's 'ownership right to the equivalent land share', any individual wishing to withdraw from the kolkhoz can apply, through Mayor's office, for demarcation of his plot. The application for demarcation is put forward, by the village or the municipality, to a rayon executive committee or a municipal land committee. Following their approval, plot demarcation is then established. Only at this point can the farmer apply for a title confirming "landholder's right". MOLDGHIPOZEM, the rural planning institute mentioned above, is involved twice during the process: initially, when preparing the demarcation (for a fee), and then when filling out the title certificate confirming the right of ownership to the land plot (for a fee). During the process, the kolkhoz members have limited say about the demarcation of boundaries; while they may offer suggestions, either individually or collectively, the final decision is made by the mayor's office and must be approved by the Land Committee or the Rayon Executive Committee. Agreements between the farmers themselves are not binding.

**Box 2: Types of Cadastres**

A Cadastre is a land information system designed to: (a) provide updated information on real estate characteristics deemed important by the society; and (b) provide secured information on real estate ownership. Cadastral information is expensive to collect, yet necessary for market economies to function. Inefficiencies arise where different cadastres are not integrated within a national land administration system.

A Legal Cadastre focuses on information about location, delineation, and ownership.

A Physical Cadastre is used for the purpose of town and city planning, public infrastructure development, environmental management, etc.

A Fiscal Cadastre provides information essential for the establishment, and the efficient operation, of land and property taxation.

1.12 The Bureau of Technical Inventory (BTI) gets involved in the process if there exist buildings on the land plot being privatized. In this case, after submission of documents confirming the purchase of a land plot, BTI offices register both the land plot, and the buildings located on it, as real estate property, with subsequent registration of donation, inheritance and exchange. It has been estimated that, given these procedures, and assuming that 30% of all members of former kolkhozes wish to set up their own farms, it would take close to hundred years to provide all farmers with title certificates. Due to the cumbersome and costly procedures for obtaining land title, very few

individuals have made the effort of obtaining title to their land. In rural areas, however, significant progress has been made recently in this regard through a USAID-supported program 'Land' for restructuring and privatization of the land of collective farms including issuance of titles confirming the ownership of the land.

1.13 *Owner-based versus parcel-based registration methodology.* Registration of land in Moldova has until very recently followed an owner-based methodology which means that titles were provided, and a unique cadastral number was issued, according to property owners and not according to the properties themselves. In practice, this means that a property owner would always only have one title, irrespective of how many land plots he/she owns, annexes for each of his/her different land plots being attached to this main 'owner title'. In this, the Moldovan land registration methodology differed from the methodology applied in Moldova for the registration of buildings as well as from methodologies applied in most other countries around the world. Moreover, such an owner-based methodology complicates real estate transactions, as well as limits the informational value of a cadastral database since the primary object for all purposes is the land or real estate itself. Ownership is just an attribute, not the primary focus of the registration (see Annex 1b comparing advantages and disadvantages of both methodologies).

#### Land information and maps

1.14 There is very little up-to-date and detailed geographical information available in Moldova. Most of the country's maps have been produced more than fifteen (15) years ago. In addition, available maps usually do not provide the detail that is needed for effective land administration. In rural areas, maps are available in a 1:10,000 scale, while 1:5,000 would be needed for plot demarcation. In urban areas, the scale needed would be 1:2,000. While such maps do exist in the larger cities and towns, they are often too outdated to be useful for cadastral registration. It is estimated that eventually Moldova will need new maps for most urban and rural areas.

1.15 Maps are being produced by the State Institute for Surveying, Geodetic Engineering and Research (IRCIM), recently reorganized as INGEOCAD subordinated to NAGCC and charged with establishing the geodetic reference network and carrying out topographic mapping. Land surveying work is mainly carried out by two large Government owned institutes; the rural planning institute MOLDGHIPROZEM, formerly under MAF and, since February 1997, under NAGCC; and INGEO TECH, a survey institute subordinated to NAGCC, recently incorporated in INGEOCAD. So far, about forty small private surveying firms have been able to establish themselves. The private surveyor sector is growing based on the demand generated by the USAID-supported program "Land" mentioned above.

#### Government policies and interventions

1.16 Government policies and interventions in the sector have more recently gained momentum in the recognition, shared by major international financing institutions, that the development of real estate markets will be an important factor for Moldova's overall economic development. Interventions to date have concentrated both on establishing real estate markets in general and on institutional responsibilities and procedures for registration. A first step towards the creation of a national cadastre was already taken in 1994, with the establishment, by Presidential Decree (27 July 1994), of a National Agency for Geodesy, Cartography and Cadastre (NAGCC) with a mandate to develop a coordinated approach to the creation and management of a national and unified cadastre. Ever since, NAGCC has focused on developing a framework for unified registration of real property

(land and buildings) in urban areas. More recently, NAGCC has started to elaborate a framework for titling and registration of rural land, adjusted to the overall approach developed, and taking into account the demands of farm privatization. In an effort to consolidate the approach to be applied by NAGCC with land registration activities undertaken through the Ministry for Agriculture and Food (MAF), MAF's Department for "Land Ownership and Reform Procedures", including subordinated agencies (MOLDGHIPROZEM and LAS offices), was transferred to NAGCC (Government Resolution No. 166; 24 February 1997). Proposals to simplify current land registration procedures, and to integrate registration of land with registration of buildings, are underway. Related to a Structural Adjustment Loan (SAL II), the Government has set ambitious targets for registration and titling of rural land, covering by spring 1998, 5% of rural land (estimated at 50,000 plots) and, by fall 1998, 10% of rural land (estimated at 100,000 rural plots) privatized through land shares.

1.17 Other Government policies and interventions in the sector concern privatization and tradability of land. A moratorium on the sale of urban land and rural non-agricultural land until year 2000 was lifted in January 1995. A similar moratorium on the sale of agricultural land was judged unconstitutional by the Constitutional Court and, in October 1996, submitted back to Parliament. Again, as part of the Structural Adjustment Loan (SAL II), the Government has committed itself to an ambitious schedule for farm privatization, aiming at completing the restructuring of at least 250 farms by Fall 1998. The Government, assisted by several donor agencies, has during 1997 reviewed the existing, and often contradictory, legal and regulatory framework within which real estate is administered and within which real estate markets should function (see Annex 1 for a summary of the legal framework).

1.18 *Inter-governmental Coordination.* In order to ensure coordination of activities among Government agencies responsible for, or related to, land and registration, the Government established an Interdepartmental Coordination Committee (ICC) in January 1996, chaired by a Deputy Prime Minister, to oversee NAGCC's operations and project implementation. A Memorandum of Understanding between the Government, the World Bank, and USAID was signed in July 1996 reflecting the strategic direction adopted by the Government in the sector. Maintaining the ICC during project implementation is a covenant in the Credit Agreement [see para. 6.1(d)].

### **C. BANK EXPERIENCE AND STRATEGY**

1.19 *Bank strategy and projects.* Land registration and cadastre projects are a small but growing part of the Bank's portfolio of lending throughout the world. Currently, the Bank is supporting at least 13 land titling and registration projects, with a total loan value of about US\$550 million (1% of Bank lending). There are approximately ten additional projects with broader objectives which include sub-components for land registration and cadastre. In Eastern Europe, the Bank is active in land titling and registration projects covering urban property registration and/or rural land titling in Russia, Estonia, Georgia, Kazakstan, and Romania. Project preparations are underway in other countries.

1.20 *Bank experience in Transition Economies.* Based on pilot activities carried out as part of project preparation, however, there is some experience with land titling and property registration in Moldova. Also, there are several such projects, in preparation or under implementation, in other transition economies, either as free-standing Cadastre Projects, or incorporating a land registration component in a larger sector project, e.g., in Russia (Land Reform Implementation Support (LARIS) Project), Laos (Land Titling Project), Estonia (Agriculture Project), Georgia (Agricultural

Development Project), Kazakstan (Real Estate Registration Project) and Romania (General Cadastre and Land Registration Project). Projects are in earlier stages of preparation in Ukraine, and Viet Nam. In addition, there are grant financed activities in Belarus and Armenia. The lessons from those activities identify four key factors crucial for project design in the sector: (i) simplicity in design with a focus on registration of real property rights, and consistency with the Government's plans to address land use questions; (ii) clarity as to which agency (there should be no more than one) will be in charge of implementation and the extent of Government support that will be needed for it to function effectively; (iii) realism as to the borrower's existing human skills and institutional arrangements (in particular, with respect to the capacity for *coordination* of mapping and surveying, adjudication, title preparation, and issuance of titles or title extracts), augmented by training and technical assistance, and appropriate staff incentives; (iv) integration, into project design, of agencies, stakeholders and legal frameworks not directly involved in immediate project implementation, but relevant to overall project success (e.g., with respect to municipalities, notaries, and the mortgage system). Also, careful attention should be given to preparation of bidding documents and bid evaluations, due to the specialized nature of equipment and services inherent in such projects.

1.21 *Bank experience in Moldova.* Experience with design and implementation of investment projects in other sectors in Moldova has been drawn from a US\$26 million Emergency Drought Recovery Project, a US\$10 million First Agricultural Project, a US\$10 million Energy Project, two Private Sector Development Projects (total \$44.0M), an Education Project (US\$16.8 million) and a Rural Finance Project (US\$5 million). Projects under preparation include an Irrigation Project, and a Social Investment Fund Project. Experiences from these activities have shown that four key factors can help facilitate project implementation: (i) simplicity of project design; (ii) active Government participation in project design; (iii) support in project management for agencies inexperienced in implementing Bank projects; and, (iv) intensive supervision efforts by the Bank. These lessons have been taken into consideration in the design of this project.

#### **D. RATIONALE FOR BANK INVOLVEMENT**

1.22 In providing the basis for an effective land administration system in Moldova, the project is closely linked to the Bank's Country Assistance Strategy (CAS) in that it focuses on establishing a basis for sustainable private sector growth through, *inter alia*, the development and strengthening of public institutions needed in the management of a market economy, and through strengthening of the legal and regulatory framework for the private sector. In pursuing these objectives, the project supports two of four priority areas highlighted in the CAS. It contributes to reorienting the role of the public sector by modernizing and rationalizing the institutions related to land and property rights registration and transfer, and by eliminating and simplifying complex regulations that currently govern land privatization. The project would help the privatization of urban and rural land, and facilitate the sustainable, efficient use of land, other natural resources and infrastructure. At the same time, the project supports the medium- and long-term strategy of a Structural Adjustment Loan (SAL II), in that it develops and institutionalizes land registration processes that will facilitate the privatization and sale of rural land.

## II. PROJECT DESCRIPTION

### A. PROJECT GENESIS

2.1 The Government of Moldova requested, in autumn 1995, World Bank assistance for the preparation of a project to address the fundamental lack of ownership information and security with respect to real estate in Moldova. Project preparation was carried out jointly with the National Agency for Geodesy, Cartography and Cadastre (NAGCC) and supported through a PHRD grant (US\$681,500) made available to NAGCC in spring 1996, and a Project Preparation Facility of \$700,000. Other Government agencies, such as the Ministry of Agriculture and Food (MAF), the Ministry of Privatization, the Bureau of Technical Inventory (BTI), the Ministry of Finance, the Ministry of Justice, and several municipalities were consulted. In order to establish consensus among different Government and foreign financing agencies involved in the sector, a Memorandum of Understanding was drawn up and signed by the Government, the Bank, and USAID<sup>5</sup> in mid 1996. As part of project preparation, NAGCC initiated a pilot program in three test areas, involving mapping, surveying, and registration activities, as a basis for methodology development and project design. Extensive public information activities, including regular radio and television broadcasts, accompanied the pilot implementation.

2.2 Project preparation initially focused on the establishment of an urban cadastre, due to unresolved institutional issues concerning rural land registration. However, a rural component was later integrated into project design due to the importance of real estate registration in rural areas during the ongoing farm privatization process. To ensure project quality at entry, a second Project Preparation Facility (PPF) (US\$1 million) and a second PHRD grant (US\$396,500) financed technical assistance; the establishment of a Project Implementation Office (PIO); civil works and equipment for Territorial Cadastre Offices; finalization of project arrangements for rural areas; and assistance with the establishment of appropriate business procedures in NAGCC, and related training for involved staff.

#### **Box 3: Cadastral Methodology**

The methodology developed during project preparation, based on test activities in three pilot zones, follows eight guiding principles:

- institutional and operational simplicity, consistent with reliability of unified registration (of land and buildings); decentralization of property registration to the city or rayon level;
- a parcel-based, not an owner-based, system of ownership registration;
- ownership registered in a public office and open for inspection by the public;
- parcel boundary identification sufficient merely to identify approximate limits of ownership (general boundaries);
- registration fees as low as possible to encourage initial registration and subsequent ownership transfer registration;
- registered ownership takes legal priority over unregistered documents;
- keep unregistered overriding interests to a minimum;
- state guarantee on transaction based on reasonable value (not on first registration) and after a warranty fund has been established.

### B. PROJECT OBJECTIVES

2.3 The project's objective is to develop and implement a national unified real estate registration program for urban and rural land, and thereby establish a system of clear and enforceable ownership

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<sup>5</sup> USAID is involved in the sector, through its privatization program which supports privatization of enterprises and restructuring of kolkhozes (collective farms), however, with registration activities under simplified procedures.

rights, so as to promote the privatization of land and the development of real estate markets in Moldova. The real estate registration system established under the project should provide: (a) property owners with security of ownership rights such that they can sell or rent real estate at fair market prices and pass on their holdings as inheritances; (b) commercial banks with the confidence necessary to give secured credit against real estate; (c) the real estate market with information on ownership and location of property as needed for the market to function effectively; (d) government agencies and institutions with basic information for urban planning and land management; (e) the real estate market with information on property values; and (f) the private sector with opportunities to develop in areas related to real estate registration (surveyors, notaries, valuers) (for a summary of objectives and indicators see Annex 5).

2.4 While the new registration system will apply to all land in Moldova (urban and rural), implementation will be carried out in phases with primary emphasis on urban land during this first cadastre project. However, in addition to providing the methodological and institutional support for cadastral activities in rural (extravillan) areas, and thereby facilitating rural land privatization, the project includes registration of rural land, focusing on selected areas connected to systematic land privatization initiatives.

### C. PROJECT DESCRIPTION

#### Component I: Mapping Program (US\$6.9 million of which IDA credit US\$3.6 million equivalent)

2.5 The project will finance production of new maps, and updating of existing maps, as appropriate over five years, in thirty-six (36) rayons and municipalities<sup>6</sup>. Financing will be provided for selective surveying in support of mapping activities, and in order to facilitate registration of real property ownership. Other surveying activities, necessary to establish cadastral registries in urban and rural areas, are included in components II and III. This component will support the first five years of a long term national cadastral mapping program for urban, as well as rural areas, initially covering about 50% of urban land and 20% of privatized rural land.

#### Component II: Urban Cadastral Services Program (US\$8.6 million of which IDA credit US\$7.2 million equivalent)

2.6 The project will finance several elements of an Urban Cadastral Services Program that will provide the institutional basis for registration of ownership rights in urban and intravillan areas, and storage and administration of ownership information, to be readily available to all potential users. The elements of this component are:

- (a) *Real Estate Registration Program.* This component will finance activities and investments to provide the institutional basis for registration of ownership rights in urban and intravillan areas, and storage and administration of ownership information, to be readily available to all potential users. This will include: (i) reorganizing and strengthening the existing twelve (12) former BTI offices in the largest municipalities and rayons into Territorial Cadastre Offices (TCOs); and (ii) support of these offices in ownership registration, title conversion (i.e. replacement of existing certificates with new certificates), and day-to-day maintenance of

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<sup>6</sup> At this stage, Transnistria is not included in the project. Excluding Transnistria, there are two municipalities and 34 rayons in Moldova. The inclusion of Transnistria in the project scope (two additional municipalities and five rayons) will be reviewed during project implementation.

the legal cadastre. It is expected that under this part of Component II, about 330,000 real estate properties (corresponding to approximately 50% of urban and intravillan properties) will be registered over five years of project implementation (see Annex 1(b) for a summary of the registration offices to be established).

- (b) *Information Services Program.* To facilitate the efficient and expedient provision of up-to-date real estate information services to all users of the cadastre, this component will, in urban areas, finance: (i) installation of appropriate cadastral databases in twelve (12) Territorial Cadastre Offices, including further development and maintenance; (ii) collection and registration of cadastral information in these databases; and (iii) transfer, consolidation and maintenance of the data by the central NAGCC office allowing users throughout Moldova to access the information.

Component III: Rural Cadastral Services Program (US\$3.7 million of which IDA credit US\$2.8 million equivalent)

2.7 The project will finance activities and investments to provide the institutional basis for registration of ownership rights in rural (extravillan) areas, and storage and administration of ownership information, to be readily available to all potential users. The elements of this program are different from the Urban Cadastral Services Program in that: (a) titles will be issued, through local primarias and their LAS offices, initially without full registration and without identifying exact parcel boundaries, based on parcel boundaries and land marks determined through decision-making consistent with ongoing farm privatization procedures; and (b) full registration of property ownership will take place on a systematic basis only, and in connection with exits from collective farming. Ownership rights from earlier issued titles will be registered over time, in the context of systematic registration. In all other aspects, particularly with respect to Information Services and Institution and Capacity Building, rural areas will be fully integrated into the project. The elements of this component are:

- (a) *Real Estate Registration and Title Issuing Program.* This component will, in rural (extravillan) areas, finance: (i) the adjustment of registration techniques and methodologies currently used by primarias and LAS offices; (ii) the reorganization and strengthening of existing former BTI offices into Branch Cadastre Offices (BCOs), and establishment of more BCOs, organizationally and technically integrating LAS activities into the BCOs' organizational structure, such that a total of twenty-four (24) BCOs serve registration activities in smaller rayons; (iii) issuance of title deeds in the context of farm privatization; and (iv) registration of ownership rights to real estate, including rights arising from titles issued earlier. It is expected that under this part of Component III, about 200,000 properties will be registered (approximately 20% of privatized rural land) over five years of project implementation (see Annex 1(b) for a summary of the registration offices to be established).
- (b) *Information Services Program.* To facilitate the efficient and expedient provision of up-to-date real estate information services to all users of the cadastre, this component will, in rural (extravillan) areas, finance: (i) installation of appropriate cadastral databases in twenty-four (24) Branch Cadastre Offices (BCOs); (ii) collection and registration of cadastral information in these databases; and (iii) transfer, consolidation and maintenance of the data by the central NAGCC office allowing users throughout Moldova to access the information.

Table 2.1: Summary of targets for Components II and III

	IDA Fiscal Year	1999	2000	2001	2002	2003	Total
<b>Titles ('000) *</b>							
urban/intravillan		5	47	78	98	102	330
rural**		5	15	30	65	85	200
<b>Total</b>		10	62	108	163	187	530
<b>Cumulative</b>		10	72	180	343	530	
<b>Offices actively involved</b>							
Territorial Cadastre Offices (TCOs)		2	+2	+4	+4		12
Branch Cadastre Offices (BCOs)		0	0	0	12	+12	24
<b>Total</b>		2	4	4	16	12	36
<b>Cumulative</b>		2	4	8	24	36	

\* the targets may be increased at a project launch workshop based on project progress and updated assumptions.

\*\* a minimum of 20% of all rural titles will have to be based on survey and demarcation activities.

Component IV: Institution and Capacity Building Program (US\$5.4 million of which IDA credit US\$2.3 million equivalent)

2.8 The project will finance an Institution and Capacity Building Program, supporting institutions, agencies, and individuals actively and competently participating in project activities and to make use of the opportunities provided by the project (see Annex 2 for detailed specifications). The program consists of three main sub-components: (a) training, including direct project implementation related training, one-year study visits abroad, and training equipment; (b) technical assistance, in special areas of expertise currently not available in Moldova, provided from abroad; and (c) establishment of a Project Implementation Office (PIO).

- (a) *Training* (US\$1.5 million). This activity will finance: (i) courses directly related to project implementation, for all staff in the Territorial Cadastre Offices (TCOs), their Branch Cadastre Offices (BCOs), and NAGCC central offices, including training in the new registration methodologies and other issues related to institutional reorganization; (ii) training for information technology specialists; (iii) intensive course in property valuation for real estate valuers and those NAGCC staff involved in administering real estate valuation through the TCOs (not earlier than year 4 of project implementation); (iv) shorter study visits abroad for a geodetic engineer and a photogrammetrist; (v) one-year study visits abroad for University lecturers in the fields of cadastre, geodesy, topography, cartography, notarial law, and property valuation; and (vi) classroom training equipment and technical instruments for training, for NAGCC, as well as the Technical University and the Agricultural University in Chisinau (see Annex 2(a) for detailed specifications).
- (b) *Technical Assistance* (US\$2.0 million). The areas of expertise that will be provided through Technical Assistance (financed by bilateral donors) to develop and expand institutional knowledge and capacities are: (i) project implementation; (ii) information systems; (iii) procurement; (iv) accounting; (v) legal development; (vi) training; (vii) property valuation; (viii) public information; (ix) mapping/photogrammetry; (x) digital mapping; (xi) land registration; (xii) cadastral surveying; and (xiii) global positioning systems (GPS) (see Annex 2(b) for detailed specifications).
- (c) *Project Implementation Office (PIO)* (US\$1.9 million). The project will, during five years, finance a Project Implementation Office (PIO) with approximately 30 staff within NAGCC, to implement, coordinate, and oversee the various project components and their specific programs (see Annex 2(c) for detailed job descriptions). Maintaining such an office through project implementation is a covenant to the Credit Agreement [see para. 6.1(c)].

### III. PROJECT COSTS AND FINANCIAL ASPECTS

#### A. PROJECT COSTS AND FINANCING

3.1 *Project Costs.* Total project costs including contingencies are estimated at US\$24.6 million, excluding taxes.<sup>7</sup> A summary of the cost estimates by component is provided below in Table 3.1. Cost estimates by expenditure category are presented in Annex 6.

Table 3.1: Summary of project cost estimates by component

Components	(US\$ Million)			%	%
	Local	Foreign	Total	Foreign Exchange	Total Base Costs
1. Mapping Program	0.8	5.4	6.2	87	28
2. Urban Cadastral Services Program	3.2	4.5	7.7	59	35
3. Rural Cadastral Services Program	2.5	0.8	3.3	23	15
4. Institution and Capacity Building	2.0	2.8	4.8	59	22
<b>Total BASELINE COSTS (excl. taxes)</b>	<b>8.5</b>	<b>13.5</b>	<b>22.0</b>	<b>61</b>	<b>100</b>
Physical Contingencies	0.6	0.9	1.5	60	7
Price Contingencies	0.4	0.7	1.1	64	5
<b>Total PROJECT COSTS (excl. taxes)</b>	<b>9.5</b>	<b>15.1</b>	<b>24.6</b>	<b>61</b>	<b>112</b>

3.2 Project cost estimates are based on January 1997 prices. Due to the evolving nature of the Moldovan economy, all estimated costs are based on the US dollar. Physical contingencies of 7 percent have been applied to base costs. Price contingencies used the following estimated inflation rates to adjust costs during project implementation: 2.2% for 1998, 2.6% for 1999, 2.8% for 2000, 2.6% for 2001, and 2.5% for 2002. The estimated total foreign cost is US\$13.5 million or 61% of total baseline costs. Local cost is estimated at US\$8.5 million equivalent or 39% of total baseline costs. Incremental recurrent costs amount to US\$4.8 million over the five year implementation period.

3.3 *Project Financing.* The proposed credit of US\$15.9 million equivalent would finance about 65% of estimated total project cost including 70% of foreign and 56% of local costs. 31% of estimated foreign costs, amounting to US\$4.7 million equivalent, would be financed through a donation of equipment and related services by the Government of Switzerland (US\$2.8 million), and through funding of consulting services by the Government of Sweden (US\$1.8 million) and other bilateral donors (US\$0.1 million). The Government counterpart financing is US\$3.97 million or 16.1% of total project cost (net of taxes). If additional grant financing becomes available, the credit amount would be reduced appropriately. The financing plan is presented in Table 3.2. As conditions of credit effectiveness, the Borrower would provide evidence to IDA that: (a) a Swedish grant agreement has been executed and delivered, and all conditions precedent to its effectiveness have been fulfilled [see para. 6.2(f)]; and (b) a project account for counterpart funding has been opened in the National Bank of Moldova, or in a commercial bank acceptable to the Bank, and an initial deposit equivalent to at least 6 months worth of counterpart contributions (estimated at lei 698,000) has been deposited in the account [see para. 6.2(a)].

<sup>7</sup> Taxes and duties related to the project are estimated at US\$3.8 million. However, according to the Moldovan budget law, World Bank and IDA financed projects are exempt from taxes, customs and duties. Should such decision change, these expenses will be entirely covered by the Government.

3.4 The project differentiates between investment costs and incremental operating costs of an investment nature. Investment costs are civil works, equipment, aerial-photography, and surveying costs. Incremental operating costs include costs for mapping (production of new maps), data verification and conversion (title development costs), and project implementation and training costs, amounting to US\$5.1 million equivalent or 21% of total project cost. These costs are partly financed by IDA on a declining basis. They are defined in economic terms as capital expenditures needed for creating (but not maintaining) assets in the form of a new national cadastre and titles expected to produce a stream of benefits over a number of years. Other incremental recurrent expenditures are about US\$0.9 million equivalent over a period of five years to support the establishment of the cadastre, and would be entirely covered by the Government. The sustainability of the program would be ensured through cost recovery mechanisms described in Chapter V (Economic Evaluation).

Table 3.2: Financing Plan  
(excluding taxes)

	(US\$ Million)		
	Local	Foreign	Total
Government of Moldova	4.0	-	4.0
Donors	-	4.7	4.7
IDA	5.1	10.8	15.9
<b>Total</b>	<b>9.1</b>	<b>15.5</b>	<b>24.6</b>

Note: US\$2.8 million have been committed by the Government of Switzerland for financing of mapping and surveying equipment. Additional donor financing for the Institution and Capacity Building component has been obtained from Sweden (US\$1.8 million) and Norway (US\$0.1 million).

## IV. PROJECT MANAGEMENT AND IMPLEMENTATION

### A. IMPLEMENTATION ARRANGEMENTS

4.1 The institutions directly involved in implementing the project will be: (a) the National Agency for Geodesy, Cartography and Cadastre (NAGCC) which will fulfill the role of Project Implementation Office (PIO); (b) NAGCC's central Registry and Cadastral Services Divisions, NAGCC's Territorial Cadastre Offices (TCOs), and its Branch Cadastre Offices (BCOs), which will register ownership rights to real estate, issue title extracts, and maintain a real estate database, regionally, as well as centrally, including both urban and rural (extravillan) areas; (c) the Institute for Geodesy, Engineering and Research (IRCIM) in its capacity as the Government's mapping agency; (d) the Institute of Land Organization (MOLDGHIPROZEM) and the Land Arrangement Services (LAS) offices in rayons and primarias, both recently transferred from the Ministry of Agriculture and Food (MAF)'s jurisdiction to NAGCC, which will support the registration of real estate and issuance of titles in rural areas; and (e) local governments (primarias, municipal land committees, and rayonal executive committees) which will initially be the authorities to authorize registration of real property when transferring land from state to private ownership. In addition, private surveyors, notaries, real estate agents, commercial banks, selected Moldovan universities, and private consultants will take part in project implementation. By March 1, 1999, NAGCC will have undertaken a study resulting in a specific action plan to support private sector development in land surveying [see para. 6.1(g)].

4.2 The implementation arrangements are designed to make best possible use of existing institutional capacity, provide for focused project implementation, and be transitional in nature with respect to the functions to be fulfilled by local governments. Implementation arrangements also reflect the project's aim to strengthen capacity in the NAGCC, its Territorial Cadastre Offices (TCO) and Branch Cadastre Offices (BCO) in implementing cadastral activities in Moldova. The institutional arrangements are further described and depicted in Annex 3.1.

#### The National Agency for Geodesy, Cartography and Cadastre (NAGCC) as Project Implementation Office (PIO)

4.3 The National Agency for Geodesy, Cartography and Cadastre (NAGCC) will manage project implementation, fulfilling the role of a Project Implementation Office (PIO). The main functions of NAGCC as the PIO will be to: (a) support and oversee all project implementation, including quality assurance; (b) coordinate and manage the various institution and capacity building activities; (c) seek grant funding for project technical assistance (TA); (d) produce consolidated management reports to IDA for the project, including information supplied by consultants providing technical assistance (TA); and (e) ensure that IDA guidelines and procedures are followed. In fulfilling its role as the PIO, NAGCC will assign, as a minimum, the following staff to undertake PIO activities: (a) project manager; (b) assistant project manager; (c) computer support manager and computer support assistants; (d) procurement specialist; (e) accountant; (f) legal experts; (g) training organizers; (h) valuation expert and financial specialist/economist; (i) public information specialists; (j) registration/survey specialists; and (k) support staff (see Annex 2(c) for more details on PIO staff requirements). The Director of NAGCC will be designated as Project Director. In pursuing its PIO activities, relevant staff will be assisted by properly qualified and experienced Advisors (see description of Institution and Capacity Building Component of the project and Annex 2b), and by regular technical and administrative staff of NAGCC. In implementing the project, NAGCC's work program will encompass mapping, surveying, registration, issuing of title extracts, and establishing

and maintaining mapping and cadastral services.<sup>8</sup> The organization and main functions of NAGCC are further described below and in Annex 3.3. Adequate staffing of the PIO will be a covenant to the Credit Agreement [see para. 6.1(c)].

#### NAGCC and its Territorial Cadastre Offices (TCO)

4.4 NAGCC's central Registry and Cadastral Services Divisions, and NAGCC's Territorial Cadastre Offices (TCOs) with their Branch Cadastre Offices (BCOs) will be responsible for setting up, implementing and administering a system for real estate registration, including maintenance of a central database and issuance of real estate title extracts. Twelve (12) existing Bureau of Technical Inventory (BTI) offices, in 1997 transferred from the Ministry of Privatization (MOP) under NAGCC's jurisdiction, are being reorganized as TCOs. These offices already possess extensive records of essential value to the legal cadastre and will be further developed into registration offices for real estate. An additional twenty-four (24) Branch Cadastre Offices will be established, either newly founded or established on the basis of former BTI offices, such that a registration office will be present in each of the thirty six (36) Moldovan departments, excluding Transnistria. NAGCC's headquarters and regional offices will work closely with the local Land Arrangement Services (LAS) offices (see para 4.6 below). Coordination with local governments and with the rayonal offices of Departments of Architecture within the local governments will also be essential. NAGCC's mandate for real estate registration, and for issuing title extracts, will be established through a Law on Real Estate Cadastre, approved by the Parliament on February 25, 1998.

#### IRCIM as Mapping Agency

4.5 The project's mapping component will be implemented by IRCIM, recently reorganized and renamed as INGEOCAD, an existing self-financing government agency subordinated to NAGCC, undertaking all geodetic and cartographic components of the project under NAGCC's supervision and guidance. Currently, INGEOCAD is the only resource available in Moldova with the expertise required for the implementation of the mapping component. INGEOCAD will also assist NAGCC in matters related to required mapping services (e.g. aerial photography), services for updating of maps and related topographic and geodetic field work, and surveying activities necessary for real estate registration.

#### Rayonal and Local Land Arrangement Services (LAS)

4.6 Rayonal and local Land Arrangement Services (LAS) offices, currently subordinated to Primarias, under jurisdiction of NAGCC, will support the implementation of the project's Rural Cadastral Services component. In methodology and technology subordinated to NAGCC's guidelines, the 3,000 LAS locations will prepare records regarding rural (extravillan) land privatization in selected areas, and provide these to their respective Territorial Cadastre Office (TCO) or Branch Cadastre Office (BCO) for entry in the national cadastre. Consistent processes and methodology for registration of urban and rural land will be ensured through project coordination by NAGCC.

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<sup>8</sup> The scope of activities will depend on the actual number of plots and buildings/dwellings to be registered. It is expected that, with project financing, between 1998 and 2003, about 330,000 ownership rights for urban and intravillan real estate (including apartments) will be registered by offices directly subordinated to NAGCC, representing about 54% of all urban, and about 11% of all intravillan real estate. In addition, it is expected that about 200,000 land parcels will be registered and titled under the rural cadastral services component, of which not less than 20% based on survey and demarcation activities. Existing records from the Bureau of Technical Inventory (BTI) will be verified and used as basic data for the registration, in particular for the urban areas. It is estimated that about 40% of the urban land will need new maps or field work/surveying. These targets may be increased at a project launch workshop based on project progress and updated assumptions.

### Local Governments

4.7 Local governments will be involved in project implementation: (a) where certificates confirming the transfer of land from state to private ownership are officially certified by primarias and rayonal executive committees; (b) regarding the rural cadastral services component, as required in the context of farm privatization; (c) through the local offices of the Government's Department of Architecture, in verifying existing records, as required; and (d) in facilitating NAGCC's public information efforts.

### Coordination and Litigation Committees

4.8 Two committees will ensure interdepartmental coordination and cooperation. Since January 1995, NAGCC's operations have been overseen by an Interdepartmental Coordinating Committee (ICC), chaired by a Deputy Prime Minister. The ICC will continue to be responsible for overall formulation of policy and coordination with other ministries and agencies. In addition, a Republican Commission, formed in February 1997, and chaired by the Project Director, is responsible for solving land litigations. Maintaining the ICC throughout project implementation is a covenant to the Credit Agreement [see para. 6.1(d)].

### Implementation Activities through Government Agencies

4.9 *Incremental Costs.* The mapping services involving the production of new maps (US\$0.8 million) will be undertaken by the Government's mapping agency IRCIM (now named INGEOCAD) based on its unique skills and role in Moldova. Data verification and conversion services (title development costs of US\$2.0 million) involving real estate registration and issuance of title extracts, and the creation of a comprehensive Real Estate Registry (cadastre) containing physical, ownership, and fiscal data for both urban and rural (extravillan) areas, will be undertaken by twelve (12) Territorial Cadastre Offices (TCOs) and 24 Branch Cadastre Offices within the NAGCC organization. Implementation training costs for individuals in NAGCC and other stakeholders involved in implementing the project will be covered under the project. The IDA credit will finance 60% of these incremental mapping, registration and training costs during the first three years (Phase I), and 30% during the last two years (Phase II) of the project implementation period, on the basis of agreed unit prices, acceptable to IDA.

### Project Implementation Plan and Operating Procedures

4.10 The Borrower's Project Implementation Plan (PIP) includes arrangements for the timely provision of all necessary inputs, adequate staffing of NAGCC, key activities, an estimated time-table of implementation, technical assistance, implementation of adequate financial management procedures, specification of the monitoring and evaluation system, performance indicators and implementation of other operational procedures required for effective project execution.

4.11 In addition to the PIP, the Borrower is defining Operating Procedures (OP) for project implementation activities containing more detailed guidelines for NAGCC and other organizations involved in implementing project components, according to agreements reached with the Government. Ensuring that NAGCC will follow Operating Procedures, acceptable to IDA, throughout project implementation is a covenant to the Credit Agreement [see para. 6.1(e)].

## B. MONITORING, EVALUATION, AND SUPERVISION

4.12 *Project monitoring* will be the responsibility of NAGCC, contracting out most of these functions, as appropriate. Separate studies to monitor issues related to land privatization and trading, project related private sector development, potential for increased use of cadastral information, etc. may also be commissioned by NAGCC. NAGCC will furnish IDA with reports on a regular basis including: (i) quarterly progress and project financial management reports; (ii) interim unaudited statements of project accounts kept by NAGCC; and (iii) additional information that IDA may request from time to time.

4.13 *Performance monitoring* will be undertaken by IDA. To ensure close monitoring of the achievements of project objectives during implementation, a set of key performance indicators have been developed and confirmed at negotiations (see Annex 2). In addition, the Government and IDA will have annual reviews to exchange views on the status of project implementation, particularly regarding: (a) performance of NAGCC and project implementation procedures agreed upon by IDA; and (b) adjustments in the project that may be required to improve implementation of its objectives, including allocation of financing between the project components. To facilitate project initiation, a project launch mission will take place at credit effectiveness. Consultant performance will be evaluated based on quality and timeliness of completion of tasks, and transfer of relevant skills to local staff. A thorough project evaluation will be undertaken at mid-term to determine if project design, implementation arrangements, or terms and conditions should be revised in order to better meet the needs of the project. Final project evaluation will be undertaken after project completion. Indicators to monitor project performance, and to be applied during supervisory missions and in periodic reports by the Borrower, were confirmed at negotiations [see para. 6.1(a)]. By December 31, 2000, NAGCC will undertake a comprehensive mid-term review, and refine project design together with IDA, as appropriate [see para. 6.1(j)].

4.14 As this is the first IDA-supported investment credit in the sector, the project is expected to require significant supervision. Therefore, approximately 25 staff weeks have been allocated in supervision for the first year, and about 20 staff weeks in each of the following four years. A detailed supervision plan is included as Annex 5.

## C. PROCUREMENT

### Procurement Arrangements

4.15 Procurement activities under the project will fall under one of the following four major areas: (i) rehabilitation of 12 Territorial Cadastre Offices (TCOs) and 24 Branch Cadastre Offices (BCOs); (ii) supply of mapping and surveying equipment, computers and office equipment needed for production and updating of maps comprising about 1,800 square kilometers; and real estate registration for about 330,000 urban residential and non-residential properties, and about 200,000 rural properties; (iii) technical services needed for implementing the project activities; and (iv) consultants' services needed for institution and capacity building programs.

4.16 All goods, works and technical services to be financed from the credit proceeds would be procured by the National Agency for Geodesy, Cartography and Cadastre (NAGCC) in accordance with *Bank's Guidelines for Procurement under IBRD Credits and IDA Credits, January 1995, revised January and August 1996 (the "Guidelines")*. The IDA's Standard Bidding Documents for International Competitive Bidding (ICB) for "Procurement for Goods" and the Regional bidding documents established for National Competitive Bidding (NCB) for "Procurement of Works", as

amended from time to time, will be used for procurement. Individual civil works contracts costing less than US\$50,000 equivalent, involving an aggregate amount of US\$0.34 million equivalent, spread over three (3) years and involving rehabilitation of 37 offices, would be procured under the National Shopping procedure. A summary of procurement categories and procurement methods is shown in Table 4.1 below. Specific procurement arrangements are further detailed in Annex 6.

4.17 Goods, equipment, and mapping/surveying contracts estimated to cost US\$0.3 million equivalent or more would be procured through ICB. In ICB, goods manufactured in Moldova would, in the evaluation of bids, be granted a margin of preference of fifteen (15) percent or the amount of related import duties, whichever is less, in accordance with Appendix 2 of the Guidelines. Goods and equipment costing less than this threshold value would be procured by International Shopping. Individual contracts for furniture/cabinets and office supplies (registration materials) estimated to cost less than US\$50,000 equivalent up to an aggregate of US\$1.2 million spread over a period of five (5) years will be procured under National Shopping procedure. Urban and rural cadastral and mapping surveys which are widely dispersed over the entire country will be procured using national competitive bidding for contract costing up to \$300,000 up to an aggregate of \$700,000 and national shopping for contracts costing less than \$50,000 up to an aggregate of \$750,000.

4.18 Consulting services, technical assistance and training to be financed from the credit proceeds would be procured in accordance with the *Guidelines- Selection and Employment of Consultants by World Bank Borrowers, January 1997 (the "Consultants Guidelines")*, using the quality- and cost-based selection procedure with the exception of individual and local consultants for project implementation, training, and fellowships/study programs abroad for which institutions and individuals will be selected based on qualifications.

#### Moldova's Procurement Procedures

4.19 Moldova has had very limited experience with international procurement practices. A procurement law (April 1997) was prepared with assistance from the Bank as a first step to improving public procurement. Current practices and regulations applied in the public and private sectors were recently summarized in a Country Procurement Review Note prepared by the Bank. The limited country experience will be remedied through: (i) the contracting of an experienced procurement consultant, and an implementation specialist with procurement experience; and (ii) the mandatory use of the Bank's (and the Region's) Standard Bidding Documents (SBD).

#### Experience and Tasks of Implementing Agencies

4.20 NAGCC, a Government entity with no ministerial affiliations, will be the project implementing agency with a project implementation office (PIO) of approximately 30 staff. NAGCC will be in charge of all procurement under the project, and responsible for coordinating all cadastral activities in Moldova. NAGCC's experience in public procurement is limited to managing project preparation advances from IDA of US\$1.7 million, and project preparation grants from the Government of Japan of US\$1.1 million. During project implementation, NAGCC will be responsible for preparing and maintaining detailed procurement plans and will handle and supervise procurement assisted by: (a) a full-time implementation specialist with procurement experience during the first year, and part-time thereafter, and (b) a procurement expert (12 weeks during year 1, and 10 weeks during year 2 of project implementation), to be recruited as part of technical assistance. As a result of these arrangements, NAGCC's ability to handle procurement during project implementation will be strengthened. In its capacity as the Government's mapping agency subordinated to NAGCC, INGEOCAD will, in addition to producing new maps, as required, assist NAGCC with matters related to procurement and supervision of aerial photography services, and surveying services.

4.21 The emerging private sector surveying industry will be stimulated through increasing demand for their services throughout the project. There are at present approximately forty (40) small licensed private firms, for urban and rural surveying combined, that would be able to provide surveying services; others may obtain licensing before or during project implementation. Five of these firms have been involved in ongoing pilot activities undertaken by NAGCC during project preparation. Two state institutes, namely the State Institute for Technical Engineering Surveys (INGEOTECH) and the Institute of Land Organization (MOLDGHIPROZEM), both currently under the management control of NAGCC, are at present not eligible under the Guidelines to compete with other national or international firms to provide surveying services under the Project. A covenant has been included in the Credit Agreement for a study and action plan to be prepared by March 1999 regarding the future of public sector surveyor institutes [see para. 6.1(g)].

4.22 *Notifications.* A "General Procurement Notice" containing information about bidding opportunities for procurement on the basis of ICB was published in "Development Business" in February 1997 in accordance with paragraphs 2.7 and 2.8 of Bank Guidelines. Specific Procurement Notices will also be published, as appropriate, in a business newspaper in the English language having national circulation in Moldova, and in daily press with national circulation.

#### Financing by Donors

4.23 Photogrammetric Systems (US\$2,037,000), Global Positioning System (GPS) equipment (US\$542,000), Total Stations equipment for surveying (US\$171,000), and computer equipment (US\$50,000) needed for production of maps, for a total amount of US\$2,800,000, will be provided through Swiss bilateral assistance in the first year of the project. Procurement of the donor-funded goods will be managed by the Swiss government through a Project Coordinator, also financed by Switzerland, according to procurement procedures specified by the donor. Sweden has agreed to finance technical assistance consultants for a total amount of US\$1.8 million equivalent. Additional limited technical assistance will be provided by Norway.

#### Procurement Review

4.24 All civil works, goods, and technical services contracts valued at more than US\$200,000, all contracts for goods and technical services awarded through ICB, and the first contract for international and national shopping, and National Competitive Bidding (NCB) procurements, would be subject to prior Bank review. Any consulting contract in excess of US\$100,000 for firms and US\$50,000 for individuals would be subject to the Bank's prior review procedures. These limits are expected to result in prior review of about 62 percent of total Bank financed procurement. Also, regardless of the value, terms of reference for all technical assistance and consultants' contracts would be reviewed in advance by the Bank. This relatively extensive review of procurement packages is considered necessary due to the inexperience of the beneficiaries in Bank procurement procedures. Other procurement (about 25%) would be subject to the Bank's post review during supervision of the project in accordance with Bank procurement guidelines.

Table 4.1: Summary of Procurement Arrangements  
(US\$ million equivalent) a/

Expenditure Category	Procurement Method				Total Cost (including contingencies)
	ICB	NCB	Other b/	N.B.F	
<b>1. Civil Works</b>					
1.1 Office Rehabilitation	-	-	0.435 (0.350)	-	0.435 (0.350)
<b>2. Goods</b>					
2.1 Mapping and Surveying Equipment	1.450 (1.450)	-	-	2.750	4.200 (1.450)
2.2 Computer Systems	1.227 (1.227)	-	0.592 (0.592)	0.050	1.869 (1.819)
2.3 Office Equipment and Supplies	-	-	1.240 (1.020)	-	1.240 (1.020)
2.4 Vehicles	-	-	0.388 (0.388)	-	0.388 (0.388)
2.5 Training Equipment for project implementation and capacity building	-	-	0.523 (0.523)	-	0.523 (0.523)
<b>3. Technical Service Contracts</b>					
3.1 Aerial Photography Contracts	-	-	0.300 (0.300)	-	0.300 (0.300)
3.2 Mapping/Surveying Contracts	4.000 (4.000)	0.700 (0.700)	0.700 (0.700)	-	5.400 (5.400)
<b>4. Consulting Services c/</b>					
4.1 Project implementation support	-	-	0.150 (1.150)	1.914	2.064 (0.150)
4.2 Training and Fellowships	-	-	0.451 (0.451)	-	0.451 (0.451)
<b>5. Miscellaneous</b>					
5.1 Incremental Mapping Costs (new maps)	-	-	0.850 d/ (0.386)	-	0.850 (0.386)
5.2 Incremental Data Verification and Conversion (Title Development Costs)	-	-	2.000 d/ (0.887)	-	2.000 (0.887)
5.3 Incremental PIO Costs	-	-	2.000 d/ (0.964)	-	2.000 (0.964)
5.4 Implementation Training Costs	-	-	0.290 d/ (0.112)	-	0.290 (0.112)
5.5 Incremental Operating and Maintenance Costs	-	-	-	0.900	0.900 (----)
5.6 Refund to PPF Advance	-	-	1.700 (1.700)	-	1.700 (1.700)
<b>Total</b>	<b>6.677 (6.677)</b>	<b>0.700 (0.700)</b>	<b>11.619 (8.523)</b>	<b>5.614</b>	<b>24.610 (15.900)</b>

Note: (a) Figures in parenthesis represent IDA financing; totals will not tally due to rounding off. (b) Includes international shopping for goods for goods (US\$1.7 million), national shopping (US\$1.1 million), procurement of small works (US\$0.4 million) and technical services (US\$1.0 million); incremental costs (US\$5.1 million); and consulting services and training (US\$0.6 million); (c) Consulting services to be provided under "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" (January 1997); (d) incremental costs on the basis of unit values agreed upon by the Bank with IDA financing of 60% and 30% of Phase I and Phase II project expenditures respectively.

## Procurement Plan and Monitoring

4.25 Procurement plans for major procurement packages are presented in Annex 6. Procurement data will be collected and recorded by NAGCC. The Project Launch Workshop, including training in procurement, would be scheduled as close as is feasible to credit effectiveness, tentatively in August 1998. Preparation of final bidding documents, and the finalization of the procurement plan would be undertaken with the assistance of an implementation specialist, and a procurement expert. Procurement training of NAGCC staff will also be undertaken by these specialists.

### **D. DISBURSEMENT**

4.26 All disbursements would be against standard documentation as described in IDA's Disbursement Handbook. No standard disbursement profile exists for projects in Moldova or in the region. Disbursements will be administered by NAGCC. The proceeds of the Credit would be disbursed as presented in Table 4.2 below.

Table 4.2: Disbursement Categories - Allocation of Credit Proceeds

Expenditure Category	Amount in US\$ million equivalent	Financing Percentage
1. Civil Works	0.3	80%
2. Goods	5.0	100% of foreign expenditure; 100% of local expenditure (ex-factory); 80% of local expenditure for other items (procured locally)
3. Technical services <u>a/</u>	5.5	100%
4. Consultants' services <u>b/</u>	0.6	100%
5. Incremental Costs <u>c/</u>	2.3	60% of expenditures incurred through December 1, 2001 30% of expenditures incurred through December 1, 2003
6. Refund to PPF	1.7	
7. Unallocated	0.5	
<b>Total</b>	<b>15.9</b>	

Note: a/ Technical services include: (i) aerial photography contracts; (ii) surveying contracts (including updating of maps, as required).

b/ Consultants' services include: (i) project implementation support; and (ii) fellowships/study programs abroad.

c/ Incremental costs include: (i) mapping costs; (ii) registration and title development costs; (iii) contract resources for PIO; and (iv) training for human resources involved in project implementation.

4.27 Disbursements are expected to be completed in 5 years, based on a conservative estimate of time required to complete the legal cadastre activities covered by the project. The estimated closing date is February 28, 2004. Payments for expenditures prior to the date of the Credit Agreement will not be financed from the proposed credit. The proceeds of the Credit are expected to be disbursed in accordance with the schedule shown in Annex 7, and summarized in Table 4.3 below.

Table 4.3: Estimated Disbursements  
(US\$ million equivalent)

	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total:
IDA	2.6	3.8	2.5	2.9	4.1	15.9

4.28 *Statements of Expenditure.* Disbursements will be made on the basis of Statements of Expenditure (SOEs) for civil works, goods, and technical services contracts below US\$200,000. Also, for consulting firms for contracts below US\$100,000, and for individual consultants for contracts under US\$50,000, disbursements will be made on the basis of SOEs for technical and other services. Incremental costs will be disbursed on the basis of SOE irrespective of the amount. The documentation to support these expenditures would be retained by NAGCC for at least one year after receipt by IDA of the audit report for the year in which the last disbursement was made. This documentation would be made available for review by IDA and auditors upon request. Full documentation would be required for withdrawals for contracts above the SOE threshold levels. NAGCC will ensure that all supporting documentation is adequately maintained and available for review at the request of IDA.

4.29 *Special Account.* To facilitate project implementation, the Borrower would maintain a Special Account (SA) in US\$ in a commercial bank on terms and conditions satisfactory to IDA. The Special Account would be managed by NAGCC. The maximum authorized allocation of the SA would be US\$500,000. During the early stage of the project, the initial allocation to the SA would be limited to US\$300,000. However, when the aggregate disbursements under the Credit have reached the level of US\$1,000,000, the initial allocation may be increased up to the authorized allocation of US\$500,000 by submitting the relevant Application for Withdrawal. Applications for replenishment of the Special Account would be submitted monthly or when one-third of the amount has been withdrawn, whichever occurs earlier. Documentation requirements for replenishments would follow the standard IDA procedures as described in the Disbursement Handbook, Chapter 6. Monthly bank statements of the SA, reconciled by the Borrower, would accompany all replenishment requests.

#### E. ACCOUNTS AND AUDITS

4.30 *Financial Management.* The Borrower and NAGCC, in its capacity as the PIO, will be responsible for maintaining an adequate financial management system. Financial management systems will include accounting, financial reporting and auditing systems. NAGCC, on behalf of the Borrower, will ensure that accurate and timely information regarding project resources and expenditures can be provided to IDA.

4.31 *Accounting.* Accounting information submitted to IDA by NAGCC will comply with accounting standards acceptable to IDA<sup>9</sup>. Cash accounting, used by NAGCC for its own financial management purposes, may be used for project accounting. Project accounts will be maintained by NAGCC separately from any other existing accounts. NAGCC, having the responsibility for orderly and efficient recording and safeguarding of the project assets and resources will: (a) ensure accountability for project funds; (b) maintain records of the sources of funds, and the relevant accounts, broken down into the various types of expenditure for the project; (c) maintain internal controls to ensure that financial records are reliable, complete and provided on a timely basis; (d) report on the use of funds; (e) facilitate verification of these reports by independent auditors; and (f) provide information, as required, to IDA.

<sup>9</sup> The International Accounting Standards, published annually by the International Accounting Standards Committee, is an example of accounting standards that are acceptable to IDA.

4.32 *Financial Reporting.* IDA informed NAGCC during project appraisal, about IDA requirements for financial management systems, including accounting, project progress reporting, and auditing. Reporting templates were also provided to NAGCC. It was agreed that during project implementation, NAGCC will submit a quarterly Project Financial Management Report to IDA. The Report will include: (a) Project Progress Report showing comparisons of actual physical and financial progress vs. forecasts, and updated six month project forecast; (b) Project Financial Statement together with a source and application of funds; expenditure by category statement; and special account reconciliation statement; and (c) Procurement Management Report showing procurement status and contract commitments. NAGCC's Project Implementation Plan will describe further the project financial management systems and the Project Financial Management Report.

4.33 *Auditing.* NAGCC will be responsible, on behalf of the Borrower, for providing to IDA, within 6 months after the end of each fiscal year (including the fiscal year of the final IDA disbursement), annual financial statements of the Project that are audited in accordance with standards that are acceptable to IDA<sup>10</sup>. An audit of such financial statements will include: (a) an assessment of the adequacy of accounting and internal control systems to monitor expenditures and other financial transactions and ensure safeguarding of project-financed assets; (b) a determination whether NAGCC has maintained adequate documentation of all relevant transactions; and verification that expenditures submitted to IDA are eligible for financing under the project, and identification of any ineligible expenditures. The use of a special account (SA) and statements of expenditures (SOEs) will be addressed separately in the auditor's opinion. NAGCC will ensure that records and accounts of the project will be audited by an independent auditor acceptable to IDA, according to standards on auditing that are acceptable to IDA. The auditor will be appointed in sufficient time to carry out its responsibilities, including: (a) a review of the financial management systems at the beginning of project implementation; and (b) periodical reviews of the project financial management systems thereafter.

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10 Moldova's fiscal year is January 1 - December 31.

## V. ECONOMIC EVALUATION

### A. IMPACT ANALYSIS

5.1 The direct and immediate beneficiaries of the project will be existing and prospective private owners of real property. However, in providing Moldova with the institutional, legal and technical basis for effective land administration, the project will have a positive impact for the economy as a whole, as well as for its most direct beneficiaries. The project will spur economic growth through: (a) providing guarantee of ownership and security of tenure; (b) facilitating the functioning of real estate markets in urban and rural areas; (c) supporting privatization in the agricultural sector by providing mechanisms facilitating the restructuring of kolkhozes; and (d) supporting effective urban planning. The project will also encourage private sector development in those areas that are directly involved in project implementation, in particular the development of a private surveyor industry, private notaries, and possibly private real estate valuers. At the same time, activities under the project will lay the basis for: (a) the establishment of a fiscal cadastre, and (b) effective environmental land management. The analysis presented here discusses first the project's benefits to the economy as a whole which - due to the nature of the project - are mostly non-quantifiable in nature, then goes on to describe a sustainable cost-recovery strategy, reviews risks associated with the project that may, at least in part, prevent the expected benefits to emerge, and finally discusses fiscal impact and distributional effects. The project's financial rate of return, calculated based on the assumption of a sustainable cost-recovery strategy, is approximately 8.5%. Given the largely public good nature of this project, the economic rate of return will be substantially higher than this, justifying a public sector intervention.

5.2 *Guarantee of ownership and security of tenure.* While private ownership of land or buildings is in principle not in question in Moldova, economic development is seriously impeded by *insecurity about* property ownership and related institutional arrangements. Therefore, only very limited credit is available with real estate as security, leaving little opportunity for individual investments. Notwithstanding the lack of legal support for existing provisional ownership titles, Moldovans buy and sell buildings and apartments; however, in the case of legal dispute there is very little protection for either party. In case of inheritance, the absence of legally valid ownership registration poses an equally large problem. In providing the institutional, legal and technical basis for an effective land administration system, the project will support activities of all those economic agents who need security about their real property to be able to fully pursue their goals, such as individuals or firms intending to invest in their property, to buy property, or to use their property as security to gain access to credit. In increasing economic opportunities for individuals and firms, the project will contribute to increased economic growth, the extent of which, however, is hard to quantify.

5.3 *Real Estate Markets.* Well functioning real estate markets contribute to economic growth by improving the allocation of real estate such that profitable properties are owned by those who make most economic use of them. Information and security about property ownership - as provided through the project - are key components of functioning real estate markets. Real estate markets in Moldova function, but suffer seriously from lack of information about properties themselves as well as from unclarity about property ownership (see para. 1.8). With the availability of information on property and property ownership, trading in real estate, as well as the facilitation of such trading through appropriate institutions, will increase.

5.4 *Rural Development and Urban Planning.* In providing a coordinated approach to real estate registration, unifying registration of land and buildings, the project provides a timely instrument that will support and facilitate ongoing efforts to restructure and privatize former agricultural kolkhozes. At the same time, the project will support effective urban planning which requires information about

urban land, in particular about the use and boundaries of plots and buildings. In Moldova, urban planning is severely hampered by the lack of appropriate information. For example, the location of crucial infrastructure is often only known to utility providers and not to municipalities which need this information. Mapping and surveying activities as included under the project will facilitate future urban planning and zoning and thereby spur economic growth.

5.5 *Private Sector Development.* Moldovan land administration has practically no privately operating professionals. During the last few years, the first private surveyor firms have emerged; yet surveying has to date mostly been undertaken by three large government owned institutes (INGEOTECH, IRCIM, MOLDGHIPROZEM). Also, currently, no private notaries exist. A law instituting the possibility for notaries to operate privately is underway; however, there is little relevant training available as would be necessary to support privatization of such services. At present, also real estate valuation does not exist as a profession in Moldova. Two universities, the Agricultural University and the Technical University, have recently taken steps to include valuation techniques in their course offerings; however, modern principles and methodologies of land valuation are by and large unknown in universities as well as in involved government agencies (e.g. the tax inspectorate). Project activities will directly support the development of these three professions, by generating demand for their services as well as through suggesting qualification systems, proposing appropriate laws and regulations, and providing training and expertise. Undertaking a study of the development of notarial, valuation and real estate agency activities, including an overview of the development of the real estate market and the commercial use of real estate information, as well as a specific action plan to support private sector development in such activities, is a covenant to the Credit Agreement [see para. 6.1(h)].

5.6 Quantifying expected benefits to the economy as described above is problematic due to lack of appropriate data and complexity of concepts. The Bank's Moldova Poverty Assessment, to be completed in 1998, will provide additional and updated information that may facilitate a future evaluation of the project's impact.

## **B. COST RECOVERY STRATEGY**

5.7 Notwithstanding the project's "public good" character, its financial rate of return is estimated at 8.5% (see Annex 8, Table 3). Project cost can be recovered, over a 35 year period, through fees imposed on the direct users of the land administration system, namely through property transaction fees (transfer of ownership, registration of mortgages, etc.), real estate information fees, and fees (royalties) for maps and other cadastral services. As the project will only provide the basis for a fiscal cadastre, but not institute it, neither property taxes nor transfer taxes have been included in the cost recovery strategy (see section E below on fiscal impact). Once the legal cadastre has been established, a fiscal cadastre can be built up on its basis, generating additional income and further increasing the project's rate of return. The considerations presented below demonstrate that cost recovery is feasible for this project, at affordable fee rates. The cost recovery strategy proposed here is based on several assumptions concerning the numbers of properties registered, numbers of real estate transactions, affordability of fees, and interest in information, over the years from FY 1999 to FY 2003.

5.8 *Assumptions concerning Cost.* Cost considered here include the Government contribution to project cost (excluding taxes and duties) and the financing cost of the credit. Direct project costs amount to (excluding taxes) a total of US\$24.6 million in 1997 prices, of which the Government contribution will be US\$3.96 million (see Annex 8, Table 1). This includes costs of goods and works related to actual surveying/mapping and registration, as well as capacity and institution building

activities such as training. The government contribution is spread across the project's five year implementation period, increasing towards the end. Prices of capital goods and services are assumed constant in real terms (project cost projections already contain contingencies). Financing cost are calculated for a standard IDA credit, administered at a service fee of 0.75%, repayable over 35 years with 10 years of grace, with an effective commitment fee of 0.25%, in US\$ equivalent. Total costs incurred to the Government, including financing cost of the IDA credit and commitment fee, amount to US\$22.35 million, spread over 35 years (see Annex 8, Table 3). Depreciation of equipment was calculated according to the norms as operating in Moldova and is included in the cost calculation. Depreciation is included with respect to all equipment for the first five years of implementation, for the remaining 30 years, however, only with respect to 40% of equipment, thereby excluding equipment which is only used for setting up and establishing the cadastral system.

5.9 *Assumption concerning Revenues.* Revenues are calculated on the basis of both urban and rural registration offices' services. Revenues are expected from: (a) fees for transaction registration; (b) fees for provision of real estate information; and (c) royalties from the publishing of maps. Fees for first-time registration are assumed to be zero. Assumptions on transaction registration fees were made in relation to monthly wages and property values. Average wages, as stated in official statistics, are low at present in Moldova, at about US\$42/month; however, the figures do not take into account substantial non-wage incomes. Notwithstanding the relatively low wage levels, payment of transaction fees should not be an affordability problem as selling or mortgaging property will generate incomes from these transactions. Currently, apartment prices in Chisinau vary between US\$6,000 (1-room apartment) and US\$35,000 (3-room apartment). Prices in rayonal towns are 30%-40% lower.

- (a) Fees for transaction registration. It is assumed that over five years a total of 330,000 properties will be registered in urban and intravillan areas, and 200,000 titles in rural areas. Assumptions on different types of properties were taken according to the existing records. The project will register, among property owners in urban areas, 67,935 owners of single family homes, 163,043 apartment owners, 13,587 owners of commercial properties, and 5,435 owners of non-commercial property, Government institutions and agencies, e.g. kindergartens, schools, etc., as well as their respective properties (see Annex 8, Table 2). As the registration of real estate *transactions* will generate fee income, assumptions cover the expected volume of transactions; volumes are estimated as a percentage of registered properties: 8% of all apartments, 4% of properties with single family houses, 2% of commercial properties, and 1% of non-commercially used other properties (during 1996 and 1997, property transactions amounted to 12% to 14% in Chisinau; see para. 1.7). Due to the implementation pace particular to rural areas, the number of transactions for rural properties is estimated to be only 1%. For simplicity, fees for all transactions are assumed to be at a fixed level rather than set in relation to a declared transaction value. In view of sales prices (and corresponding mortgage amounts), the fees are initially assumed to be US\$30 per apartment, US\$30 per single family home, US\$50 per commercial property, US\$10 for other non-commercial properties, and US\$20 for properties in intravillan areas and for rural land plots. Over time, property markets will improve in performance, credit will increasingly be available, real estate values will rise and with them the benefits of the cadastre to its users<sup>11</sup>. Therefore, it is assumed that charges for transaction registration will increase over the 35 year cost recovery period. Based on these assumptions, a total of US\$36 million is expected to be generated through fees for transaction registration over 35 years (see Annex 8, Table 3).

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<sup>11</sup> Experience from Thailand suggests that the increase in land values attributable to land registration ranges between 75% and 200%.

- (b) Fees for the provision of real estate information, as charged to private users of such information (e.g. real estate agents, developers, banks, parties initiating court procedures for which documentation is required) are assumed to be US\$2 per request, initially, assuming requests for 4% of all registered real estate, and rising slowly. It is assumed that Government agencies (municipalities, Ministries) will not be charged for information provided to them. A total of US\$3.7 million can be generated over 35 years through the provision of cadastral information.
- (c) Royalties from printing and selling of maps will depend on the number of maps sold and on the willingness of the market to pay for such maps. A total of US\$500,000 is assumed as income from such royalties over 35 years.

5.10 The project financial rate of return will be 8.5%, based on a calculated cost of US\$22.35 million, depreciation cost of US\$8.64 million, and project revenues of US\$40.19 million, spread over 35 years. Project costs are incurred during the first five years, and most project benefits are generated during later years of the cost recovery period.

### C. PROJECT RISKS

5.11 There are short/medium term risks, and long-term strategic risks associated with the project, mainly deriving from technical/organizational, institutional, and financial aspects of the project and related to overall project acceptance. Technical/organizational risks in the short and medium term relate to NAGCC's implementation capacity, and the capacity of its regional offices and contracted surveyors to perform project tasks according to targets. Capacity risks exist in particular with respect to property registration in rural areas, in view of the yet unclear level of privatization activities to be expected. In order to mitigate these risks, and to guide project design, a pilot activity was undertaken as part of project preparation. On the basis of this pilot program, and with financing through a second Project Preparation Facility, NAGCC has prepared appropriate technical and organizational capacity strengthening activities, including relevant training. Also, continuous performance monitoring will play an important part in mitigating capacity risks. Long-term strategic risks related to technical and procedural aspects of project implementation arise from the possibility of deterioration in equipment or human capital. These will be addressed through the implementation of an appropriate cost recovery strategy, thereby securing funds for equipment maintenance and appropriate wages. Assigning an international project implementation advisor is a condition for Credit effectiveness [see para. 6.2(c)].

Table 5.1: Short term and medium term project risks<sup>12</sup>

Risk	Possible Cause	Mitigation Measures	By Whom?
<b>Institutional Framework</b>			
Different treatment of urban and rural properties	<ul style="list-style-type: none"> <li>Legal framework fails to establish cadastral mandate for NAGCC</li> </ul>	<ul style="list-style-type: none"> <li>Adoption of Law on Real Estate Cadastre is a condition of credit effectiveness [see para. 6.2(b)].</li> <li>Adopting implementing regulations under this Law is a condition of effectiveness [see para. 6.2(c)].</li> </ul>	<ul style="list-style-type: none"> <li>Parliament</li> <li>Government</li> </ul>
<b>Technical/Procedural</b>			
Surveying below target	<ul style="list-style-type: none"> <li>Surveying firms lack technical capacity</li> </ul>	<ul style="list-style-type: none"> <li>Training and prequalification</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC / Cadastral Services Division</li> </ul>
First-time registration in urban areas below target	<ul style="list-style-type: none"> <li>Lack of coordination between or integration of NAGCC and TCO</li> <li>TCOs lack in human capital</li> <li>TCOs lack in organizational capacity</li> </ul>	<ul style="list-style-type: none"> <li>BTI transferred to NAGCC</li> <li>Early training</li> <li>Operating procedures and project implementation advisor condition for effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC/PIO</li> <li>NAGCC/PIO</li> </ul>
First-time registration in rural areas below target	<ul style="list-style-type: none"> <li>IT related problems</li> <li>as above</li> <li>Coordination problems with LAS offices</li> <li>Slow farm privatization</li> </ul>	<ul style="list-style-type: none"> <li>IT training</li> <li>as above</li> <li>Cooperation strategy part of operating procedures</li> <li>SALII conditions</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC Help Desk</li> <li>NAGCC/PIO</li> <li>NAGCC/Local Governments</li> <li>MAF</li> </ul>
<b>Acceptance</b>			
Little demand for registration services by property owners	<ul style="list-style-type: none"> <li>Little information about benefits</li> <li>Bad services (waiting)</li> <li>Inappropriate legislation on mortgages</li> <li>Low economic growth</li> </ul>	<ul style="list-style-type: none"> <li>Public information component</li> <li>Quality Assurance Targets</li> <li>Covenant to Credit Agreement</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC / public information officer</li> <li>NAGCC / PIO</li> </ul>
Little demand for information services by other users (real estate agents, etc.)	<ul style="list-style-type: none"> <li>Little information about benefits</li> <li>Bad services (waiting)</li> <li>Information not updated timely</li> </ul>	<ul style="list-style-type: none"> <li>Public information component</li> <li>Quality Assurance Targets</li> <li>Quality Assurance Targets</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC / public information officer</li> <li>NAGCC / PIO</li> <li>NAGCC / PIO</li> </ul>
<b>Financial</b>			
Ineffective cost recovery over project period	<ul style="list-style-type: none"> <li>Less demand than expected (see above)</li> <li>Delayed/different fee structure</li> <li>Financial mis-management</li> </ul>	<ul style="list-style-type: none"> <li>see above</li> <li>Implementation Advisor</li> <li>Implementation Advisor</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC</li> <li>NAGCC</li> </ul>
Counterpart funding insufficient or late	<ul style="list-style-type: none"> <li>Funding based on unsecured revenues</li> </ul>	<ul style="list-style-type: none"> <li>Initial counterpart funding deposit</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC Ministry of Finance</li> </ul>

<sup>12</sup> Abbreviations used are: IT (Information Technology); TCO (Territorial Cadastre Office); PIO (Project Implementation Office); SALII (Structural Adjustment Credit II); MAF (Ministry of Agriculture and Food).

5.12 Institutional risks are that legal and institutional changes necessary to fully exploit the opportunities of the registration system may not be adopted, e.g. appropriate mortgage legislation, or regulations for land valuation, urban planning, etc. The existence of the aforementioned Interdepartmental Coordinating Committee (User Group) will provide a forum for cadastral interest groups to exchange ideas and to reach consensus on such topics. To mitigate these risks, the development, and submission to Parliament, of draft legislation to remove any effective impediment to the enforcement by secured creditors of claims over real property, is a covenant to the Credit Agreement [see para. 6.1(i)].

Table 5.2: Long term strategic risks

Risk	Possible Cause	Mitigation Measures	By Whom
<b>Institutional Framework</b>			
Once it is established, not all potential users derive benefits from the national cadastre system (municipalities, fiscal users, etc.)	<ul style="list-style-type: none"> <li>No laws establishing fiscal cadastre</li> <li>Legal framework inappropriate for urban planning</li> </ul>	<ul style="list-style-type: none"> <li>Proposals for laws and regulations will be developed during project implementation</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC / PIO</li> <li>Ministry of Finance</li> <li>Ministry of Justice</li> <li>Municipalities</li> </ul>
<b>Technical/Procedural</b>			
Equipment deteriorates	<ul style="list-style-type: none"> <li>High cost of maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Cost recovery strategy developed during project preparation</li> </ul>	<ul style="list-style-type: none"> <li>NAGCC / Cadastral Services Division</li> </ul>
Human capital deteriorates	<ul style="list-style-type: none"> <li>Low wages</li> <li>Inadequate management</li> </ul>		<ul style="list-style-type: none"> <li>NAGCC/PIO</li> </ul>

5.13 Financial risks relate mainly to the availability of Government counterpart funds. This risk should be mitigated through the development of an appropriate cost recovery strategy, which, however, may be implemented ineffectively. Public information activities increasing demand for cadastral services, and setting of quality assurance targets, will address this risk. Counterpart funding may be in risk if based on unsecured revenues. Deposit of initial counterpart funds is a condition for credit effectiveness [see para. 6.2(a)].

5.14 Finally, there is the risk that property owners may lack confidence in the registration system and have little understanding of the benefits of land registration, and thus they may not make appropriate use of it. This risk would be addressed by keeping the project and the system as simple as possible, utilizing public information instruments whenever possible, including an open, transparent process aimed specifically at informing the public about the benefits, procedures, and costs of land registration, specifying the role of appropriate government agencies and other actors involved.

#### D. ALTERNATIVE DESIGNS

5.15 Several alternative project designs were considered during project preparation including: (a) a cadastre project focusing exclusively on urban areas; (b) a cadastre project excluding map production (component I); and (c) no intervention at all. While institutional arrangements under (a) would be more simple than under the proposed project design, excluding rural land from the national cadastre would ignore the potential impact which access to credit could have in rural areas on growth in the agricultural sector, and thus on the economy as a whole. Establishing a nation-wide unified

cadastre, i.e. harmonizing procedures for titling and registration of real estate in rural and urban areas, makes maximum use of the institution and capacity building investments that will have to be part of the project irrespective of its size. It also minimizes the risk that confusion about differing procedures and titles would deter the banking sector from accepting the system as a valuable instrument for verifying ownership of real estate. Including a component that finances the production of maps, updated and new, in the proposed project makes use of economies of scale. Up-to-date and exact maps are not absolutely necessary in all cases for the registration of real estate; however, they substantially reduce the risk of wrong and/or overlapping plot demarcations to be registered. Including Component I in the project therefore makes use of anyway ongoing survey activities and, at the same time, substantially increases project quality in the reliability of the information registered.

5.16 The project team also considered the no-intervention scenario, particularly given already ongoing registration activities in Moldova. However, the low level of collateralized credit on immovable properties clearly suggests the need for a functioning real estate registration system. The already existing property registries, separate for land and for buildings, call for, at minimum, harmonization and integration such that the potential economic benefits of a well functioning land administration system may be achieved (see section A of this chapter). In addition, owner-based methodology of land registration used to date does not allow real estate markets to use the information as necessary to facilitate transactions. The very slow pace of land registration to date also suggests the need for changes in procedures and for additional investments. Bank involvement, in addition to providing essential foreign exchange for financing of increased registration efforts, will also encourage the necessary discipline to implement a strategic program and set and monitor performance targets for quality of service and cost-effectiveness.

#### **E. PARTICIPATION AND SUSTAINABILITY OF IMPACT**

5.17 Project sustainability will depend on various aspects of institutional reform, and therefore, on the commitment of Government agencies and political decision makers to implement such reforms, in particular the Ministries of Privatization, Agriculture and Food, and Justice. Commitment on the Government's side is strong at present, as demonstrated through: (a) the Government having established NAGCC at an early stage with appropriate independence and mandate; (b) the presence of all involved sector ministries in the Interdepartmental Coordination Committee established for NAGCC and for the project; and (c) the Government's financial commitment, as demonstrated through the use of a first Project Preparation Facility (US\$0.7 million) and a second Project Preparation Facility (US\$1.0 million) for project preparation and pilot activities. The initially high investment in setting up a cadastral system should constitute an additional incentive to provide for the legal and institutional stability that is necessary to continue to exploit the benefits of the system.

#### **F. DISTRIBUTION OF IMPACT**

5.18 The project will benefit all users of cadastral information, and thus in particular those parts of the population who own immovable property and want to trade it, pass it on to their heirs, or use it as security to obtain access to credit. Benefits are therefore likely to be widespread. Due to the existing institutional environment, this first project concentrates on urban areas (estimated 50% of all urban properties) more than on rural areas (estimated 10% of all rural properties). Within urban areas, given that already more than 85% of residential buildings have been privatized, benefits should be spread evenly. No further distributional effects are expected. As most urban buildings have already been privatized on the basis of provisional titles, and as registration of ownership to urban land will follow the existing titles on buildings, the project will not substantially change already existing

ownership patterns. Throughout the privatization program, most building titles have been issued to male heads of households. Yet, this did not have significant distributional effects along gender lines as, within marriage, property belongs to both partners, irrespective of who is registered as owner, and partners may only dispose of such property with mutual consent.

### G. FISCAL IMPACT

5.19 Counterpart funds required from the Government for the proposed project are about US\$3.96 million over the five year project implementation period (excluding taxes). Annual Government contributions to the project represent 0.02% of the total Government revenues in 1998, 0.05% in 1999, 0.06% in 2000, 0.09% in 2001, and 0.11% in 2002, and 0.05% in 2003 (see Table 5.2 below). It should also be noted that project cost, and financing cost, can be fully recovered through fees for transaction registration, provision of cadastral information, etc. (see paras. 5.7 and 5.10). Cost recovery through fees is a covenant to the Credit Agreement [see para. 6.1(f)].

Table 5.3: Fiscal Impact

Fiscal Year	/a	1996	1997	1998*	1999*	2000*	2001*	2002*	2003*
GDP <sup>1,2</sup>		2247.8	2648.5	2997.6	3392.8	3840.0	4346.2	4919.1	5568.4
Annual Govt. Revenue <sup>1,2</sup>		459.3	605.7	692.8	792.5	906.6	1037.1	1186.4	1357.2
Revenues, in % of GDP <sup>1</sup>		20.44	22.87	23.11	23.36	23.61	23.86	24.12	24.40
Government Counterpart Contribution <sup>2</sup> .				0.15	0.38	0.56	0.92	1.27	0.69
Government Counterpart Contribution, in % of Government revenues <sup>1</sup>				0.02	0.05	0.06	0.09	0.11	0.05

As per IMF; <sup>2</sup> in million US\$; \* estimates

/a According to Moldovan Fiscal Years

5.20 Once successfully implemented, the project will be the basis for substantial revenue increases to the Government in the medium term as it will provide the basis for improving the collection on real estate taxes (not included in this analysis). Currently, revenues from property taxes (taxes on buildings) amount to less than 0.6% of total tax revenues, an amount that could possibly be at least doubled if an appropriate system of property valuation were established. Revenues from property taxes vary across countries but may amount up to 3% of government revenues and are typically crucial instruments for financing urban service provision. Undertaking a study, including a strategy and specific action plan on the introduction of a fiscal cadastre, as well as a system for the introduction of property valuation in the cadastral registration system, is a covenant in the Credit Agreement [see para. 6.1(k)].

5.21 Under Moldova's current system, revenues depend on the value of a property as set forth in a Law on Normative Prices of January 1, 1994. Such system is difficult to update and administer, and hard to enforce. The law defines the values of buildings according to which their owners are taxed (land is not taxed except for agricultural land), not taking into account market values or reference values. Rates are set by local governments which receive 90% of the property tax revenues. Individuals pay between 0.15% and 0.4% of a property's value, depending on their location and on the type of property (residential housing, dacha/garage, enterprise). Legal entities pay between 0.1% (industrial activity) and 1% (gastronomy) of the value of their buildings as shown in their annual tax

statements. In addition, property owners are also taxed upon any property transaction that is certified by a government institution. Transactions involving relatives of the property owners are taxed up to 1% of the transactions value, other transactions are taxed up to 12% of the transaction value. The declared property values which are the basis for the tax calculation are widely believed to amount to less than the actual values.

#### **H. POVERTY IMPACT**

5.22 The project will have no direct impact on the poor as a group. However, as the poor lack access to finance, but typically own their residence, the project will help create collateral, and possibly capital, and therefore will increase their opportunities for improved living standards.

#### **I. ENVIRONMENTAL IMPACT**

5.23 The project has been assigned to environmental category C. It will have a positive effect on the environment by providing reliable and current land information, which will assist in the preparation and enforcement of environmental protection programs and identification of polluters. Private land ownership, which the project would support, is expected to foster prudent use of land and natural resources.

## VI. AGREEMENTS AND RECOMMENDATIONS

### A. AGREEMENTS REACHED DURING NEGOTIATIONS

- 6.1 The following agreements were reached during Credit negotiations:
- (a) Agreement was reached on the indicators to monitor project performance [see para. 4.13];
  - (b) Arrangements for project implementation were agreed upon, including implementation plan, procurement and disbursement arrangements, reporting requirements, and supervision schedule [see paras. 4.12, 4.13, and 4.14, Sections IV.C and IV.D];
  - (c) During project implementation, the Government will maintain, at all times, a Project Implementation Office (PIO) within NAGCC, with functions and responsibilities acceptable to IDA, and with a Project Manager and key staff with qualifications, experience and terms of reference satisfactory to IDA [see paras. 2.8(c) and 4.3];
  - (d) During project implementation, the Interdepartmental Coordination Committee, chaired by the Deputy Prime Minister, will be maintained at all times to coordinate project implementation, with members and terms of reference satisfactory to IDA (see paras. 1.18 and 4.8);
  - (e) The Government will ensure that NAGCC and its subordinated offices at all times follow the Operating Procedures, and that NAGCC follows the operational reporting and accounting system for the PIO [see para. 4.11];
  - (f) The Government will ensure that fees are charged for registration and cadastral services and measures are taken to achieve full cost recovery in accordance with a methodology agreed with IDA and set out in the Operating Procedures [see para. 5.19];
  - (g) By March 1, 1999, a study of the development of surveying activities will have been undertaken, with terms of reference satisfactory to IDA, which shall include the preparation of a specific action plan to support private sector development in land surveying. The study will be furnished to IDA no later than July 1, 1999 [see paras. 4.1 and 4.21];
  - (h) By July 1, 1999, a study of the development of notarial, valuation and real estate agency activities will have been undertaken, including an overview of the development of the real estate market and the commercial use of real estate information, with terms of reference satisfactory to IDA, and including the preparation of a specific action plan to support private sector development in such activities. The study will be furnished to IDA no later than September 1, 1999 [see para. 5.5];
  - (i) By December 31, 1999, the Government will submit draft legislation to its Parliament, satisfactory to IDA, to remove any effective impediments to the enforcement by secured creditors of claims over real property [see para. 5.12];
  - (j) For the mid-term review, the Government, by October 31, 2000, will prepare, and furnish to IDA, a report, under terms of reference satisfactory to IDA, integrating the results of the monitoring and evaluation activities undertaken with respect to the project's progress. The Government will review the report with IDA by December 31, 2000, setting out measures recommended to ensure the efficient carrying out of the project and the achievement of its objectives during the period following this mid-term review [see para. 4.13];
  - (k) By July 1, 2001, the Government will undertake a study on the introduction of a fiscal cadastre, with terms of reference satisfactory to IDA, including a strategy and specific action

plan, and including proposals for a system to introduce property valuation in the cadastral information system. The study will be furnished to IDA no later than September 1, 2001 [see para. 5.20].

## **B. CONDITIONS OF EFFECTIVENESS**

6.2 Following the signing of the Credit Document, in addition to the conditions of effectiveness set out in IDA's General Conditions, the following additional conditions must be fulfilled by the Borrower:

- (a) A Project Account for counterpart funding shall have been opened by the Borrower and an initial deposit equivalent to at least 6 months' worth of Government contributions (estimated at lei 698,000) shall have been deposited in the account [see para. 5.13].
- (b) The Cadastre law shall have been adopted by the Parliament of the Borrower together with all necessary amendments to existing legislation [see Table 5.1];
- (c) Implementing regulations under the Cadastre Law acceptable to the Bank shall have been adopted by the Government of the Borrower [see Table 5.1];
- (d) The Project Implementation Office shall have been established within NAGCC and a Project Manager, a Project Implementation Advisor and key staff shall have been appointed with qualifications, experience and terms of reference satisfactory to the Bank [see para. 5.11];
- (e) Operating Procedures, acceptable to the Bank, shall have been adopted by NAGCC and a reporting and accounting system, acceptable to the Bank, shall have been established within the PIO [see para. 4.11]; and
- (f) A Swedish grant agreement shall have been executed and delivered, and all conditions precedent to its effectiveness shall have been fulfilled [see para. 3.3].

## **C. RECOMMENDATION**

6.3 With the above agreements and conditions, the proposed project would be suitable for an IDA credit of SDR 11.5 million (US\$15.9 million equivalent) at standard IDA terms, payable in thirty-five years, including ten years of grace. The Borrower would be the Republic of Moldova.

## 1. FRAMEWORK FOR A LEGAL CADASTRE

### (a) LEGISLATIVE ACTIVITIES

#### **Current Situation**

1. Improvement of the legal framework related to all aspects of real property is essential for the development of a strong real estate market in Moldova. The ability to fully achieve the objectives of the First Cadastre Project is affected by issues resulting from many existing laws and regulations. These range from fundamental issues surrounding privatization and registration of land, buildings, and condominiums (apartments) through to aspects of statutes that define functional accountabilities for day to day processing. Many of these issues need to be resolved before the project can become fully operational. Consequently, effort has been, and will continue to be, directed at the legal framework of real estate ownership and registration.

2. Activities that have been undertaken to date include: (a) analysis of Moldovan legislation against a background of legislation in mature market economies and relevant legislation in Eastern Europe; (b) identification of new legislation and changes to existing legislation and regulations that will be required to effectively achieve the objectives of the project (real estate registration); and (c) preparation of a comprehensive new law and regulations to establish a national system of unified registration of title and of a set of legislative and regulatory amendments to existing laws to remove obstacles impeding the development of a real estate market.

3. These activities have been undertaken primarily as part of project preparation and pilot work, and through USAID funded initiatives regarding privatization of land under privatized objects, and farm restructuring. Consultations have occurred with those ministries and agencies most affected by the proposed changes.

#### **Status of Activities Underway**

4. The existing land registration system, recently transferred from the Ministry of Agriculture and Food (MAF) to National Agency for Geodesy, Cartography and Cadastre (NAGCC), is unable to cope with the present workload. In addition, the workload with respect to rural land is expected to increase rapidly due to expansion of farm restructuring activities across the country, and the fact that the Constitutional Court has declared the moratorium on (agricultural) land sale unconstitutional (October 2, 1996). In order to streamline present title issuance procedures, amendments, additions or exclusions to several laws and government regulations have been proposed to the government through the USAID funded privatization initiative.<sup>1</sup> The most important goal of these amendments is to bring the operational surveying, registration, title issuance, and transfer responsibilities to the level of the rayon and primarias, and in particular to avoid, to the extent possible, expensive and time-consuming activities before titles can be issued.

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<sup>1</sup> Amendments, additions or exclusions to: (a) Land Code; (b) Law on Local Public Administration; (c) State Regulation of Land Ownership Regime; (d) State Land Cadastre, and Land Monitoring; (e) Law on the Normative Price of Land; (f) Provisional Regulation on Sale and Purchase of Land; (g) Governmental Decision on Approving the Unique Models of Documents Confirming the Right of Ownership, Possession and Use. no. 449; (h) Regulation on Land Allocation; (i) Regulation on the Contents of General Land Cadastre Documentation; and (j) Regulation of Relations between Cadastre Database and Information Users.

5. Regulation of different possible forms of holding real estate ('land tenure') at present in Moldova can be found in different laws and regulations, but is incomplete. Several forms of real estate rights that are normal in Roman Law countries are missing from the Moldovan Civil Code (of 1964). These rights will be needed now that more real estate is being transferred to private ownership (e.g. easements, superficio/right to own building on someone else's land, condominium rights, etc.). A comprehensive list of real estate rights has to be available, including what rights can and must be registered. A draft condominium law is under consideration in Parliament, but may require modification in order to more effectively regulate issues related to the registration of multi-story buildings, privatized apartments, etc.

6. Now that land privatization is gaining momentum, and the relevant regulations are being revised, more attention can be given to transactions between private entities forming the real estate market. To date relatively little attention has been given to this subject. For these transactions, it is important to know the extent of the rights individuals possess, the procedures for transfer, and the manner in which security of title will be achieved (i.e. registration). The few regulations that currently deal with transfer of private real estate rights reflect a detailed and extensive involvement of the government. The authorities have a pre-emption right for every sale of land, for every transaction one needs to acquire detailed information from a central government database ("Cadastru"), and any change of a parcel (e.g. subdivision) will need to be prepared through surveying by an institute (MOLDGHIPROZEM) recently transferred from MAF to NAGCC. Apart from the time and resource demands this poses for private owners in executing their rights, the administrative burden on the authorities will be unmanageable once the real estate market develops.

7. The following new legislation and related legal documentation has been developed as a part of project preparation of the proposed First Cadastre Project: (a) the Law on Real Estate Cadastre, approved by the Parliament on February 25, 1998; (b) necessary amendments to existing legislation; and (c) related implementation regulations, including a transitional process from existing registration at the primaria level to registration at regional Territorial Cadastre Offices (TCO), instructions for preparing title certificates (extracts of the registration), functional accountabilities, and operational procedures.

8. In parallel with these activities, the Government and the Ministry of Justice have presented legislation to Parliament that will enable notaries to establish themselves in private practice. The notaries play, and will continue to play, an important role in undertaking real estate transactions. In drafting agreements they will be liable to their clients if they fail to fulfill their role with due diligence. Use of a notary will become compulsory (Latin Notary system). The notaries will be financially independent, but operate under the strict control of a Chamber of Notaries.

9. New legislation has recently been enacted with regard to collateral and bankruptcy. While these two new laws are not very coherent, they do create an improved framework for mortgaging real estate. However, several (social) protective regulations make foreclosure on mortgaged residential houses almost impossible. For the new Law on Real Estate Cadastre to be fully effective, the present registration procedures for collateral (at the notary's office) will need minor modifications

10. As part of project preparation, amendments have been prepared to existing legislation necessary to provide a more efficient system of privatization of land and the issuance of title certificates and to facilitate the development of an improved system of registration of real estate rights and real estate transactions. These include amendments to the Civil Code, the Land Code, Law on

Local Public Administration, Law on State Regulation of Land Ownership Regime, State Land Cadastre and Land Monitoring, Law on Normative Price of Land, Provisional Regulation on Sale and Purchase of Land, Regulation on Land Allocation, Law on Property, and Law on Privatization.

11. The major effects of these legal activities will be to: (a) establish real estate registration as a unified process, able to provide for the issuance of “unified” titles (land and associated immovable structures); (b) establish NAGCC as the primary entity within real estate registration and related operations; (c) decentralize registry operations to the rayonal level; (d) stimulate private firms and individuals to provide professional services, such as surveying and notarial services, in support of owners of real estate; (e) base registration on the land parcel rather than on the owner; (f) speed up and simplify processes related to real estate registration, such as title (registration extract) issuance, and eliminate the need for geodetic surveys to always be undertaken prior to the privatization of land lots; (g) over time reduce the involvement of the state in determining the price of land (eliminate it eventually as the market develops); and (h) make real estate readily available as collateral.

#### **Future Activities**

12. The Law on Real Estate Cadastre is a cornerstone for the new real estate registration and cadastre system, aimed at providing more security of property rights for owners, and access to financing through collateralization of their real estate. ITSEN

## (b) **METHODOLOGIES FOR REAL ESTATE REGISTRATION**

### **Nine reasons why parcel-based registration is more efficient than owner-based registration**

Whether for legal, real property tax, or land management cadastre purposes, the primary object for all purposes is the land or real estate itself. Other information is then collected about that primary land or real estate object or entity, including the persons using or owning the real estate, the encumbrances about that real estate, the land area, the actual land use, its planned use, and its address. The ownership is just another attribute, not the primary focus. For many land management purposes, the actual ownership information is not even necessary for the system to be useful.

For real estate legal registration purposes, the main reasons for basing the system on the real estate parcel itself (rather than on the owner) are:

- 1. Real estate parcels in cities have a life span of at least 50 years on average, while owners last just 10 years or less (they sell the parcel and buy another).** It is therefore more useful and practical to hold information about real estate regarding parcels of land, rather than the land holders of the property.
- 2. Parcel-based real estate registration systems are more likely to avoid duplication or omission of parcels.** A clear geographic picture of every property emerges only on the basis of a parcel based system. This provides more security to every owner and allows local governments to ensure that no properties go unrecorded; therefore taxation is more equitable.
- 3. In real estate transactions, it is the real estate itself that is the object of sale - not the buyers or sellers.** Therefore, it is necessary for the buyer to have information about all facets of the real estate parcel itself and not about the seller. This includes: the property rights associated with the parcel; its planned and current land use; its current property tax due for that real estate parcel and tax payment information; its land planning, zoning and building restrictions; whether the real estate is the subject of a court case, and so on.
- 4. Encumbrances concerning real estate, continue to be applicable to the land or real estate, not with the owner, at the time of a sale.** This includes an easement, a mortgage, a lease, real property tax obligations, etc. In person-based systems, this encumbrance information is typically difficult to access or to ensure that they do not apply or have been complied with, and to ensure that they are transferred appropriately at the time of transfer of the property.
- 5. A person-based system is inefficient in a land market system - the transaction costs and risks are greater for all parties.** This is clear, since in many countries lawyers fees for conducting a real estate sale within a person-based system are more expensive than a parcel system. This results from the fact that people-based systems involve searching through records to ascertain the identity of the true owner of the real property rights, and to determine the encumbrances. Also, the risks are greater for lawyers in these systems, as they certify whether the property rights are satisfactory for purchase by their clients - if wrong they are liable.

**6. Land management functions such as planning, building standards control, crop planning, and land use planning are all possible with parcel-based systems - they are nearly impossible with people-based systems.** This information is accessed in all cases in developed countries through the real estate records itself, not the current owner. It comes from multiple sources - the real estate registry, local government, and utility agencies. Clearly it would be illogical to hold planning information about real estate in terms of owners who change every 10 years. Many of these agencies hold the information based on a unique parcel identifier to allow simple cross-referencing of information between agencies. Computerization of any of these functions is **only** possible on the basis of a parcel-based approach.

**7. Real property tax systems at a local government level are better undertaken with a parcel-based system: the object of valuation is the real estate object and this is required to be valued at least every five years, sometimes every year.** This is typically a local government tax. The overall total tax possible is assessed based on the tax on a total tax roll. A complete real property tax list of values is required and then assessed to determine the amount of the tax which will be paid. Ownership information is secondary.

**8. Worldwide in industrialized countries over the last 100 years - when new systems have been introduced, they have been parcel-based systems, not person-based systems.** Romania recently introduced a parcel-based system (using Austria and its grundbuck [land book] system as an example), as did Estonia (using Germany as an example), and Kazakstan. Others include Scotland (in 1980); England and Wales (1926); Indonesia (1960); Thailand (1900); Singapore (1950s) and so on. France introduced parcel-based systems (the Torrens systems from Australia) into its French-speaking countries in the 1940s and 50s, rather than its own poor "transcription inscription system," a people-based system.

**9. A parcel-based system allows efficient, simple, and complete information about that parcel to be recorded over a long period of time - 50 to 100 years; this is not possible with owner-based systems, as the records become cluttered with outdated people-based information.** Parcel-based systems are designed for ease of secure transactions at minimum cost.

## 2. INSTITUTION AND CAPACITY BUILDING

1. Enabling institutions, agencies, and individuals to actively and competently participate in project activities and to make use of the opportunities provided by the project will be crucial for the project to achieve its objectives. The Institutional Strengthening Program (Component IV) consists of three different sub-components: (a) Training, including courses directly related to project implementation, one-year study visits abroad, and training equipment; (b) Technical Assistance, in special areas of expertise currently not available in Moldova; and (c) the Project Implementation Office. Specifications and cost estimates are provided below.

### (a) TRAINING

2. The following Training Activities will take place during project implementation:

- (i) *Start-up training* would take place before effectiveness and should include initial training, in procedural, technical and IT issues, for managers of the Territorial Cadastre Offices (TCOs) and their key staff, as well as for surveyors and land arrangement experts. These courses would take place in Chisinau. Also, about 250 staff of primarias in rural areas would be provided with 4 weeks of training, arranged for in regional centers as well as in Chisinau, covering an introduction to new methodologies and procedures of cadastral registration. The total cost of this start-up training is estimated to amount to US\$67,763.
- (ii) *Courses directly related to project implementation*, for all staff in the Territorial Cadastre Offices (TCOs), their Branch Cadastre Offices, and in NAGCC central offices, including training in the new registration methodologies and other issues related to institutional reorganization. Courses would also include additional training modules for IT staff. It is suggested that courses be held in Chisinau and facilities be rented from other institutions, e.g. the Technical University, so as to set up a Training Center. Estimated cost covers fees for the instructors, rent for facilities, course materials and subsistence costs for those course participants that must travel to Chisinau from elsewhere. Costs will amount to: year 1: US\$ 34,193; year 2: US\$16,779; year 3: US\$3,800; year 4: US\$1,819; year 5: US\$ 1,047. Total cost would be US\$57,638.
- (iii) *Training for Information Technology Specialists*. Additional training modules for IT staff is recommended during the first year of project implementation. The estimated cost for such modules is estimated at US\$ 3,174.
- (iv) *Crash Course in property valuation*. A special course for real estate valuers and those NAGCC staff involved in administering real estate valuation through the Territorial Cadastre Offices is suggested to take place not earlier than year 4 of project implementation. The estimated cost for such a course, including cost for foreign valuation specialists, is estimated at US\$ 157,546
- (v) *Short study visits* for one geodetic engineer (one week visit abroad, estimated at US\$1,400) and for one photogrammetrist (three months attachment to a specialist firm abroad, estimated at US\$12,000), abroad are recommended for shorter and longer time periods.
- (vi) *One year study visits abroad* for lecturers from the Agricultural University's and the Technical University's Cadastral Engineer Programs, as well as for lecturers specializing in real estate / notarial law and economists specializing in property valuation (not earlier than year 2). Such study visits abroad are recommended for three lecturers during each of the

years of project implementation. Costs are estimated at US\$25,000 per participant per year. Lecturers should be younger than 40 years of age, with appropriate language capacities.

(vii) *Training equipment.*

(a) For project implementation-related training, a computer laboratory and classroom equipment would need to be purchased during year 1 of project implementation. Cost are estimated at US\$52,525.

(b) For a crash course in valuation suggested for year 4 of project implementation, appropriate equipment is recommended, estimated to cost US\$89,000.

(c) Equipment, for both Moldovan universities operating a Cadastral Engineering Program (the Agricultural University and the Technical University), for appropriate computer laboratories and classrooms. The cost of appropriate equipment for the university programs is estimated at US\$77,000 each.

(d) Scientific instruments for a laboratory for the joint use of staff and students of both universities' cadastre programs. The cost of appropriate equipment is estimated at US\$221,763.

**Summary of Training Costs**

	year 1	year 2	year 3	year 4	year 5	TOTAL
<b>BASE COST</b>						
Project Related Training	101,956	16,779	3,800	1,819	158,593	282,947
Study Abroad	88,400	75,000	75,000	75,000	75,000	388,400
Equipment	428,288			89,000		495,525
<b>TOTAL</b>						<b>1,166,872</b>
<b>TOTAL incl. contingencies</b>	<b>673,586</b>	<b>103,802</b>	<b>91,264</b>	<b>197,236</b>	<b>285,348</b>	<b>1,351,236</b>

## (b) TECHNICAL ASSISTANCE

The following table summarizes the thirteen (13) areas of expertise in which the project will provide support through technical assistance. Cost-estimates are based on the assumption that this expertise will be obtained from outside Moldova, but that the share of foreign involvement will be phased out during project implementation.

	Type of Assistance	Timing	Minimum Expected Cost (in million USD)
1	<i>Project Implementation Support</i> to (a) develop, and continue to adjust, appropriate business procedures for NAGCC's diverse activities; (b) develop, and continue to adjust, a human resource strategy appropriate for project implementation; (c) define appropriate internal performance benchmarks enabling NAGCC to monitor its own implementation efforts; and (d) assist NAGCC in all implementation-related conceptual and practical matters.	One international consultant, full-time for the first year, and for eight weeks each during the following three years.	1998/1999: 0.182 1999/2000: 0.042 2000/2001: 0.042 2001/2002: 0.042  <b>Total: 0.308</b>
2	<i>Computer Systems Installation and Enhancement Support</i> to NAGCC computer specialists in maintaining and updating the cadastral information systems	One international consultant, full-time for the first year, and for six weeks each during the following two years.	1998/1999: 0.105 1999/2000: 0.031 2000/2001: 0.032  <b>Total: 0.168</b>
3	<i>Procurement Support</i> to NAGCC in preparing competitive bidding procedures during project start-up, and training PIO staff appropriately.	One international consultant, with experience in Bank procurement, for 12 weeks during the first year of project implementation, and for 10 weeks during the second year.	1998/1999: 0.055 1999/2000: 0.045  <b>Total: 0.100</b>
4	<i>Accounting Support</i> to NAGCC in setting up appropriate accounts and procedures during project start-up, and training PIO staff appropriately	One international consultant, with experience in Bank reporting requirements, for 8 weeks during the first year of project implementation, and for 2 weeks during the second year.	1998/1999: 0.037 1999/2000: 0.010  <b>Total: 0.047</b>
5	<i>Legal Development Support</i> in the development of proposals for legal acts and regulations, or the refinement thereof, that will clarify, strengthen, and sustain the introduction of a full range of property rights in real estate (mortgages, mortgage registration, transactions, etc.)	One international consultant, for eight weeks each, during all five years of project implementation.	1998/1999: 0.037 1999/2000: 0.038 2000/2001: 0.038 2001/2002: 0.038 2002/2003: 0.038  <b>Total: 0.189</b>

	Type of Assistance	Timing	Minimum Expected Cost (in million USD)
6	<i>Training Support</i> to NAGCC in developing a training strategy and separate training modules, and in organizing those, including training of trainers and study programs abroad, and in quality assessment of training programs implemented.	One international consultant, for ten weeks during the first year of project implementation, for six weeks during each of the consecutive three years, and for four weeks during the final year of project implementation.	1998/1999: 0.046 1999/2000: 0.028 2000/2001: 0.028 2001/2002: 0.029 2002/2003: 0.021 <b>Total: 0.152</b>
7	<i>Property Valuation Support</i> to NAGCC in: (a) monitoring real estate market developments, in particular with respect to transactions and values; and (b) developing a methodology for property valuation, jointly with the Ministry of Finance and other stakeholders, as well as drafting laws and regulations, and amending existing ones, as appropriate, in support of the introduction of a system of independent real estate valuation services.	One international consultant, for four weeks during each of the first two years of project implementation, and for ten weeks during each of the last three years of project implementation.	1998/1999: 0.019 1999/2000: 0.019 2000/2001: 0.045 2001/2002: 0.045 2002/2003: 0.045 <b>Total: 0.173</b>
8	<i>Public Information Support</i> to NAGCC in developing activities that will increase understanding and acceptance of the new registration system, providing information to four target groups: (i) NAGCC staff; (ii) relevant government institutions; (iii) professional users of the cadastre; and (iv) the general public.	One international consultant, for eight weeks during the first year of project implementation, and for four weeks during the following year.	1998/1999: 0.037 1999/2000: 0.019 <b>Total: 0.056</b>
9	<i>Mapping / Photogrammetry Support</i> to NAGCC in developing the mapping program, ensuring international standards.	One international consultant, for sixteen weeks during the first year of project implementation, and for four weeks during each of the consecutive years.	1998/1999: 0.082 1999/2000: 0.022 2000/2001: 0.022 2001/2002: 0.022 2002/2003: 0.023 <b>Total: 0.171</b>
10	<i>Digital Mapping Support</i> to NAGCC in developing the mapping program, ensuring international standards.	One international consultant, for sixteen weeks during the first year of project implementation, and for four weeks during each of the consecutive years.	1998/1999: 0.075 1999/2000: 0.021 2000/2001: 0.021 2001/2002: 0.021 2002/2003: 0.021 <b>Total: 0.159</b>
11	<i>Property Registration Support</i> to NAGCC in developing the mapping program, ensuring international standards.	One international consultant, for eight weeks during the first year of project implementation, for six weeks during the second year, and for four weeks during each of the other years.	1998/1999: 0.038 1999/2000: 0.028 2000/2001: 0.021 2001/2002: 0.021 2002/2003: 0.021 <b>Total: 0.129</b>

	<b>Type of Assistance</b>	<b>Timing</b>	<b>Minimum Expected Cost (in million USD)</b>
<b>12</b>	<i>Cadastral Survey Support</i> to NAGCC in developing cadastral survey techniques, methodologies, and procedures, ensuring international standards.	One international consultant, for eight weeks during the first year of project implementation, and for four weeks during the second year.	1999/2000: 0.037 2001/2002: 0.021 <b>Total: 0.058</b>
<b>13</b>	<i>Global Positioning Support (GPS)</i> to NAGCC in developing procedures and methodologies for: (i) establishing and coordinating photo control points using GPS technology, including integration with other data acquisition tools such as EDM; (ii) building in the necessary quality control techniques; and (iii) using GPS for all relevant project components.	One international consultant, for eight weeks during the first two years of project implementation.	1999/2000: 0.038 2001/2002 0.038 <b>Total: 0.076</b>
	<b>TOTAL, excluding Contingencies</b>		<b>1,786</b>
	<b>TOTAL, including Contingencies</b>		<b>1,989</b>

**(c) THE PROJECT IMPLEMENTATION OFFICE (PIO)**

The Project Implementation Office (PIO) will have approximately 30 staff with experience and responsibilities in areas crucial to the success of project implementation, and about 6 support staff. The following describes some of the responsibilities of PIO staff, and the extent of experience and knowledge required.

PIO: Description of Tasks and Qualifications	Number of staff
<p><i>Project Manager.</i> A Project Manager is required for the duration of the Project. This person is critical to the success of the project and hence the Government's overall real estate registration program. This individual will be ultimately responsible for all activity of the project, for relations with institutions involved in related activities, and for relations with the World Bank. While it is preferable for the Project Manager to be experienced in land reform issues and their implications on registration functions, it is critical that this individual brings sufficient seniority and experience so as to ensure the ultimate success of the project. The Project Manager should preferably have good knowledge of the English language, be able to work with, and co-ordinate, multi-disciplinary and international teams.</p>	1
<p><i>Assistant Project Manager.</i> The Assistant Project Manager will be responsible for the detailed logistics and for the day to day coordinating work of the project. S/he should have an in-depth technical understanding of the whole program, have significant experience in managing large projects with numerous components, and should understand project management techniques such as project planning, schedule establishment and control, status monitoring and reporting, and managing the production of project deliverables.</p>	1
<p><i>Information Technology.</i> The existing software will need continuous refinement throughout the Project. In particular, the provisions of the new land registration law will require some refinement of the software. The software as developed was suitable for the Pilot activity, but the amount of further development and implementation for large numbers of properties will involve considerable time. It is expected that three senior IT specialists and five Analysts/Programmers will be necessary in order to manage and continuously update and adjust the information technology used for the ongoing registration activities.</p>	8
<p><i>Procurement of Goods and Services.</i> The Procurement Specialist/Contract Officer will be responsible for all contractual work, including procurement of equipment, civil works, leases, surveying contracts, mapping contracts, and contracts with Territorial Cadastre Offices, amounting to several million US\$ each year. He or she will also be responsible for ensuring quality of works and approving payment schedules.</p>	1
<p><i>Monitoring and Accounting.</i> An accountant will keep track of project finances, maintain project accounts. S/he must be able to operate under World Bank procedures and with high expenditures.</p>	1

PIO: Description of Tasks and Qualifications

Number of staff

*Legal Development.* There is a continuing requirement to develop legislation and regulations related to land and property. A two person team will be responsible for developing, drafting and encouraging the enacting of legislation and regulations. Particular regard will be given to collateral law, condominium law, laws on leasing, adjudication of land claims, survey law, town and country planning law, municipal building laws, and fiscal law related to real property. Also, further development of the Civil Code and Land Code should be addressed.

2

*Training.* Training is a major activity of the project and is the subject of ongoing review. Many of the training recommendations will include requirements for university programs that will cater for the ongoing requirement of changed professions. It will be necessary to conduct significant training courses, covering all registration offices, according to the established schedule, for a total of more than 700 participants. The training team will be responsible for designing, scheduling, organizing and implementing this training. As the volume of training necessary will decrease over time, two full-time training organizers will be required during the first three years of project implementation. Thereafter, the training program can be supported by one staff.

1.5

*Real Estate Valuation.* Principles of, and methodologies and institutional arrangements for real estate valuation need to be developed in Moldova. Under the project, NAGCC will take the lead in collaborating with other institutions, ministries and private sector entities to develop a framework within which real estate values are established through a transparent and well understood process, on the basis of services of well-qualified and certified private valuers. During the first years of project implementation, one valuation expert would deal with the development of principles and methodologies. The valuation expert, an economist, would also assist project implementation by reviewing fee levels, income generation, development of the warranty fund, and general economic activity and viability of the Registries being established. As of the fourth year of project implementation, the adoption of the principles, the implementation of the methodologies, training and licensing of real estate valuers, and the integration of real estate values in the registration system will take place. Therefore, two valuation specialists will be needed during the fourth and fifth year of project implementation.

1.5

*Public Information.* Considerable effort will have to be dedicated to the dissemination of information encouraging public participation in the registration program. Two staff, experienced in the field of public information, will develop and implement an information strategy. Initial focus is assumed to be on providing information to those living in areas identified for systematic registration. Information officers will prepare surveyors as well as staff in the Registration Offices for their important communication functions. A considerable amount of preparatory work will go into the production of leaflets and posters and the training of survey groups dealing with the public.

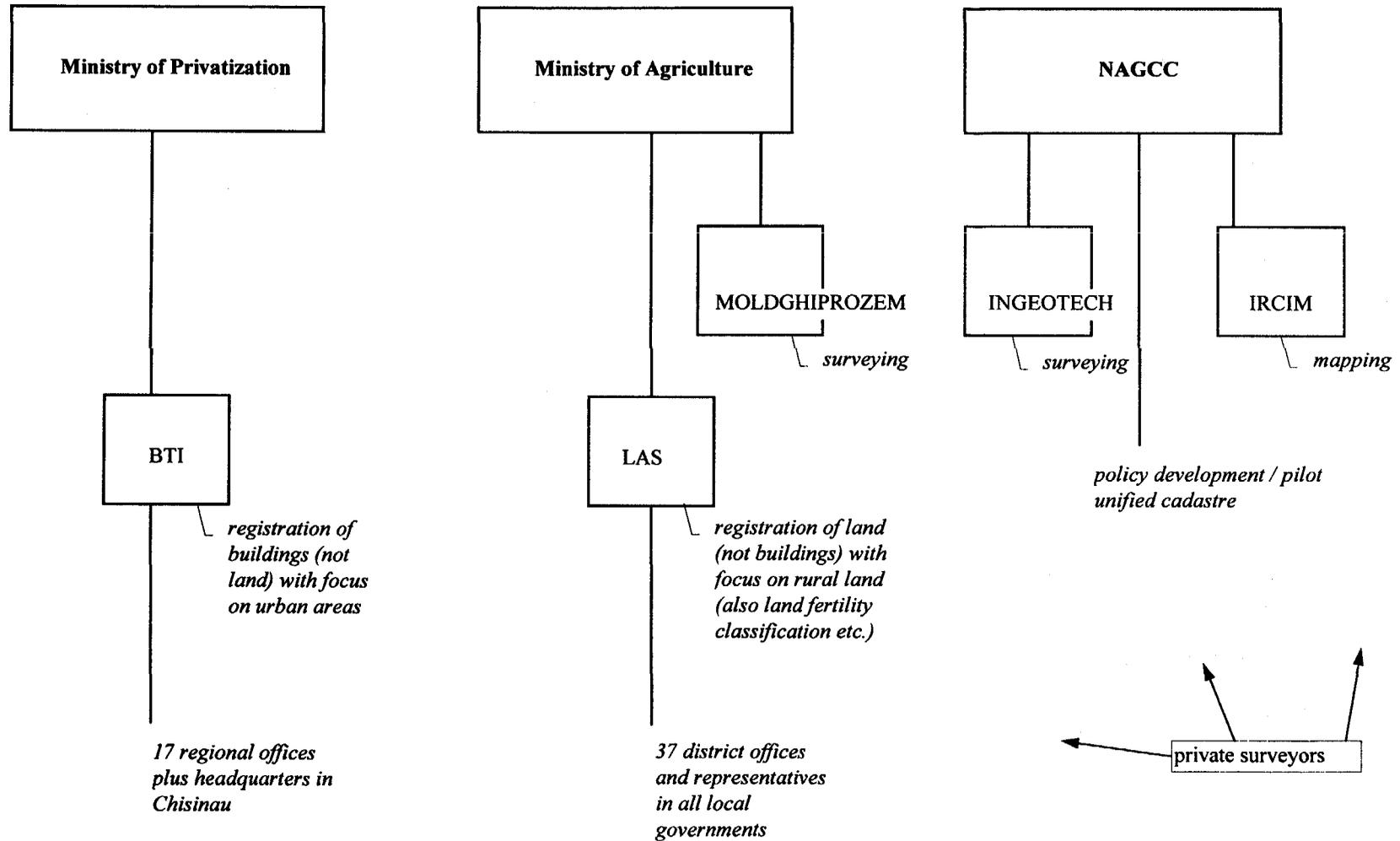
2

PIO: Description of Tasks and Qualifications	Number of staff
<i>Registration and Survey Specialist.</i> Tasks will be to set priorities and monitor the Survey Groups and mapping contracts. Duties include assistance in preparing tenders, general co-ordination of mapping and surveying activity, and dealing with problems and disputes.	1
<i>Trouble Shooting / Registration.</i> When implementing projects like these, there are always unforeseen disputes and problems to resolve. Boundaries may be unclear, neighbors may be fighting over rights of way, husband and wife breaking up or children reaching adulthood can dispute ownership rights. Problems may be legal as well as involving survey technicalities or simply personal problems. The survey teams themselves usually do neither have the expertise nor the time to deal with such matters. Three registration/survey experts should be assigned to answering such queries, wherever they come up. Experience with legal issues and knowledge of survey work will be required.	3
<i>Registration Supervisors.</i> Each of the twelve Territorial Cadastre Offices will be as big as many previous projects in this field. Staff will be needed in Headquarters to coordinate activities, ensure schedules are kept to, deal with problems, report back to the head office, organize and supervise the viewing periods., etc.. Six full-time positions would have to be filled, separate from the actual managers of the Territorial Cadastre Offices.	6
<i>Support Staff.</i> Operation of the PIO would have to be supported by the following staff: <ul style="list-style-type: none"><li>* Office Administration / Secretary. Due to the complexity of ongoing project implementation activities, the involved administrative work will require an experienced individual, with a high level of organizational skill, experience in major word-processing packages, and with English language capabilities.</li><li>* Translators. Two translators, one senior staff and one junior staff, will be needed.</li><li>* Drivers. Three drivers are expected to be needed for the PIO to be functional during the first year of project implementation.</li><li>* Cleaner (1).</li></ul>	7
<b>TOTAL STAFF needed for the PIO</b>	<b>36</b>

### **3. IMPLEMENTATION ARRANGEMENTS**

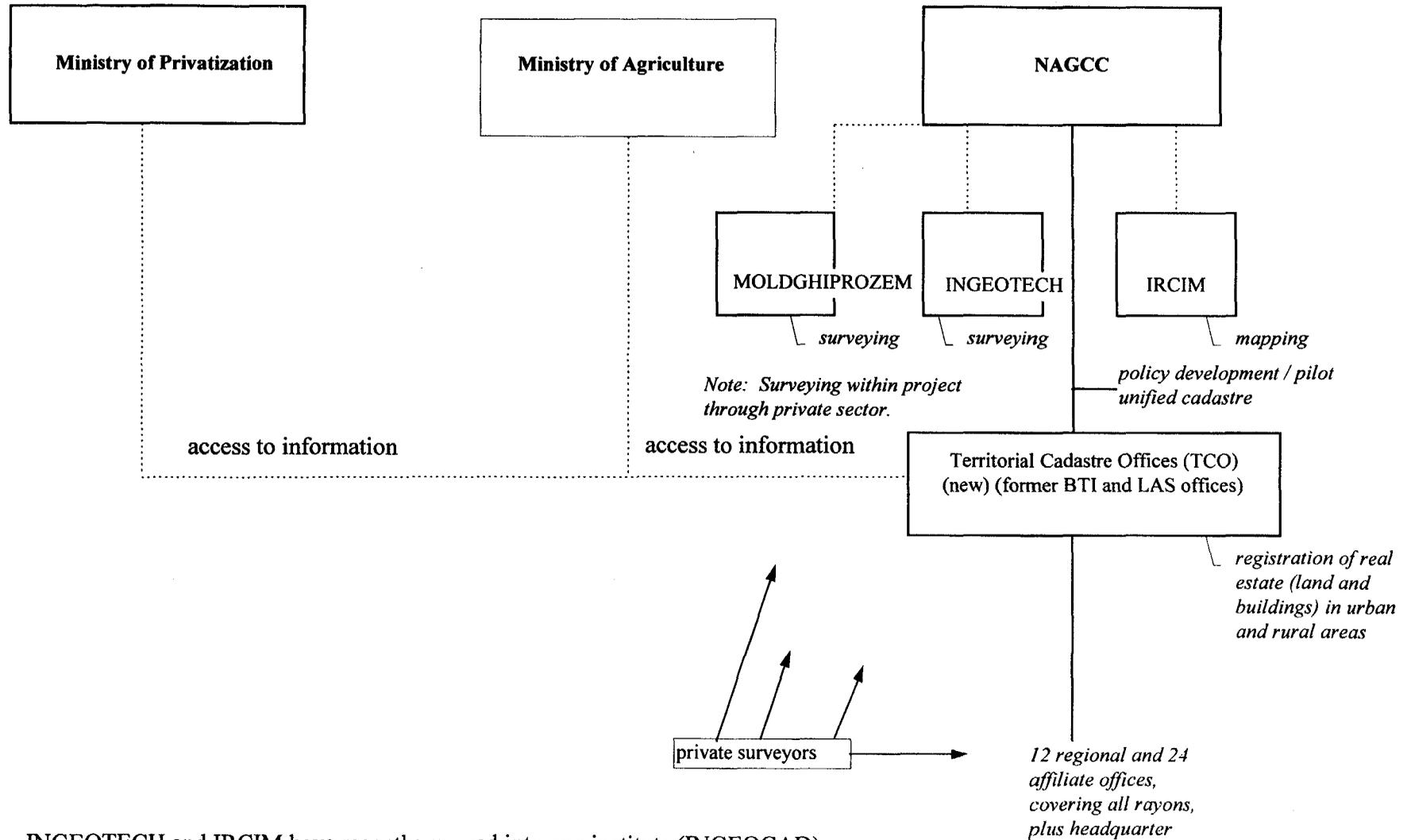
- 3.1 (a) Institutional Arrangements for Real Estate Registration in Moldova: up to February 1997
- 3.1 (b) Institutional Arrangements for Real Estate Registration in Moldova: during/after project implementation
- 3.2 Organization of Territorial Cadastre Offices.
- 3.3 Organization of Project Implementation Office

**Annex 3.1(a): Institutional Arrangements for Real Estate Registration in Moldova : up to February 1997**



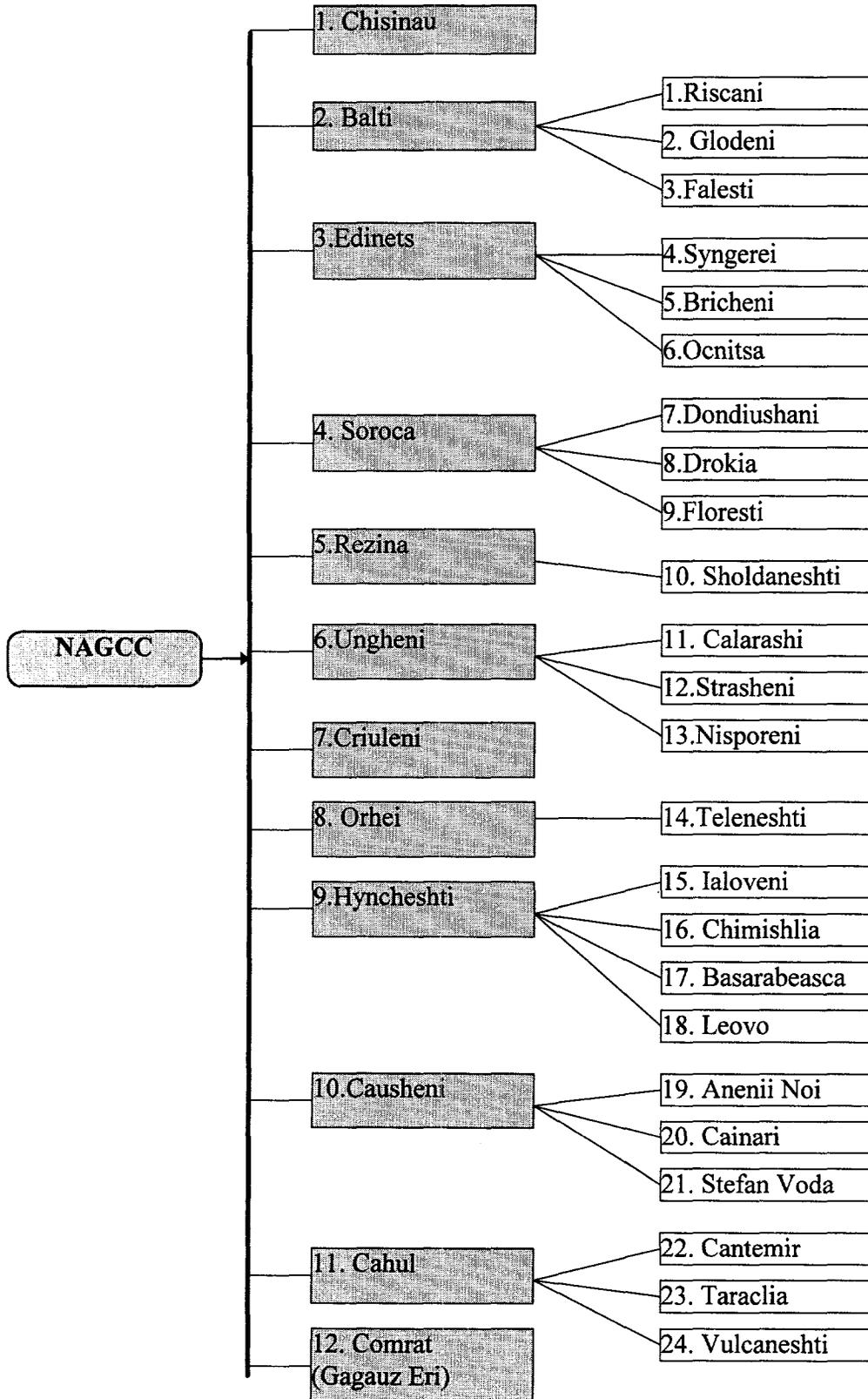
INGEOTECH and IRCIM have recently merged into one institute (INGEOCAD).

**Annex 3.1(b): Institutional Arrangements for Real Estate Registration in Moldova during/after Project Implementation**

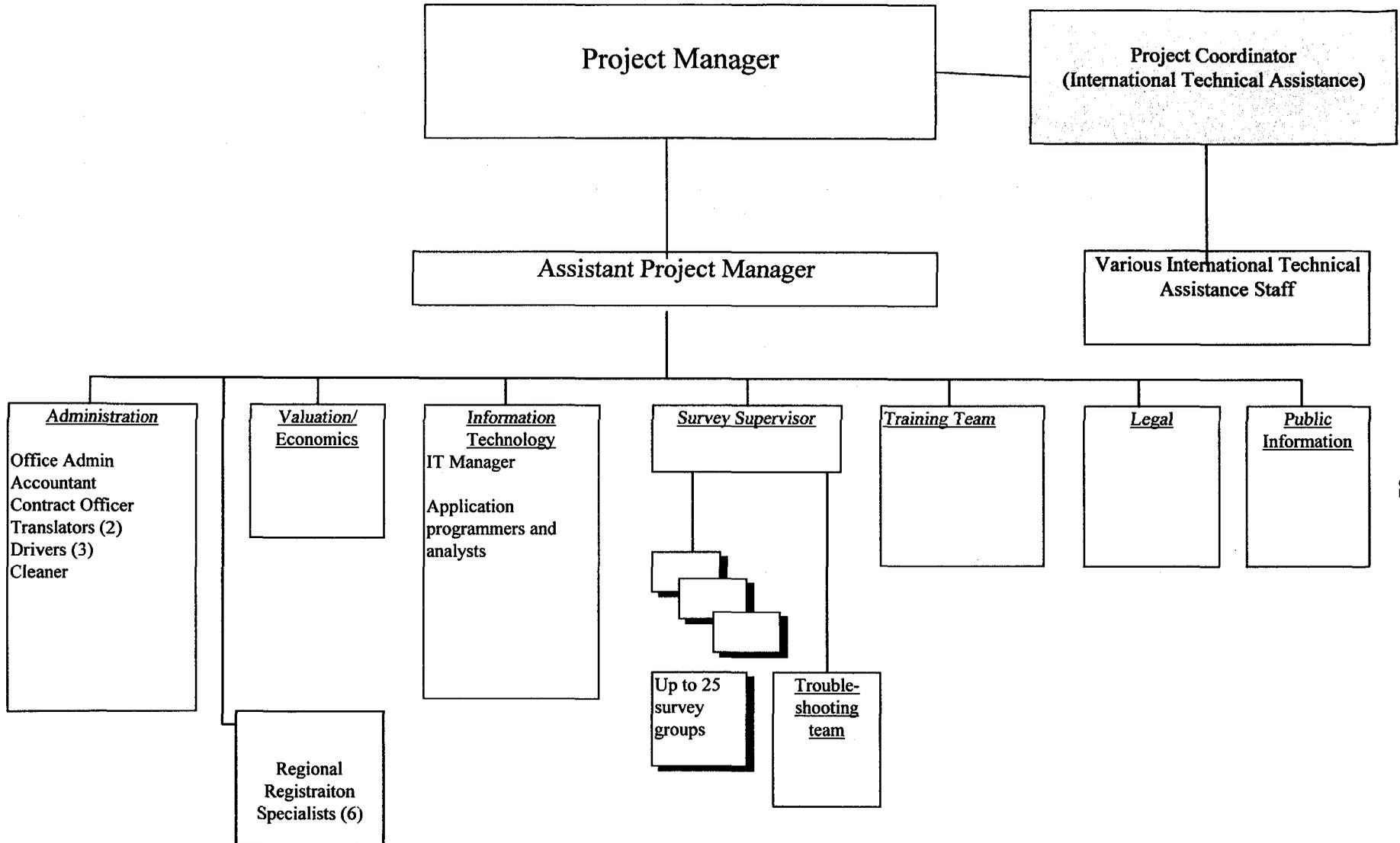


INGEOTECH and IRCIM have recently merged into one institute (INGEOCAD)

**Annex 3.2: Organization of Territorial Cadastre Offices**



**Annex 3.3: Organization of PIO**



#### 4. PROJECT DEVELOPMENT OBJECTIVES AND KEY PERFORMANCE INDICATORS

1. The project's development objective is to develop and implement a national unified real estate registration and titling program for urban and rural land, and thereby establish a system of clear and enforceable ownership rights, so as to promote the privatization of land and the development of real estate markets in Moldova. The real estate registration system established under the project should provide: (a) property owners with security of ownership rights such that they can sell or rent real estate at fair market prices and pass on their holdings as inheritances; (b) commercial banks with the confidence necessary to give secured credit against real estate; (c) the real estate market with information on ownership and location of property as needed for the market to function effectively; (d) government agencies and institutions with basic information for urban planning and land management; (e) the real estate market with information on property values; and (f) the private sector with opportunities to develop in areas related to real estate registration (surveyors, notaries, valuers). These objectives, the outputs of the various related project components, and the expected outcomes and impacts were agreed upon at negotiations, and are summarized in the table below. The targets may be increased at a project launch workshop based on project progress and updated assumptions.

Objectives	Outputs	Outcome/Impact	Benchmarks over five years					
			Year 1	2	3	4	5	
<i>The specific development objectives of the project are as follows:</i>	<i>The specific results (goods and services) from carrying out the project, and the corresponding key performance indicators, are as follows:</i>	<i>Expected development outcomes/impacts from achieving the project outputs, and the corresponding key performance indicators, are as follows:</i>	Year					
(a) Provide property owners with security on their ownership rights such that they can sell or lease at fair market prices and pass on their holdings as inheritances.	Unified national real estate registration system established with appropriate legal framework. Training for registration and data maintenance provided. Legal advice provided on request.	Number of urban / intravillan real estate registrations (in thousands, cumulative)	5	52	130	118	330	
		Number of extravillan real estate registrations (in thousands, cumulative)	5	20	50	115	200	
		Number of real estate transactions. (national, in thousands, cumulative)	0.3	2.2	5.4	10.3	15.9	
(b) Provide commercial banks with the confidence necessary to give secured credits against real estate.	Scope for registration of mortgages in (publicly accessible) registration system and appropriate legal framework. Appropriate laws and regulations proposed.	New mortgage legislation introduced.	introduced					
		Number of mortgages provided (% of registered properties)	1.0	1.5	2.0	2.5	3	

Objectives	Outputs	Outcome/Impact	Benchmarks over five years										
<i>The specific development objectives of the project are as follows:</i>	<i>The specific results (goods and services) from carrying out the project, and the corresponding key performance indicators, are as follows:</i>	<i>Expected development outcomes/impacts from achieving the project outputs, and the corresponding key performance indicators, are as follows:</i>	Year	1	2	3	4	5					
(c) Provide the real estate market with information on ownership and location of property as needed for the market to function effectively.	Cadastral information service units established as part of registration offices. Public information about potential uses of cadastral information.	Number of real estate agents.  Number of information requests to territorial and branch cadastral offices (in % of registered properties).	24	28	33	36	40	2	4	6	8	10	
(d) Provide government agencies and institutions with basic information for urban planning and land management.	Mapping and surveying of all urban areas and selected rural areas Related training activities. Related information available to government agencies for free.	Number of cadastral maps produced (in thsnd sqkm, cumulative)	4	9	15	22	30						
(e) Provide the Government with a basis for future revenue generation mechanisms through property taxation (fiscal cadastre).	Registration system capable of integrating land values in real estate registration system. Strategy developed for introducing modern real estate valuation methods into fiscal system. Training for real estate valuers provided.	Number of (examined) training participants (cumulative) Relevant property laws, regulations and normative acts introduced. Relevant valuation system introduced.	50	100	150	200	250	-	-	-	introduced		
(f) Provide the private sector with opportunities to develop in areas related to real estate registration (surveyors, notaries, valuers).	Contracts for private firms involved in real estate, e.g. surveyors, notaries, valuers, through project implementation. Related training.	Licensing system introduced for operation of private real estate agents, surveyors, notaries, valuers, etc.	All in first year, except for licensing system for valuers, which will be introduced in the second year.										

## 5. SUPERVISION PLAN

1. Supervision of the project is expected to require 25 staff-weeks during the first fiscal year of implementation and 20 staff-weeks during each of the following four fiscal years. The schedule below is in addition to regular review requirements for procurement actions, advisory services, and general administration.

Approximate Dates (month/year)	Activity	Expected Skill Requirements	Staff - Weeks <sup>1</sup>
08/98	Project Startup	Team Leader Organizational Specialist Technical Resource Specialist Procurement Specialist Financial Management Specialist	13
02/99	Supervision	Team Leader Organizational Specialist Technical Resource Specialist Procurement Specialist Disbursement Specialist	12
08/99	Supervision	Team Leader (others as required)	10
02/00	Supervision	Team Leader (others as required)	10
08/00	Supervision	Team Leader (others as required)	10
02/01	Supervision Mid-term review	Team Leader Economist Financial Analyst Organizational Specialist Technical Resource Specialist	10
08/01	Supervision	Team Leader (others as regional)	10
02/02	Supervision	Team Leader (others as required)	10
08/02	Supervision	Team Leader Task Manager (others as required)	10
02/03	Supervision	Team Leader (others as required)	10
08/03	Project Completion	Team Leader Economist Technical Resource Specialist	10

<sup>1/</sup> Staff-weeks for IBRD staff only. Additional resources are expected to be obtained from consultant trust funds.

## **6. DETAILED COST AND PROCUREMENT ARRANGEMENTS**

This annex contains: (a) Specific Procurement Arrangements; (b) Procurement Information, and (c) Procurement Plan for the procurement to be carried out under the project, including specification of donor-financed equipment and services, and services to be performed on the basis of unit values agreed upon with the Bank.

The Procurement Information includes: (i) Section 1 - Procurement Review, (ii) Section 2 - Capacity of the Implementing Agency in Procurement and Technical Requirements, (iii) Section 3 - Training and Development on Procurement, (iv) Section 4: Procurement Staffing.

The Procurement Plan is divided into the following sections:

### **WORKS**

- Works Contracts (Office Rehabilitation)

### **GOODS**

- Mapping/Surveying Equipment
- Computer Equipment and Software
- Office Equipment and Supplies
- Vehicles
- Training Equipment for Project Implementation, and Institution and Capacity Building

### **TECHNICAL SERVICES CONTRACTS**

- Aerial Photography Contracts
- Mapping/Surveying Contracts

### **CONSULTANCIES**

- Various local and foreign consultants
- Study Programs Abroad

### **MISCELLANEOUS COSTS**

Incremental costs on the basis of agreed upon unit prices, acceptable to the Bank (mapping services costs/new maps, and data verification and data conversion/title development costs, fees to consultants hired by the PIO, audit costs, and training for human resources involved in project implementation).

### **PPF ADVANCE**

Specific Procurement Arrangements

1. *Civil Works.* A limited amount of civil works (small contracts) involving office rehabilitation in NAGCC headquarters, 12 Territorial Cadastre Offices (TCO) and 24 Branch Cadastre Offices (BCO) offices involving an aggregate amount of US\$435,000 and spread over 3 years will be procured under the proposed project. Individual civil works contracts, not exceeding twenty (20) in number, each valued at less than US\$50,000 will be financed by the loan and procured under procedures for procurement of Small Works. Lump-sum, fixed-price contracts will be awarded on the basis of written quotations obtained from at least three qualified contractors.

2. *Goods.* Procurement of goods will involve mapping and surveying equipment, computers and related equipment and software, office equipment and vehicles. Contracts for goods will include maintenance and repair, and software licenses under the project. ICB will be used for all Bank financed purchases of goods which are expected to exceed US\$300,000 per contract.

- (a) Computer equipment including UPS equipment, software and maintenance for 5 years (aggregate amount US\$1,227,000) required to meet: (i) the needs of NAGCC headquarters; and (ii) the registration needs of the urban cadastral services program in 12 TCOs, will be procured under ICB procedures using the Bank's Standard Bidding Documents for goods, in two separate bidding packages, to be conducted during the first two years of project implementation.
- (b) Computer equipment including UPS equipment, software and maintenance for 5 years (aggregate amount US\$592,000) required to meet the registration needs of rural cadastral services program in 24 affiliated offices will be procured under IS procedure in two separate annual bidding packages, to be conducted during the third and fourth years of project implementation.
- (c) Photogrammetric equipment (US\$563,000) and geodetic equipment (US\$901,000) needed for production of new maps will be procured under ICB procedures using the Bank's Standard Bidding Documents for goods, in two separate bidding packages to be conducted in the first year of project implementation.
- (d) Other Office Equipment (that is facsimile and photocopying machines) for the 37 offices (namely the NAGCC headquarters, 12 TCOs and 24 BCOs) for an aggregate amount of US\$ 171,000 will be procured under IS procedure in three separate annual packages during the first, second and third years of project implementation.
- (e) Vehicles (aggregate amount US\$388,000) for 37 offices (namely the NAGCC headquarters, 12 TCOs and 24 BCOs) and IRCIM will be procured under IS procedure in three separate annual packages during the first, second and third years of project implementation. The need for vehicles will emerge as the project implementation progresses and will be reviewed annually.
- (f) Procurement of office furniture, cabinets and security equipment (aggregate amount US\$69,000) for 24 BCOs will be undertaken under National Shopping (NS) procedure in three separate annual packages during the first, second and third years of project implementation.
- (g) Registration materials of different categories (aggregate amount US\$1.0 million) for 37 offices (namely the NAGCC headquarters, 12 TCOs and 24 BCOs) through individual

contracts not exceeding 30 in number, each valued at less than US\$50,000, will be financed by the credit, and procured under National Shopping (NS) procedures to meet annual requirements during the first two years of project implementation and thereafter to meet semi-annual requirements during the third, fourth and fifth year of project implementation.

- (h) Under the institution and capacity building component, equipment needed in computer laboratories to be established for (i) project implementation training, (ii) University Cadastral Engineering programs; and (iii) real estate valuation training (aggregate amount US\$ 330,000) will be procured under the IS procedure in three separate packages in the first year of project implementation. Further scientific instruments needed for the Cadastral Engineering University programs (US\$246,000) will be procured under IS procedure in two separate packages in the fourth year of project implementation.

3. In the evaluation of bids for equipment purchased under ICB, bids offering Moldovan manufactured goods would be granted a margin of preference of fifteen (15) percent or the amount of duties and other related import charges which a non-exempt importer would have to pay for the importation of the goods offered in Moldova, whichever is lower, as specified in Appendix 2 of the Bank's Guidelines for Procurement.

4. *Technical Service Contracts.* The following technical services contracts will be awarded under the project.

- (i) Aerial photography service contracts (aggregate amount US\$300,000) will be awarded on the basis of International Shopping (IS) in two (2) separate bidding packages to be conducted in the first and third years of project implementation, with an estimated cost of about US\$100,000 and US\$200,000 respectively using the Regional Bidding Documents for "Procurement of Works - Smaller Contracts" with appropriate modifications.
- (j) Contracts for "mapping and surveying services" in urban areas (aggregate amount US\$4.0 million) will be let on the basis of competition under the Bank's ICB procedure, in four (4) separate bidding exercises to be conducted annually from the second year through the fifth year of project implementation, with an estimated annual cost ranging from US\$500,000 to US\$1.2 million. These specifications could be sliced and packaged, with provision for discounts, to be of interest to both small and large bidders. The contract documents used will be based on the Bank's Standard Bidding Documents for Works-Smaller Contracts. However, contracts for "mapping and surveying services" in urban areas for the first year of project implementation (aggregate amount US\$100,000) will be let under the National Competitive Bidding (NCB) procedure and National Shopping (NS) procedure (aggregate amount US\$ 127,000) on the basis of competition amongst licensed/qualified (for urban surveying) national surveying firms in the private sector, as the contract values are small.
- (k) Contracts for "mapping and surveying services" in rural areas will be awarded under the National Competitive Bidding (NCB) up to an aggregate of US\$0.7 million and through National Shopping procedure (NS) up to an aggregate of US\$ 0.7 million on the basis of competition amongst licensed/qualified (for rural surveying) national surveying firms in the private sector.

5. *Consulting Services and Training* (US\$0.6 million). Consulting services would be required under the project's Institution and Capacity Building Component, assisting NAGCC with the implementation of all project components. US\$1.6 million will be provided through a Swedish grant. Another US\$150,000 is provided for other consultancy support. See Annex 2 for a description of consulting services required. Consultants will be recruited on the basis of the Consultants Guidelines using Quality-and Cost-Based Selection (QCBS) among short-listed firms. The Bank's standard consulting contracts will be used. For fellowships/study programs abroad (US\$451,000), institutions and individuals will be selected based on quality and qualifications respectively. Implementation training required for NAGCC and other stakeholders involved in implementing the project will be procured from individuals or firms with expertise in the respective technical field. Terms of Reference for the respective training activities would be submitted to the Bank for prior approval. If financing from bilateral or other sources is available for any or all of the above services, the IDA credit will be reduced correspondingly. However, the Bank will satisfy itself that the procedures to be used for the recruitment of such consultants are efficient and economic, that the consultants selected have the necessary qualifications and that the services to be contracted are of satisfactory quality and will be carried out in accordance with the agreed project implementation schedule.

6. *Project Implementation Office* (US\$2.0 million). About 50% of the incremental costs for fees to local consultants hired for the Project Implementation Office (PIO) of NAGCC will be financed by the credit. The individuals will be selected according to paragraph 5.2 of the Bank's Consultants Guidelines.

## Moldova First Cadastre Project - Procurement Information

Section 1: Procurement Thresholds						
Element	ICB	NCB	IS	NS	Consultancies	Other methods
1. Procurement method thresholds	Above \$300,000	Technical Services: Up to \$300,000 per contract, up to aggregate amount of \$700,000	Goods: Up to \$300,000 per contract, up to aggregate amount of \$2.0 million.	Goods: Below \$50,000 per contract, up to aggregate amount of \$1.2 million. Technical Services: Up to \$50,000 per contract up to an aggregate of \$750,000	Quality-based or Quality- and Cost-Based Selection (QCBS). Quality-based selection for study programs abroad up to aggregate amount of \$451,000.	Small Works: Below \$50,000 per contract, up to aggregate amount of \$400,000
2. Prior Review	All civil works, goods, and technical services contracts valued at more than US\$200,000, all contracts for goods and technical services awarded through ICB, and the first contract for IS, NS, and NCB procurements, would be subject to prior IDA review. All individual consultant contracts >\$50,000, and contracts with consulting firms >\$100,000. These limits would result in prior review of about 62 percent of total Bank-financed procurement.					
3. Ex-post Review:	Selective post review (about 25%) of awarded contracts below the threshold levels will be carried out during supervision missions.					

Section 2. Capacity of the Implementing Agency in Procurement and Technical Assistance requirements	
4. The Project Implementation Office (PIO) in NAGCC has been developing its procurement capacity under a PPF of US\$700,000 and a PHRD grant of US\$681,500.	
5. Country Procurement Assessment Report or Country Procurement Strategy Note status: Country Procurement Strategy Note prepared in 1997.	6. Are the bidding documents for the procurement actions of the first year ready by negotiations? Yes                      No                      X

Section 3. Training, Information and Development on Procurement				
7. Estimated date of Project Launch Workshop November, 1997	8. Estimated date of publication of General Procurement Notice February, 1997	9. Indicate if contracts are subject to mandatory SPN in Development Business Yes    X    No	10. Domestic Preference for Goods Yes    X    No	11. Domestic Preference for Work, if applicable Yes                      No                      X
12. Retroactive financing Yes                      No                      X                      Explain:		13. Advanced Procurement Yes                      No                      X                      Explain:		
14. Procurement Monitoring System and Information System: The Project Implementation Office (PIO) in NAGCC will be undertaking all procurement, and will maintain an adequate monitoring system.				

Section 4. Procurement Staffing	
15. Indicate name of Procurement Staff as part of Project Preparation Team: Mr. Narayanaswami Viswanathan	Consultant, International Development and Finance Incorporated
16. Explain briefly the expected role of the Field Office in Procurement: Project Officer will support PIO/NAGCC, as required.	

**Preliminary Procurement Plan (Works): Moldova First Cadastre Project\***

1	2	3	4	5	6. Estimated schedule					
					Description	Type	No. of slices/items/subpackages	Estimated cost (\$ 000 thousands)	Procurement method	Prequalifications
<b>WORKS CONTRACTS</b>	CW	up to 20	<b>400,000</b>	NS	NA	I/98 I/99	II/98 II/99	III/98 III/99	IV/98 IV/99	
Office Rehabilitation										
		<b>TOTAL</b>	<b>400,000</b>							

\* Excluding taxes and duties.

**Procurement Plan (Goods): Moldova First Cadastre Project\***

1 Description	2 Type.	3 No. of slices/items/ subpackages	4 Estimated cost (\$ 000 thousands)	5 Procure- ment method	6. Estimated schedule				
					Prequalifications	Document preparation	Invitation to bid	Contract signing	Contract completion
<b>MAPPING / SURVEYING EQUIPMENT</b>	Goods	2	1,450	ICB	NA	III/98 II/99	IV/98 III/99	I/99 II/00	II/99 III/00
<b>COMPUTER SYSTEMS- Urban Cadastral Services</b>	Goods	2	1,227	ICB	NA	II/98 II/94	III/98 III/99	IV/98 IV/99	IV/99 I/00
<b>COMPUTER SYSTEMS- Rural Cadastral Services</b>	Goods	2	592	IS	NA	I/99 I/00	I/99 I/00	II/99 II/00	III/99 III/00
<b>OFFICE SUPPLIES- Registration Materials</b>	Goods	up to 30	1,003	NS	NA	II/98 I/99 III/99 I/00 III/00 I/01 III/01	II/98 I/99 III/99 I/00 III/00 I/01 III/01	II/98 I/99 III/99 I/00 III/00 I/01 III/01	III/98 II/99 IV/99 II/00 IV/00 II/01 IV/01
<b>OFFICE EQUIPMENT- Fax Machines and Photocopiers</b>	Goods	3	171	IS	NA	II/98 I/99 III/99	II/98 I/99 III/99	III/98 I/99 IV/99	IV/98 II/99 IV/99
<b>OFFICE EQUIPMENT- Furniture And Fixtures</b>	Goods	3	69	NS	NA	II/98 I/99 III/99	III/98 I/99 III/99	I/99 I/99 IV/99	II/99 II/99 IV/99
<b>VEHICLES</b>	Goods	3	388	IS	NA	III/98 I/99 I/00	IV/98 I/99 I/00	I/99 II/99 II/00	II/99 II/99 II/00
<b>TRAINING EQUIPMENT for Project Implementation and Institution /Capacity Building</b>	Goods	4	523	IS	NA	II/98 III/98 IV/98 II/00	II/98 III/98 IV/98 II/00	IV/98 IV/98 I/00 II/00	IV/98 IV/99 I/00 III/00
		<b>TOTAL</b>	<b>5,423</b>						

\* Excluding taxes and duties.

**Procurement Plan (Technical Service Contracts): Moldova First Cadastre Project\***

1	2	3	4	5	6. Estimated schedule				
Description	Type/	No. of slices/items/subpackages	Estimated cost (\$ 000 thousands)	Procurement method	Prequalifications	Document preparation	Invitation to bid	Contract signing	Contract completion
<b>AERIAL PHOTOGRAPHY CONTRACTS</b>	Tech. Serv.	2	300	IS	NA	II/98 II/99	II/98 II/99	I/99 III/00	II/99 IV/00
<b>MAPPING/SURVEYING CONTRACTS (Urban)</b>	Tech. Serv.	5-15	127	NS	NA	II/98	III/98	IV/98	I/99
		1	100	NCB	NA	I/99	I/99	II/99	IV/99
<b>MAPPING/SURVEYING CONTRACTS (Urban)</b>	Tech. Serv.	4	4,000	ICB	NA	II/98 IV/98 IV/99 IV/00	II/98 I/99 I/00 I/01	III/98 III/99 III/00 III/01	II/99 II/00 II/01 II/02
<b>MAPPING/SURVEYING CONTRACTS (Rural)</b>	Tech. Serv.	15-40	576	NS	NA	I/98	I/98	II/98	III/98
		Up to 5	600	NCB	NA	IV/98 IV/99 IV/00	I/99 I/00 I/01	II/99 II/00 II/01	IV/99 IV00 IV/01
		<b>TOTAL</b>	<b>5,703</b>						

\* Excluding taxes and duties.

1/ Using Small Works documents.

**Procurement Plan (Consultancies): Moldova First Cadastre Project\***

1	2	3	4	5	6. Estimated Schedule						
Description	Type	No of slices/items/subpackages	Estimated Cost (\$000) thousands	Procurement method	Start	Finish	Year 1	Year 2	Year 3	Year 4	Year 5
<b>PROJECT IMPLEMENTATION SUPPORT</b>	CF***	1	150	Quality-based or QCBS **	3/98	12	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
<b>STUDY PROGRAMS ABROAD</b>	CI***	NA	451	Quality-based	3/98	12	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
<b>TOTAL</b>			<b>601</b>								

\* Excluding taxes and duties.

\*\* Quality- and Cost-Based Selection

\*\*\* CF = Consulting Firm

CI = Consulting Individual

**Procurement Plan (Miscellaneous): Moldova First Cadastre Project\***

1	2	3	4	5	6. Estimated schedule				
Description	Type	No. of slices/items/subpackages	Estimated cost (\$ 000 thousands)	Procurement method	Prequalifications	Document preparation	Invitation to bid	Contract signing	Contact completion
<b>INCREMENTAL MAPPING COSTS</b> (new maps for urban and rural)	Incremental costs	NA	850	NA	NA	NA	NA	NA	NA
<b>DATA VERIFICATION AND CONVERSION</b> (Title Development Costs for both urban and rural)	Incremental costs	NA	2,000	NA	NA	NA	NA	NA	NA
<b>INCREMENTAL PIO COSTS</b> (fees to contracted consultants for the PIO; audit costs)	Incremental costs	NA	2,000	NA	NA	NA	NA	NA	NA
<b>IMPLEMENTATION TRAINING COSTS</b>	Incremental costs	NA	290	NA					
<b>REFUND TO PPF</b>		NA	1,700	NA	NA	NA	NA	NA	NA
<b>TOTAL</b>			<b>6,840</b>						

\* Excluding taxes and duties.

EXCLUDING INCREMENTAL OPERATING COSTS WITH 100% FINANCING FROM GOVERNMENT COUNTERPART FUNDS (\$900,000).

\*\* On the basis of work contracts between NAGCC and INGEOCAD, approved by the Bank.

\*\*\* On the basis of work contracts between NAGCC and Territorial Cadastre Offices (TCOs), approved by the Bank.

## 7. ESTIMATED DISBURSEMENT SCHEDULE

Estimated Schedule of Credit Disbursements  
(US\$ million equivalent)

<u>Bank Fiscal Year</u>	<u>Semester Ending</u>	<u>Disbursement in Semester</u>	<u>Cumulative Amount</u>	<u>Cumulation as % of Total Credit</u>
1999	12/31/98	1.5	1.5	1
	06/30/99	1.1	2.6	16
2000	12/31/99	1.9	4.5	28
	06/30/00	1.9	6.4	40
2001	12/31/00	1.3	7.7	48
	06/30/01	1.2	8.9	56
2002	12/31/01	1.5	10.4	65
	06/30/02	1.4	11.8	74
2003	12/31/02	2.0	13.8	87
	06/30/03	2.1	15.9	100

## 8. CALCULATIONS FOR PROJECT COST RECOVERY

1. Under the proposed project, the Government of Moldova (GOM), donors and the IDA credit would provide a total of about US\$24.6 million to finance the establishment of a national cadastre. Government counterpart funds would amount to US\$3.96 million, disbursed over five years with the higher shares to be allocated during the initial years of project implementation.

Table 1: Project Cost and Government Contribution (in million US\$)

(in million US\$)	year 1	year 2	year 3	year 4	year5	Total
<b>I. Mapping Program</b>						
Government	0.009	0.049	0.075	0.152	0.156	0.44
IDA	1.990	0.270	0.490	0.490	0.364	3.60
Donors	2.800	0.000	0.000	0.000	0.000	2.80
<b>Total</b>	<b>4.799</b>	<b>0.319</b>	<b>0.565</b>	<b>0.642</b>	<b>0.520</b>	<b>6.85</b>
<b>II. Urban Cadastral Services Program</b>						
Government	0.099	0.176	0.260	0.433	0.455	1.42
IDA	1.779	1.420	1.199	1.388	1.398	7.20
Donors	0.000	0.000	0.000	0.000	0.000	0.00
<b>Total</b>	<b>1.898</b>	<b>1.596</b>	<b>1.459</b>	<b>1.821</b>	<b>1.853</b>	<b>8.63</b>
<b>III. Rural Cadastral Services Program</b>						
Government	0.022	0.052	0.188	0.313	0.364	0.94
IDA	0.170	0.290	0.770	0.990	0.580	2.80
Donors	0.000	0.000	0.000	0.000	0.000	0.00
<b>Total</b>	<b>0.192</b>	<b>0.342</b>	<b>0.958</b>	<b>1.303</b>	<b>0.944</b>	<b>3.74</b>
<b>IV. Institution and Capacity Building</b>						
Government	0.175	0.174	0.159	0.256	0.397	1.16
IDA	0.750	0.530	0.500	0.260	0.260	2.30
Donors	0.558	0.583	0.355	0.343	0.065	1.90
<b>Total</b>	<b>1.483</b>	<b>1.287</b>	<b>1.014</b>	<b>0.859</b>	<b>0.722</b>	<b>5.37</b>
<b>Total Project Cost</b>						
Government	0.305	0.451	0.682	1.154	1.372	3.96
IDA	4.709	2.510	2.959	3.128	2.602	15.90
Donors	3.358	0.583	0.355	0.343	0.065	4.70
<b>Totals</b>	<b>8.373</b>	<b>3.544</b>	<b>3.996</b>	<b>4.625</b>	<b>4.039</b>	<b>24.58</b>

2. Proforma projections of the expected cost and revenues that may be generated through project implementation are provided below. Assumptions used for the projections are also discussed in Chapter V (Economic Evaluation). The projections indicate that the project, over a 35 year horizon, generates enough income to cover its cost. During this period, the cost incurred to the Government through its counterpart contribution during project implementation, and through servicing the IDA credit over the full 35 year period, including a 10 year grace period, amount to US\$22.35 million, most of it incurred during the beginning of the 35 year period (see Table 3 below). Depreciation cost

are assumed to occur in particular during project implementation; for the years 6-35 of the cost recovery period, depreciation cost on only 40% of all investments are assumed as only 40% of instruments and equipment will be needed in order to continue cadastral activities based on the system set up initially.

3. Incomes generated through the project depend on the number and type of properties that are registered.

Table 2: Projected number of properties registered during project implementation

Years	total	rural	intra-villan	total urban	single family homes	appartments	enterprises	other building uses/owners
1	<b>10,577</b>	5,000	1,352	4,225	1,148	2,756	230	92
2	<b>61,479</b>	15,000	11,268	35,211	9,568	22,964	1,914	765
3	<b>108,085</b>	30,000	18,930	59,155	16,075	38,579	3,215	1,286
4	<b>163,535</b>	65,000	23,887	74,648	20,285	48,683	4,057	1,623
5	<b>186,324</b>	85,000	24,563	76,761	20,859	50,061	4,172	1,669
<b>Total</b>	<b>530,000</b>	200,000	80,000	250,000	67,935	163,043	13,587	5,435

4. Incomes generated are assumed to emerge later during the 35 year period, after the project is completed and when real estate markets and commercial banks start using the information available to them. Incomes are assumed to be generated by: (a) fees for the registration of property transfers, mortgages, or other transactions, the volume and the level of which are assumed to be flat but vary by usage; (b) fees for the provision of cadastral information; and (c) royalties from the sales of maps. The total income from these activities is expected to amount to US\$40.19 in 1997 dollars, most of it generated towards the end of the projected period.







# MOLDOVA

- SELECTED CITIES
- ★ NATIONAL CAPITAL
- ~ RIVERS
- +—+—+ RAILROADS
- ROADS
- - - INTERNATIONAL BOUNDARIES

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