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STAFF APPRAISAL REPORT

ARMENIA

TITLE REGISTRATION PROJECT

September 16, 1998

**Rural Development and Environment Sector Unit
Europe and Central Asia Region**

CURRENCY EQUIVALENTS

(as of September 14, 1998)

Currency Unit	= Dram
Current	1\$US = 515 Dram
October 24, 1997	1\$US = 490 Dram
October 15, 1996	1\$US = 420 Dram
December 31, 1995	1\$US = 402 Dram

WEIGHTS AND MEASURES

Metric System

ARMENIA - FISCAL YEAR

January 1 - December 31

ABBREVIATIONS AND ACRONYMS

AMD	Armenian Dram
ARSP	Agricultural Reform Support Project
AUPCA	Armenian Unified Property Cadastral Administration or SCA
CBA	Central Bank of Armenia
CIS	Commonwealth of Independent States
EU-FSP	European Union - Food Security Program
FSU	Former Soviet Union
GIS	Geographic Information System
GOA	Government of Armenia
IAS	International Accounting Standards
IB	Inventory Bureaus (former) - core of the State Cadastral Administration
ICB	International Competitive Bidding
ICMA	International City/Country Management Association
IDA	International Development Association
IRC	Information & Registration Center
IS	International Shopping
MOA	Ministry of Agriculture
MOEP	Ministry of Environmental Protection
MOFE	Ministry of Finance and Economy
MUD	Ministry of Urban Development
NCB	National Competitive Bidding
NNP	Net National Product
PIU	Project Implementation Unit
PHRD	Participation and Human Resources Development
PPF	Project Preparation Facility
SCA	State Cadastral Administration
TRP	Title Registration Project
USAID	United States Agency for International Development
VAT	Value Added Tax

Vice President: Johannes Linn, ECAVP
Country Director: Judy O'Connor, ECC03
Sector Director: Kevin Cleaver, ECSSD
Team Leader: Mark Lundell, ECSSD

REPUBLIC OF ARMENIA
TITLE REGISTRATION PROJECT
AM - 57560

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This report is based on the findings of pre-appraisal missions in February and June 1997, whose mission members included: M. Lundell (Mission Leader), J. Holl, B. Klose, and M. Sahatdjian. The report was finalized on the basis of an appraisal mission (December 1997) and a follow-up mission (April 1998) by M. Lundell and T. Ward.

**REPUBLIC OF ARMENIA
TITLE REGISTRATION PROJECT, AM - 57560**

PROJECT SUMMARY

Borrower: Republic of Armenia

Implementing Agency: State Cadastral Administration

Beneficiaries: Private farmers, small and medium-size enterprises, financial institutions, and property owners (land and real estate)

Amount: US\$ 8.0 million equivalent

Terms: Standard, with 35 year maturity, including a 10 year grace period.

Commitment Fee: 0.75% on undisbursed credit balances, beginning 60 days after signing, less any waivers.

Financing Plan:

	<u>National</u>	<u>Foreign</u>	<u>Total</u>
	-----US \$ million -----		
IDA	6.086	1.914	8.000
Government of Armenia	<u>2.569</u>	<u>0.000</u>	<u>2.569</u>
Total Project Costs	8.655	1.914	10.569

Project Objectives: The overall aim of the Title Registration Project (TRP) is to promote private sector development by implementing a transparent, parcel-based, easily accessible, and reliable registration system for land and other real property. This system will set out a chronological record of property owners and their rights and obligations. The specific objectives of the TRP are: (a) to increase the productivity and value of land and other real estate by securing property rights and promoting consolidation of fragmented rural land ownership; and, (b) to facilitate the use of property as collateral and reduce high transaction costs in title transfer and mortgage finance by improving the efficiency of rural and urban property markets. The project will also promote least-cost registration procedures by building on existing data bases of property information, by adding only market relevant information to these data bases, and by contracting through private surveyors.

Project Description: The project consists of three components: (i) establishing a network of Information and Registration Centers (IRCs); (ii) surveying land and other real estate to produce cadastral maps; and, (iii) equipping and operating a Project Implementation Unit (PIU).

The IRC network will include a Central Office in Yerevan and 25 fully functional local offices. The Mapping Center will oversee surveys and cadastral map production. Together, these components of the system will facilitate the information flow relating to titles for registration of property transactions based on operational manuals that define a set of procedures for local IRCs, surveying, and cadastral mapping. The PIU will have direct responsibility for coordinating project activities involving the IRC network and the Mapping Center and executing all project procurement, disbursement, monitoring, and evaluation activities.

The TRP will substantially complete the systematic surveying and official registration of property in Yerevan and four of the country's eleven marzes (regions). In the other six marzes, it will incorporate existing Acts (deeds) into the new registration system based on a limited number of systematic surveys. Over four years, the project will bring into the registration system an estimated 55% of rural properties and 45% of urban properties. Access to data will be demand driven and administered by the Armenian Unified Cadastral Administration (SCA).

Project Benefits: The primary beneficiaries of this project are private farmers, small and medium-size enterprises, and urban property owners whose title would be secured. Title security would increase incentives for investment in property and increase access to credit thereby improving the operational capacity of farmers and rural enterprises. In rural areas, land titling will also promote consolidation of land plots and reduce the cost of property transactions, thereby increasing the potential for agricultural productivity growth. Similarly in both rural and urban areas, registration will document the owners' rights, obligations, and build-up the pool of collateralized real estate property and reduce transaction costs. In sum, the project will assist the development of a property market and subsequent fair and transparent market valuation.

Environmental Aspects: The project is classified as category "C" in the Bank's environmental rating system because security of land title will likely stimulate sustainable land management and improved agricultural practices. Such practices in rural areas would be supported by a more effective extension service system created under the Agricultural Reform Support Project (ARSP). Furthermore, land registration in particular would improve the creditworthiness of farmers and their access to credit. In turn, increased credit would increase the likelihood of farmers' investing in conservation and other sustainable practices.

Project Risks: The project's risks include: (a) resurgence of macro-economic instability that could deter the development of financial markets; (b) delay and subsequent increased costs in the registration process due to: i) need for greater use of labor and time-intensive surveying, ii) lack of coherent rules as to how data should be collected, iii) lack of trained surveyors, and iv) requirements for excessively precise boundaries for the surveying process; (c) lack of sufficient focus and funding by the Government for title registration in the newly formed registration system; and (d) lack of market demand for SCA's services stemming from an excessively high fee structure; and, (e) participating financial institution's failure to aggressively promote the complementary line of credit (under the ARSP) because of inexperience with investment lending and mortgage concepts. The implementation risks associated with (b), (c) and (d) above would be mitigated through a clear legal framework, precise definitions and procedures in the operations manual, and a transitional provision whereby initial registration is systematic with low fees and freely accessible information. The ARSP is addressing the issues of the implementation risk associated with (e).

Economic Rate Of Return (ERR): Determination of the ERR is difficult, as demonstrated in a series of similar title registration projects in other countries. The primary economic assumption for this project is that a registry system would simplify the deed and title search; thereby lessening property transfer and mortgage costs and enhancing property market development. Estimated cost recovery periods of similar projects average seven years in urban areas and 15 years in rural areas, the difference owing to a lower intensity of transactions in the rural sector.

Estimated Closing Date: December 31, 2002

Poverty Category The project is not explicitly focused on poverty alleviation. However, through mass registration of property via a systematic approach it supports the development of rural finance, rekindles demand for farm produce from processors, and supports market-driven urban development. Therefore, it has strong linkages to a large number of small-scale private farmers and rural inhabitants. As such, it would help increase farmers' access to formal credit. Title registration would also improve agricultural practices with land security and farmers' abilities to borrow in the medium term. In sum, the project will have an indirect, but substantial impact on poverty reduction.

Project ID: AM-57560

Map: 29596

Project Cost Summary (US \$ million)

	National	Foreign	Total	% Foreign Exchange	% of Cost
Information and Registration Center Network	1.747	1.172	2.919	40.2%	30.2%
Surveying and Cadastral Mapping	5.618	0.503	6.121	8.2%	63.5%
Project Implementation Unit	0.531	0.071	0.602	11.8%	6.3%
Total Allocated	7.896	1.746	9.642	18.1%	100.0%
<u>Contingencies</u>	<u>0.760</u>	<u>0.168</u>	<u>0.928</u>	<u>18.1%</u>	<u>9.6%</u>
Total Project Cost	8.655	1.914	10.569	18.1%	109.6%

Projections for IDA Disbursements (US \$ millions)

	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Annual	1.093	1.999	1.699	1.650	0.857
Cumulative	1.093	3.092	4.791	6.441	7.298
<u>Cumulative Contingencies</u>	<u>0.105</u>	<u>0.298</u>	<u>0.461</u>	<u>0.620</u>	<u>0.702</u>
Grand Total - Cumulative	1.199	3.389	5.251	7.061	8.000

1. BACKGROUND

A. Introduction

1.1 Armenia covers an area of 29,800 km² and shares borders with Azerbaijan, Georgia, Iran and Turkey. Altitudes vary from 400 m to 4,000 m above sea level. Two-thirds of the total land area is covered by high plateaus and mountains, and most of Armenia is at an altitude of 1,000 m or above. In 1997, the total population is estimated at 3.68 million, at a population density of about 123 per km². About 69% of the population is concentrated in the urban areas. Yerevan (the capital city) alone has 1.4 million inhabitants or about 38% of the total population and some 250,00 private homes (flats and homes). Administratively, the country is divided into 11 marzes, including Yerevan. The smallest administrative unit is the village, of which there are some 950.

1.2 Armenia became an independent country in May 1991 following the disintegration of the Former Soviet Union (FSU). It is now a member of the Commonwealth of Independent States (CIS). Since independence, the Government of Armenia (GOA) has pursued the objectives of consolidating national independence and promoting market reform. A very high degree of integration into the FSU economy induced economic collapse in Armenia when the inter-FSU trade, payments and financial system broke down. More fundamentally, the elimination of non-market pricing in trade between FSU states imposed a severe terms of trade shock on Armenia, particularly due to the sharp rise in energy import prices. This exposed the lack of comparative advantage for significant parts of Armenia's productive base. Facing these difficulties, the GOA has shown a strong commitment to a re-orientation of the role of government in the country's economy. The adoption of a new national constitution has initiated a thorough restructuring of government agencies. Furthermore, the implementation of a comprehensive stabilization and structural reform program since early 1994 has reinforced the coordination between ministries in priority setting and policy formulation.

1.3 Progress on re-orienting government in the transition to the market economy has accelerated with an easing of the regional political situation. Initially, the conflict over Nagorno-Karabakh led to a trade and transport blockade by Azerbaijan (traditionally Armenia's principal transit route for oil, gas, and other products) and the closure of the Turkish border. However, there have been several positive developments in Armenia's relations with its neighbors. A formal cease-fire with Azerbaijan was signed in 1994, and there have been signs of a rapprochement between Armenia and Turkey. These developments offer a real prospect of lifting the blockade on Armenia in the near future. In addition, rapidly-growing trade with Iran and greater stability in Georgia have eased Armenia's isolation. Progress in implementing a stabilization program has been impressive since mid-1994. The fiscal deficit declined from 48.2% of GDP in 1993 to

8.8% in 1996. The nominal exchange rate has been broadly stable since the Spring of 1994. After an estimated 60% decline in GDP in 1991-93, growth of GDP has been about 6% annually in 1994-97. The current account deficit (excluding official transfers) declined to 26.5% of GDP in 1996 from 35.5% in 1994. This has been accompanied by an accumulation of foreign exchange reserves equivalent to 3.5 months of imports (three times the 1994 level).

1.4 However, these achievements in GDP growth and external adjustment remain fragile, and poverty has become pervasive (particularly in urban areas, where people have limited access to agricultural land). Average monthly wages in the state sector were about US \$36 in January 1996 (in the budgetary sector they were only about US \$12) and average pensions for the elders is about US \$7. Although wages are often supplemented by informal sector income, social assistance, remittances from abroad, and humanitarian aid, survey data reveal consumption levels barely above subsistence levels for large parts of the population. While recorded unemployment is only 5% of the labor force, a further 15% to 30% are estimated to be on involuntary unpaid leave or reduced pay for shortened working hours.

B. The Policy Agenda

1.5 Despite the initial success following introduction of the reform programs, the new market economy is still in a transition stage - tax collection remains haphazard, and the productive sector has not fully been adjusted to new economic signals. In general the GOA hope to institute a cadaster system for property to a) provide updated information on real estate characteristics deemed important by the society; and b) provide secured information on real estate ownership. Information is the key to its justification and sustainability. However, information is expensive to collect and maintain, yet pivotal to the development of market economies. Inefficiencies arise where different cadasters are not integrated within an unified administrative system. Together, the GOA seeks three parallel missions from the newly created SCA, namely, i) to develop and integrate a *legal cadaster* - via an IRC network, focusing on information about location, demarcation and ownership; ii) to produce a *physical cadaster* - via a classification taxonomy and detailed surveys for the purpose of city and/or regional planning, public infrastructure development and environmental management, etc.; and, iii) to assess with a *fiscal cadaster* - via its pre-existing Inventory Bureaus (IBs), providing information essential for the establishment and the efficient operation of property taxation. In sum, for the GOA to achieve complete transition to a market economy the following major measures are required:

- a) the timely development of a working rural financial system to support privatized agriculture, farmers, agribusiness and dwellers;
- b) the implementation of a registration system for transactions in land and other real estate which is capable of standardizing determination of collateral for working capital and investment loans. These elements that relate to this project are currently being addressed by the GOA and are briefly described below.

1.6 Land Privatization. Before privatization, the cultivated agricultural land areas within the collective and state farms of the Republic of Armenia consisted of about 46% of the total area (2,974,000 hectares), of which arable land covered 495,000 hectares, perennials covered 84,000 hectares, meadows 138,000 hectares, pastures 666,000 hectares, and collective property horticultural unions covered 6,000 hectares. In January, 1991, Armenia enacted the "Law on the peasant cooperative farms," according to which three forms of ownership were established: property of citizens, collective property, and state property. Agricultural land was distributed as private property to more than 320,000 farmers on free of charge basis with area allocated in proportion to family size. However a five year ban (until 1996) on the sale of land was imposed. The non-land assets of the dissolved collective and state farms were privatized in the same way (livestock, technical resources, technology units, etc.). Although farmers were allocated 80% of the arable land, 20% remained under the community as a reserve fund (and pasture land was held in state ownership). The land in this fund can be leased by the community council to individuals for agricultural purposes.

1.7 The privatized land has been distributed by the committees that were established in the communities according to the following principles: families of up to three persons were allocated one land parcel. Families consisting of four to six persons received two land parcels, families with seven or more members got three land parcels. Thus, land was given to the family and the head of the family was registered as an owner (farmer) and received a temporary certificate of a right to ownership by the privatization committee. Since in each of the communities the privatized areas and the number of the land parcels are different, the sizes of the lands received by the landowners are also different (ranging from 0.3 to 15 hectares). Today, it is estimated that private agricultural land and dachas account for 366,000 ha (approximately 26% of all 'rural lands'). To date, 85,000 state acts have been prepared, while another 250,000 await preparation and issue to land owners. Due to the lack of funds from the GOA for investment costs, that process has slowed down the work and restricted the geographical coverage of the survey mainly to the agricultural areas near Yerevan. However, the SCA has now been given the authority to administer the mapping requirements and officiate the registration process, which by draft law will be based on production of cadastral maps through parcel surveys.

1.8 Establishment of a Property Registration and Property Cadaster System. On December 27, 1995, the National Assembly passed the "Law on the Real Property," in which land is defined as real property and owners are given well clarified rights and obligations to this property. In July 1997, the GOA established a property registration system by a decree under the "Establishment of the State Cadaster System." According to this decree, a unified state cadastral service for legal property registration was established as the State Cadastral Administration (SCA). The main tasks of the SCA are to: (i) register the specific attributes of individual pieces of land and other real estate (via a parcel based methodology) - including location and sizes, property owners and their legal status, rights and obligations or encumbrances such as leases, mortgages, condominium, and other indemnities, and property sales; (i.e. *legal cadaster*) and, (ii) accumulate and distribute data on these attributes as well as those regarding assessed values of real

property and adjudicate boundary disputes (i.e. *physical and fiscal cadasters*). The information will be collected and integrated into the chronologically tabulated cadastral system, which will be made available to tax authorities, realty enterprises or agents, and banks and other interested organizations or individuals.

1.9 According to an earlier GOA decree (March, 1996) on the property registration system, the draft preparation work on property registration and cadastral issues and its submission to the GOA had been delegated to the Ministries of Urban Development, Agriculture, Finance and Economy, Justice, and the Yerevan City Municipality. A commission had been formed from the representatives of these bodies. It was given the task of developing a draft law on Real Property Registration. This law should give legal force to the SCA's specific activities and establish the legal principles governing registration and government accountability for the accuracy of the information in the registration system.

1.10 The registration system being set up by the SCA will have its units in each of the marzes (administrative regions) and be responsible not only for the organization of surveying and mapping, collection of information, issuing of titles, and answering information requests through title reports, but also for the property dispute adjudication as well as settling of land problems. They are also to cooperate with different bodies of justice, such as the notary offices, to document changes connected with the legal status of property, such as the provision of easement rights' and settlement of disputes occurring over their use. In cases when the local registry offices of the SCA are not able to resolve the disputes in the field, the case will be sent to the court to be addressed through the justice system.

1.11 Complementary Support to Rural Finance The TRP offers important support to the process of developing sustainable rural finance which is targeted by the Agriculture Reform Support Project (ARSP, signed in March 1998). The credit resources flowing to the rural sector are well below the levels which the current estimated creditworthiness of the sector would justify (upwards of \$30 million annually; see ARSP, SAR pp. 4-5). With a chronological based registration system, the TRP would serve as a direct link to the ARSP's credit component This is because an important factor in improving creditworthiness and alleviating rural credit constraints is the removal of barriers to pledging land and other real estate as collateral by generating low-cost information on the property of potential borrowers.

C. Urban Developments

1.12 Prior to the creation of the SCA, there were Yerevan and Republic Inventory Bureaus (IBs). Today, these bureaus are placed under SCA's jurisdiction. The Yerevan and Republic Inventory Bureaus store data by owner and by building address. They maintain several registers for each community in the country, including a register of private homes; a register of privatized apartments; a register of privatized commercial and industrial properties; a register of dachas and garden houses; and a register of garages. In

sum, the IBs work will be the basis of the fiscal cadaster part within the registration process and SCA's umbrella administrative mission.

1.13 For each property, the bureaus store its ownership history, current ownership documents, assessed tax value, and various technical information. The ownership history and current ownership documents are of interest to the legal cadaster development. The tax value is of minor interest to the legal cadaster but of great interest to the fiscal cadaster. Although much of the technical information is of little interest to the legal registration, some of this data will be of to the degree it assists with initial parcel numbering and formal registration of acts which have been issued to date.

1.14 The Yerevan Inventory Bureau has a computer database with some property information. Some or all of this data might added to the nationwide property registration system.

1.15 The Inventory Bureaus are just completing a nationwide tax inventory. This survey will most likely contain data of interest to the title registration system, especially the list (registry) of property objects. The Republic Inventory Bureaus' summary report will be reviewed for planning surveying activities. The report depicts the number of properties in each marz and former rayon, with breakdowns by categories such as private homes, multi-unit apartment buildings, garden plots, etc.

D. Agricultural Sector

1.16 During the Soviet regime, the agricultural sector accounted for 18% of Net Material Product (NMP) compared with 56% for the industrial sector, and most of the country's food requirements were imported from the other Republics. Following the collapse of the FSU and the ensuing blockade, Armenia's economy began progressively to deteriorate, although the agriculture sector began to pick up again in 1993. Agriculture's share of NMP increased substantially, partly because of the decline in the other sectors but also thanks to policy reforms reversing the agricultural sectors' decline. With its limited resource base, Armenia has been specializing in high value horticultural crops such as grapes, apricots, apples, tomatoes, and a variety of other fruits and vegetables largely under irrigation and closely linked to the processing industry. The privatization of land brought the emergence of 320,000 smallholders and changed, together with the blockade, the entire picture in the agricultural sector.

1.17 The main reason for the change in cropping pattern is the need for farmers to secure food self-sufficiency after the collapse of the FSU, the blockade, and the war in Karabakh. In addition, the collapse of the downstream processing sectors and the upstream suppliers (typical of most of the CIS republics) has caused a major decline in production, a loss of soil fertility and a crisis in the livestock sector. As in the past, the country is a net importer of food - grains, meat and dairy products. Surpluses remain in fruits and vegetables. Armenia used to enhance its food self-sufficiency by producing food from imported base products, such as feed. During the blockade, the domestic food supply has dropped and food consumption declined. Armenia thus faces the following

constraints in the agricultural sector: (i) a deteriorating food security; (ii) production decline due to inadequate irrigation, shortage of farm inputs (including farm mechanization), and lack of credit and adequate extension services; and, (iii) limited outlets for produce due to lack of packaging materials and spare parts in the processing sector, and bottlenecks in transport and storage.

1.18 Private Farming. Probably the most significant development in the sector since independence has been the emergence of small private farms as the main producers of food and agricultural products. The Government's privatizing of much of the agricultural land in 1991 and later its issue of Acts in 1995 that give preliminary transfer rights and security to property owners are viewed as a primary factor. However, over-fragmentation agricultural land continues to suppress efficient productivity. This is illustrated via two surveys of small-scale privatization farms, conducted in different districts of Armenia, as a preparation activity for ARSP. They exhibit that on average, farm households have a land holding of 1.28 hectares of which 74% is arable, 13% is under perennials (orchards and vineyards), and 13 % is under hay meadows and pasture. The average family farm employs 2-3 members of the immediate family, mostly on a part-time basis. All farms in the survey produced crops, with a diverse crop mix, and 71% of the farmers had livestock. On average farm households consumed 60-70% of their produce and sold the balance, making them more than subsistence farmers.

1.19 About 75% of farms in the survey indicated that they received income from sales of agricultural produce. Among these 75%, average gross revenues from sales were about 360,000 Dram (US \$900) per annum, and average net revenue was about 185,000 Dram (US \$465), before payments for family labor. Sales revenues from crops and livestock are about 70% and 30%, respectively. Farm households in the survey were found to derive a substantial proportion of their income from non-farm sources, with 51% of households indicating that the farm provided less than 50% of the household income. A further 18% of households derived between 50% and 75% of total household income from farming. Relative to the equity base and the potential revenue stream, both input and output levels were low, reflecting constraints in accessing high quality inputs, credit, and information on current technologies. The main sources for funding farm operations in 1995 were retained earnings and interest free loans from relatives (99% of respondents). Less than 1% of the respondents reported commercial borrowing. This evidence further illustrates the need for re-consolidation of land for a more efficient use of equipment and resources. Proper titling of property will facilitate such activity.

E. Constraints to Increased Agricultural Productivity

1.20 Credit constraints in Agro-Processing Enterprises and Marketing. As a preparatory activity for the recently effective ARSP, a team of consultants have examined sub-groups of agro-processing enterprises to identify their credit demand and potential eligibility to participate in borrowing under the IDA Enterprise Development Project (EDP) which became effective in 1997. The main credit constraints for agro-processing enterprises at present are the blockade of the country, virtual absence of medium and long-term loans, very high short-term interest rates (as high as 40-60% per annum after

inflation), and minimal understanding of mortgage financing. According to the investment proposals, the demand for credit is high, due to the need for fixed investments (especially for quality-control modernization and improvement of packaging), and working capital. In addition, financing is needed by enterprises supplying farm inputs, such as fertilizers, agro-chemicals, spare parts and veterinarian medicine.

1.21 Credit for Primary Agricultural Production During the Soviet period, the main supplier of credit to agriculture was the Agrobank, which had over 30 branches. However, the Agrobank was geared to channeling public funds to state enterprises and clearing payments between them, rather than carrying out retail banking operations. Following the breakdown of the FSU's banking system, the rural population lost access to institutional financial services. Over the past three years, there has been virtually no institutional credit available to large farms, nor to individual farmers. Credit to farms from the agro-processing sub-sector and marketing and input distribution enterprises was also reduced, since they were also facing credit shortages. Finally, self-financing was also reduced, since price liberalization generated strong upward movement in real farm input prices, and demand fell because of overall reduction of national income. The resulting severe cost-price squeeze on farm profits has reduced utilization of inputs, mainly fertilizers and chemicals, and caused a drop in crop yields.

1.22 As a result of land privatization (para. 1.18) and lack of mortgage lending developments, one of the most critical remaining constraints facing private farms is the lack of credit. This project seeks to assist with mortgage development by supporting a cost-effective registration system and delivery of relevant information, which is one step towards an efficient property market. Similarly, the ARSP seeks to promote mortgage understanding through its extension services and initial credit to promote such development. Results of the two farm surveys done during ARSP project preparation (one including about 4,000 respondents and the second about 2,000 respondents) indicate a broad and substantial demand for credit on the part of rural population, with 53% of the farmers in the survey indicating that they had a need for credit, in varying amounts up to AMD 300,000 (US \$600 equivalent), with the most commonly requested credit terms being 6-12 months at interest rates 1-3 percent per month. At the same time there is significant part of comparatively large privatized former collective farms (up to 200 ha) that have a great need of medium term loans for amounts up to \$50,000.

1.23 Demand for rural credit for small-scale agriculture has been estimated based on analysis of the farm surveys and summary data provided by the Agricultural Cooperative Bank of Armenia (ACBA) from submitted preliminary loan application forms. According to this data, about 25% of the sample were found to have adequate repayment capacity to repay a 9-month, average-sized loan of AMD 250,000 (US \$500 equivalent) priced at an annual percentage rate of up to 36%, with a cash coverage ratio of 1.50 or higher. These farms projected a return of 61% on their total costs (farm profit divided by total cost), suggesting that even relatively high market interest rates may not be a major impediment to borrowing. If, like the ACBA loan application sample, 25% of the 312,900 small farms reported to be operating in Armenia have the ability to repay average seasonal loans of US \$500 (at 36% annual interest with a coverage ratio of 1.50), then total potential credit demand is on the order of AMD 19.6 billion (US \$39.1)

million. An additional survey of large farms, carried out in the fall of 1996, also revealed a strong demand for credit. The estimated total number of large private farms is 409. The average demand for financing by one large farm is about \$50,000, including both seasonal and investment credit. Based on this average and an estimated eligibility rate of about 30%, and a repayment capacity similar to that of small farms, the total demand for credit by large private farms might be on the order of US \$6 to \$7 million. Investment priorities included procurement of agricultural mechanization, land purchase, small-scale agro-processing facilities, agricultural buildings, livestock, establishment of new orchards, and refrigeration (in descending order of indicated preference). A surprisingly high number of farms also expressed high priority for seasonal credit, giving a fair indication of the degree to which the agricultural sector is devoid of cash.

1.24 Rural Land Tenure. As a result of the particular method followed for privatizing agricultural lands in Armenia, land has become fragmented. Each family in each rural community was given four to five parcels of land, one of each category of land which had made up the former collective. Thus, each family was given non-contiguous plots of cropland, vineyards, perennials, hayfields, and pasture, with each plot averaging about 0.3 hectares. In order to achieve more efficient use of land and effective use of agricultural machinery, it is necessary to establish a land market, which will allow, through sales, exchanges, and leases, the initiation of the land consolidation process. The growth of a land market and its activities will be assisted by the creation of a title registration system, including the issuing of land deeds (state acts) to the farmers. The state acts give the landowner tangible proof that he is the initial legal owner of the land. They also serve as a guarantee by the state to market agents that land can be used as collateral in return for receiving input advances, loans, or other financing instruments. The various activities involved in a title registration system, e.g., surveying, mapping, preparation of titles, has been examined during the past two years of the Title Registration Pilot financed jointly by the World Bank Institution Building Loan for Armenia and by resources from USAID. The experience of this pilot and its staff have been directly transferred to the State Cadastral Administration, which is now in charge of establishing and operating the title registration system.

F. Bank's Experience and Strategy

1.25 Bank's Role and Past Assistance to Armenia The project would support areas where the Bank has considerable experience. The lessons learned from the various title registration activities, projects and components under implementation and preparation in the ECA region (especially Georgia, Moldova, Kazakhstan, Kyrgyz Republic, Romania, Slovenia, but also in other countries such as Thailand) have also been incorporated into the design of the this project. One of the major challenges of this project has been to resolve the institutional responsibility issue of which ministry or agency should manage an integrated registry of both rural and urban land and real estate. Over the course of two years of project preparation, this issue was continuously explored with the GOA, which decided in July 1997 to place this responsibility with the newly created State Cadastral Administration.

1.26 Experience from the first rural sector Bank project in Armenia (the Irrigation Rehabilitation Project (IRP)), shows that the Government can administer and implement a project within an agreed timetable if the objectives are clearly defined. The IRP also has demonstrated the importance of contingencies (in light of cost escalation due to the earthquake, technical assistance, especially to coordinate operational (procedural) and technical (design, equipment specification) issues simultaneously in a manner satisfactory to the Bank.

1.27 Strategy for Assistance in the Agricultural Sector Soon after independence in 1991, Armenia took steps to liberalize its economy in general, and the agricultural sector in particular, by introducing major reform programs. The Armenian land privatization program is unique among former Soviet Republics in regard to the speed and completeness of its implementation. At the request of the Government of Armenia, to ensure the successful implementation of these programs, an FAO/CP mission visited Armenia in April/May 1994 and assisted the Government in identifying a project that would support the agricultural reform programs. A prior mission from the World Bank visited Armenia in May/June of 1993 and prepared a review of the sector (Armenia: The Challenge of Reform in the Agricultural Sector) which reported on the status of food and agricultural sector in the Republic of Armenia during the first years of the privatized primary agriculture. It also presented an assessment of the process of the sectoral reforms needed to complete the transition to a market based agricultural sector. The most critical issues that will determine the future success of reforms in the sector and the recovery of food and agriculture in general are:

- (a) developing a working competitive domestic market for agricultural products and agricultural sector services, required to accelerate the: (i) privatization of the remaining agro-industrial enterprises; (ii) demonopolization of the distribution, input supply, and product market; and (iii) facilitation of the entry of foreign capital and firms into domestic agro-processing, input distribution and support services;
- (b) developing a financial intermediary system that can meet the rural sector's credit needs;
- (c) developing an institutional framework that is consistent with the needs of a market-based agriculture and emphasizes the state's role in supporting the private sector through setting standards and regulations and providing public goods and services such as extension services, research, and education focused on the needs of privatized agriculture;
- (d) and, development and implementation of a title registration and information system to provide security of tenure, full information on land transactions, and a repository for property assessment information; preparation and implementation of a program to promote the emergence of land markets to support land consolidation and move towards a more efficient holding structure; establishment of a competitive land mortgage and credit system;

1.28 Specific measures to implement the policy recommendations outlined in a-c above are incorporated into the current Agricultural Reform Support Project (ARSP). The Title Registration Project (TRP) as proposed in the following chapter will reinforce the latter policy needs by launching a legal title registration system (in both rural and urban areas).

1.29 Lessons Learned from Past Operations in the Agricultural Sector The proposal project is IDA's third operation supporting Armenia's agricultural sector; following the Irrigation Rehabilitation Project (IRP), which became effective in mid-1995 and the Agricultural Reform Support Project (ARSP), which became effective in early September 1998. Furthermore, a number of other projects in the ECA Region were examined during the design and appraisal phases of this project. The most important one was the 1998 Romania General Cadaster Project designed to accelerate land reforms. Design of this project also took into account the experience gained under the registration component of the Georgia Agriculture Project, Kazakhstan's Pilot Registration Program, Moldova's First Cadaster Project, and preparation of the proposed Slovenia Land Cadaster Project. Significant design elements of the above mentioned projects were built into this proposed TRP.

2. THE PROJECT

A. Project Origin and Formulation

2.1 During discussion of the agricultural sector review "Armenia: The Challenge of Reform in the Agricultural Section" (prepared by the Bank in 1993-94), the GOA requested financial assistance to the rural sector for investment activities that would support the policy measures targeted by the GOA to revive production and exports. This request led to the preparation of materials for the proposed project during 1996, by consultants engaged under a PHRD grant from the Government of Japan. Major issues considered during the project preparation and appraisal in 1997-98 were as follows: (i) the most appropriate and cost effective system of title registration and development of property markets; and subsequently (ii) the capacity of the banking system to meet the credit needs of small and large farmers and the justification for supporting mortgage-based finance.

2.2 Project implementation could commence as early as December 1998 after receiving approval of the credit for the TRP from IDA and acceptance of this credit by the National Assembly of Republic of Armenia.

B. Project Objectives and Description

2.3 The overall objective of the TRP is to promote private sector development by increasing: (a) the productivity and value of land and other immovable assets through secured property rights; and, (b) the efficiency of rural and urban property markets. The project seeks to implement transparent, parcel-based, easily accessible, and reliable registration system which chronologically defines the property owners and their rights and obligations. The secondary objectives are to reduce high transaction costs to title transfer and mortgage finance, to facilitate the use of property as collateral, and promote consolidation of fragmented rural land ownership. The TRP aims to achieve these objectives through three components: (i) establishing a network of information and registration centers (IRCs) to provide locally-based capacity for initial systematic registration and recording of property transactions; (ii) supporting privately contracted systematic surveys and production of cadastral maps; and, (iii) equipping and operating a Project Implementation Unit (PIU).

2.4 Summary of Project Scope To support the above objectives, the proposed project would provide assistance for the establishment a title registration system administered by

the State Cadastral Administration (SCA) to cover all eleven marzes, albeit to varying degrees of intensity. Project design has carefully taken into account the results of the Pilot Title Registration Project which the GOA executed in 1994-1996 with support of USAID and the Institution Building Loan supported by IDA. The project implementation will be guided by dated covenants including of legal framework development (supported by USAID) as well as survey and registration manuals laying out their component methodologies.

Marzes targeted for concentrated systematic surveying and formal title registration	Marzes selected for a limited number of systematic property surveys and formal title registration
City of Yerevan Aragatsotn Ararat Armavir Kotaik	Gegharkounik Lori Siunik Shirak Tauosh Vaik

2.5 Since widespread privatization of rural land and urban dwellings have made significant changes in boundaries and land use over the past decade, the collection of data on ownership and boundaries through survey and cadastral mapping is a particularly complex task. To keep per unit costs down for individual pieces of land and other real estate (in the marzes where intensive demand for the registration system's information is expected) a systematic survey approach will be implemented. A sporadic method of surveying individual land plots on demand by owners will be applied in marzes where expected demand for title registration information does not warrant systematic adjudication and cadastral mapping activities. The results of the plot surveys will be organized into cadastral map representations and linked to the data fields on ownership status. Each transfer of ownership, mortgage, lease, and other encumbrance regarding a particular piece of real estate will be registered into the title system and be available to the general public for query.

2.6 Definitive establishment of the legal framework is primary for this project to move forward. The next step towards this is to finalize a Title Registration Law and achieve passage by the Armenia Parliament. Critiques of the governing body of legislation on title registration and a recent draft Title Registration Law have been provided by the International City/County Management Association (ICMA, a contractor to USAID) specialists and other consultants during project preparation. The law currently in draft form will determine the scope and cost recovery (i.e. fees) for the title registration system's development. To provide additional legal support to this process, USAID has tendered a two year contract that will build on the past work of the Title Registration Pilot. This program commenced in July 1998 and will address the definition of cost effective norms and procedures for gathering the exact forms of data which are to be included in the registration system; details of the state's guarantees of registry information; and the precision of survey methods to which the SCA will adhere. With a

properly outlined system, subsequent process issues will be resolved based on market requirements and budget constraints of the SCA. During re-examination of project appraisal documents in April-May, 1998, it was determined that USAID's program will sufficiently cover most of the technical assistance requirements of the SCA and its constituent bodies.

2.7 During the TRP implementation period, the strengths and weaknesses of approaches and methodologies will be continually assessed and revised, especially in the area of parcel identification (surveying and cadastral mapping). The experience gained as a result of implementation will have critical significance for planning the extension of the title registration system to intensively cover the rest of the country.

Component 1: Establishment of the IRC Network (US \$2.919 million)

2.8 The creation of the Information and Registration Centers (IRCs) is the key to the system building process. The IRC network would narrow the current information gap which deters property market development by acting as data clearing houses for both entry and retrieval of information. Their service fees will be based on statutory law and over time the IRC network will become a completely self-financing non-profit entity. However, it must be noted that rural centers may require assistance from the more profitable operations in areas of higher transactions demand. Therefore, the SCA's fees may be redistributed accordingly. Financing of the equipment and other operating costs of the IRCs are provided for under the TRP, with support for operating costs gradually phased out over the course of the project. The specific expenditures under this component will provide financing to:

- Equip and furnish a central information center and 11 fully functional local offices;
- Design, procure and install the IRC computer information network to manage the data produced;
- Build the personnel of IRC network through international and short-term local consultants, who will provide technical assistance, training and administrative support;
- Support the non-labor operating costs of the IRC network at a decreasing rate over the TRP implementation period.

2.9 The TRP's initial investment under this component will be the equipping of 7 local IRCs in Project Year 1 (PY1) and 4 in PY2 (out of a total 25 IRCs). The number of these local offices will vary between 2-4 in each marz in five targeted marzes. The remaining six marzes will be limited to one or two IRCs each. The EU-FSP is currently financing the initial equipping of 14 IRCs, but will not finance not in future cover any of their operating or equipment maintenance costs. The equipment maintenance costs for all 25 IRCs and the Central IRC will be 90% financed by the project under service contracts.

Component 2: Surveying and Cadastral Mapping (US \$6.121 million)

2.10 This component supports the SCA's cadastral map production. The process includes data collection, surveying, and production of cadastral maps. The specific expenditures under this component will provide financing to:

- Equip and furnish the Mapping Center
- Contract satellite imagery and finance GPS grid enhancement work, orthophotomapping, revision of available survey data, and contract systematic cadastral surveys;
- Support the non-labor operating costs of the Surveying and Mapping works at a decreasing rate over the TRP implementation period.

2.11 For broad coverage and cost effectiveness, the TRP will develop a unique parcel numbering system, using existing maps and selected satellite imagery; the latter is to be executed in areas where changes in land tenure and dwelling occupancy have occurred quickly and base maps are therefore outdated. The surveying approach being adopted will utilize global positioning system receivers (GPS) and "total stations" for quicker surveying and more accurate creation of cadastral maps where base maps are outdated, non-existent, or available in scales which cannot show newly created small plots. All survey work will be performed via private contractors to promote competition, efficiency, and timely execution. As the registration process evolves, more precise surveys would be executed upon request (and on a fee basis), for example, if a bank required an updated survey of a specific property for a mortgage. The updated survey and pending mortgage would then become a part of that parcel's registration history.

2.12 Armenia has approximately 950 villages in which private farm land and dachas account for some 365,000 ha. On average there about 350 farm families per village, each of which typically owns a homestead plot and 3-4 separate plots with an average plot size of 0.3 ha each. Thus, in rural areas, the TRP will finance the costs of 80 rural village survey updates (for villages partially surveyed in the past by Giprozem) and complete surveys of 336 villages.. The estimated cost per village for a complete survey is about US\$ 9,000 and about US\$ 4,000 for a survey update. In rural areas, each survey contract will cover on average four villages and encompass roughly 4,800 land parcels and 1,360 homesteads.. Under the methodology for the rural surveys, only the village boundaries and private plots will be surveyed, while the common areas are to be surveyed at a later time.

2.13 Similarly, within the urban focus of this project, surveying will include 30 km² with high density in Yerevan and 150 km² with minimal detail or less dwellings per square km in Yerevan and marz capitals. The urban survey costs are estimated to be US\$ 17,000 and US\$ 9,000 per km² for high density and minimal detail (low density) areas, respectively. Each of the contracts for high density areas will cover the surveying of 4 km² and include an estimated 8,000 buildings, private dwellings, and apartments. The schedule proposed for implementation of the surveys to be contracted is as follows:

	Village Updates (# of Villages)	Village Compete (# of Villages)	Yerevan Full (Km ²)	Urban Minimal (Km ²)
PY1	20	80	10	30
PY2	20	80	7.5	36
PY3	20	80	7.5	36
PY4	<u>20</u>	<u>96</u>	<u>5</u>	<u>48</u>
Total	80	336	30	150

In sum, private survey contracts covering about 50% of the land and other pieces of real property in the country will be targeted for registration in the national system over the four years of the TRP. This will extend to 416 villages and the 10 largest cities and towns in Armenia, including Yerevan.

2.14 Shared Responsibilities Data from the surveys will be digitally inputted into a data storage and retrieval system that will be kept at the local IRC office. Periodic summary reports will be prepared locally and sent to the center via database exchange. Since there are various sources of data regarding property that could become a part of the registry, the Title Registration Law will need to first define the inputs (TA has been contracted by USAID to target this task as mentioned above). Thus, the data management system will therefore be flexible to adapt as the legal framework and survey precision are decided.

Component 3: Project Implementation Unit (US \$0.602 million)

2.15 The PIU was created by the SCA to coordinate and oversee implementation of the IRC Network and Surveying and Mapping components of the project. It will be headed by a full-time employed Project Manager. The specific expenditures under this component will provide financing to contract technical and administrative staff (see **Annex B** for details), to purchase office furnishings, computer equipment, and a vehicle, and to the PIU's operating expenditures.

C. Cost Estimates

2.16 The total cost of the project, is estimated at US \$10.57 million (**Table 2.1**). About US \$1.91 million or 18% of the total are foreign costs and US \$8.66 million are local expenditures. These estimates are based on prices prevailing in the international market during the period June-September 1997 and on local cost data from August 1998. Physical contingencies of 4% and price contingencies of 5.6% have been added to the base (US \$9.64 million). The price contingencies are in line with Bank guidelines but reflect less than the full amount of projected dollar inflation because prices of computer and survey technologies (a large share of project equipment) are expected to continue to decline. Physical contingencies are reasonable given the adjustment at negotiations in the SAR survey cost estimates from \$20 to \$25 per rural property owner. During the implementation of the Pilot Title Registration Project, rural survey costs have ranged

from US \$15-30 per rural property owner, who typically own a dwelling plot and three to four separate agricultural plots totaling on average about 1.2 ha. Physical and price contingencies amount to 9.6% of the project's base cost. The project cost is denominated in US dollar terms because of an underlying assumption that the exchange rate between the Armenian dram and the US dollar will depreciate at an average rate that compensates for dram inflation and leaves the real exchange rate unchanged. This assumption is based on the observed path of the dram rate over the period February 1996-September 1998, which has maintained a largely constant real value vis-à-vis the US dollar.

Table 2.1: Project Cost Summary (US \$ million)

	National	Foreign	Total	% Foreign Exchange	% of Cost
IRC Network	1.747	1.172	2.919	40.2%	30.2%
Surveying and Cadastral Mapping	5.618	0.503	6.121	8.2%	63.5%
Project Implementation Unit	0.531	0.071	0.602	11.8%	6.3%
Total Allocated	7.896	1.746	9.642	18.1%	100.0%
<u>Contingencies</u>	<u>0.760</u>	<u>0.168</u>	<u>0.928</u>	<u>18.1%</u>	<u>9.6%</u>
Total Project Cost	8.655	1.914	10.569	18.1%	109.6%

D. Financing

2.17 The IDA credit in the amount of US \$8.0 million would be lent to the Government of Armenia at standard IDA terms with 35 years' maturity and a 10-year grace period. The share of the IDA credit is equivalent to 76% of total project cost. The GOA would contribute US \$2.6 million equivalent, or about 24% of total project costs. Prior to negotiations, the GOA confirmed its intentions to provide appropriate contributions that are necessary to fulfill its share in the project financing of the local currency components and ensure adequate and timely project implementation. The financing plan for the project is presented in Table 2.2 below. Grant co-financing possibilities have been discussed with several donors that have indicated interest in providing for the technical assistance needs of the project. At present USAID is initiating a contract for TA aimed at legal support as noted above. In addition, the EU-Food Security Program provided (in late 1997) a grant of \$2.9 million for computers and surveying equipment for the Central IRC and the Mapping Center, computer equipment for 14 of the 25 local IRC offices, and extending the rural land surveying process.

Table 2.2: Financing Plan (US \$ million)

	National	Foreign	Total
IDA	6.086	1.914	8.000
Government of Armenia	2.569	0.000	2.569
Total Project Costs	8.655	1.914	10.569

E. Procurement

2.18 Procurement arrangements for goods and services to be financed under the project, and their estimated costs and proposed methods of procurement are presented below. All procurement of goods to be financed from the IDA credit proceeds would be procured in accordance with the World Bank Guidelines for Procurement (January 1995, revised in January and August 1996 and in September 1997), and using the Bank's Standards Bidding Documents. For procurement under NCB, the Borrower will use Regional, standardized bidding documents. Consultants would be selected in accordance with the Guidelines for Selection and Employment of Consultants by World Bank Borrowers (January 1997 and revised September 1997). A "General Procurement Notice" containing information about bidding opportunities for procurement on the basis of ICB will be published in the August 1998 issue of "Development Business" in accordance with Paras. 2.7 and 2.8 of the IBRD Guidelines.

2.19 Specific procurement arrangements and thresholds are provided in detail in Annexes E (Procurement and Disbursement Plans) and F (Thresholds for Procurement Methods). Equipment (estimated to cost US \$0.62 million) to be purchased under the project would consist of vehicles, computers, office furnishings and survey equipment. Equipment would be procured using ICB, IS, and NS procedures. Goods and services required that are less than or equal to US \$25,000 would be procured using National Shopping (NS) procedures, and contracts between US \$25,000 and US \$200,000 would use International Shopping (IS) procedures. Contracts for over US \$200,000 would be procured through International Competitive Bidding (ICB).

2.20 Field survey contracts under the survey and mapping component are estimated to cost a total of US\$ 5.6 million. Execution of these survey contracts would involve adjudication of land boundaries, which requires intimate knowledge of national conditions, customs and language. Therefore, they will be procured through NCB (using a slice and package approach). Taking into consideration the specifics of these survey contracts, it is expected that the average size of a slice would be about US\$ 30,000. To achieve greater economy and efficiency these slices would be grouped into packages of US\$ 150,000-200,000.

2.21 Technical services for satellite imagery and aerial photography (estimated to cost a total US\$ 0.17 million) will be procured through international shopping owing to a limited number of qualified firms. Maintenance services for survey equipment (estimated to cost a total of US\$ 0.05 million) will be procured through a direct contract with the local affiliate of Leica, since all of the SCA's survey equipment (21 GPS receivers and total stations) provided through the EU-FSP grant have been supplied by Leica, and Leica is the only producer of survey equipment to have a local affiliate in Armenia. Although the TRP is financing the purchase of three additional total stations (under IS procedures), the majority of the SCA survey equipment to be used under the TRP will have been supplied by Leica.

Table 2.3: Summary of Proposed Procurement Arrangements (US \$ millions)

Project	Procurement Methods			NBF	Total Cost
	ICB	NCB	Other		
1	Goods	Equipment and Machinery	0.485 (0.461)	0.130 (0.124)	0.615 (0.584)
2	Technical Services		6.155 (5.539)	0.227 (0.204)	6.382 (5.744)
3	Consultancies				
3.1	Technical Assistance			0.329 (0.329)	0.329 (0.329)
3.2	Training			0.102 (0.102)	0.102 (0.102)
3.3	Project Implementation Consultants			0.435 (0.435)	0.435 (0.435)
4	Miscellaneous				
4.1	Operating Costs for IRC Network and Mapping Center			1.361 (0.731)	1.361 (0.731)
4.2	Operating Costs for PIU			0.075 (0.075)	0.075 (0.075)
4.3	IRC and Mapping Center Salaries			1.270	
Total			0.485 (0.461)	6.155 (5.539)	2.659 (2.000)
GOA Share			0.024	0.616	0.659
				1.270	2.569

Notes:

1/ Decimals may not add up exactly due to rounding

2/"Other" procurement methods under the TRP loan include: international shopping for survey equipment (\$43,800), office furnishings and equipment (\$71,800), and satellite imagery (\$164,400); national shopping for vehicles (\$14,800) and for vehicle maintenance services (\$15,900); direct contracting for survey equipment maintenance services (\$47,100); QCBS and I (quality and cost based selection and individual) methods for consultant services (\$0.866 million); and operating costs for the IRC Network and the Mapping Center (\$1,361,500) and for the PIU (\$74,500), which are defined to include expenditures on office materials and minor maintenance, supplies, utilities, communications, vehicle operation and minor maintenance, office rent (PIU only), and auditing costs (PIU only), but excluding salaries.

2.22 Consultant services. Technical assistance and training requirements under the project would amount to US \$0.43 million. Included in this total are: 10 staff-months for the basic registration support and mapping technical assistance. Project implementation

consultants in the Project Implementation Unit, and the Mapping and Public Information Centers for the title registration would be contracted on an individual basis by the PIU to assist with the coordination of the TRP's components as described in the terms of reference in Annex A.

2.23 Review by the Bank. All ICB contracts, the first two NS and NCB contracts for each of the procurement categories (Equipment and Technical Services), the first IS contract regardless of its value, and all contracts for consulting services valued in excess of US \$100,000 for firms and US \$50,000 for individual consultants, would be subject to prior review and approval by IDA. All other contracts would be subject to ex-post review by IDA. Terms of reference for all consultant contracts would be reviewed in advance by IDA. Procurement information would be included in the quarterly project progress reports prepared by the PIU.

2.24 Project launch. During project pre-appraisal and appraisal missions in 1997 and a follow-up to the appraisal in April 1998, the Project Preparation Unit and the project beneficiaries have been provided with an overview of the Bank's procurements practices. The efficiency and capability of the Borrower to carry out the procurement in accordance with the Bank's procedures would be strengthened through ongoing training, mainly by the procurement teams in the ARSP and Irrigation Rehabilitation Project (IRP) PIUs, which have three years of experience with Bank procurement procedures, and through use of the Standard Bidding Documents. *Agreement was reached at Negotiations that all procurement activities under the project would follow the procedures outlined in Paras. 2.18 to 2.23 (Para. 5.3(c)).*

F. Disbursement

2.25 The proposed IDA Credit of US \$8.0 million equivalent would be disbursed over four calendar years, until the project's close on December 31, 2002. Based on the experience of the IRP to date, a disbursement profile for the TRP has been prepared. Taking into account this experience and knowledge gained during project preparation, it is reasonable to assume that the Credit's proceeds could be fully disbursed over the four years. A mid-term evaluation to examine all aspects of project implementation would be undertaken by IDA and the Borrower by December 31, 2000, or when disbursements reach 50% of the total credit amount, whichever is earlier. Commitments for major contracts would be approved through June 30, 2002. Estimated annual disbursements under the IDA Credit (by fiscal year, July 1-June 30) are shown in Table 2.4.

Table 2.4: IDA Disbursements Projections (US \$ millions)

	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Annual	1.093	1.999	1.699	1.650	0.857
Cumulative	1.093	3.092	4.791	6.441	7.298
Cumulative Contingencies	0.105	0.298	0.461	0.620	0.702
Grand Total – Cumulative	1.199	3.389	5.251	7.061	8,000.0

2.26 The Proceeds of the credit would be disbursed as shown in Table 2.5 below:

2.27 Direct payment procedures from IDA to suppliers would be used. Disbursements against the categories described in Table 2.5 would be made upon receipt by IDA of fully documented applications, except for contracts valued at less than US \$200,000 for goods and technical services, US \$100,000 for consulting firms and US \$50,000 for individual consultants, which would be made against certified statements of expenditures (SOE). Supporting documentation for SOEs would be retained by the Borrower and made available to IDA during supervision. The minimum size of application for direct withdrawals and issuance of commitments from the IDA Credit account would be 20% of the amount of the Authorized Allocation to the Special Account. All withdrawals for training would be done on the basis of an SOE, with all Term of Reference (TORs) for training subject to prior review.

Table 2.5: Disbursement Categories (US \$ million)

Disbursement Category	Allocation	Disbursement Basis
(1) Goods – Equipment and Machinery	0.533	100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 90% of expenditures for other items procured locally
(2) Technical Services	5.314	100% of foreign expenditures, 90% of local expenditures
(3) Consultancies	0.790	100%
(4) Operating Costs for IRC Network and Mapping Center	0.593	on a declining basis, 75% until January 1, 2000; 60% until January 1, 2001; 40% until January 1, 2002, and 20% thereafter
(5) PIU – Operating Costs	0.068	100%
(6) Unallocated	0.702	
(7) TOTAL	8.000	

2.28 To facilitate implementation, the Borrower would establish a Special Account in a major foreign commercial bank on terms and conditions satisfactory to IDA. During the early stage of the Project, the initial allocation to the Special Account would be limited to US \$500,000. However, when the aggregate disbursements under the Credit have reached the level of US \$1,500,000, the initial allocation may be increased up to the Authorized Allocation of US \$1,000,000. Documentation requirements for replenishment of the Special Account would include reconciled bank statements and other appropriate supporting documents.

2.29 At Negotiations, agreement was reached that disbursement arrangements will follow the procedures described in Paras. 2.25 to 2.27 and for establishing and operating the Special Account as described above (Para. 2.28) (Paras. 5.3 (d) and (e)).

3. PROJECT IMPLEMENTATION

A. Organization and Management

3.1 The project would be carried out under the overall coordination and supervision of the State Cadastral Administration (SCA), through the Project Management Board (PMB). The Project Preparation Unit was transformed into the Project Implementation Unit (PIU) on July 17, 1998. The PIU Manager has been selected in consultation with the Bank and will be the principal linkage between the Bank and the GOA for the TRP. The PIU is responsible for the day-to-day implementation of the TRP.

3.2 Project Implementation Unit. The PIU was created by the SCA to coordinate and oversee implementation of the IRC Network and Surveying and Mapping components of the project. It will be headed by the full-time employed Project Manager, and includes technical and administrative staff (see Annex B for details). The PIU is responsible for:

- (a) providing information to, and seeking guidance about the project implementation issues from the MOA, the Ministry of Urban Development (MUD), the Ministry of Finance and Economy, SCA, and Project Management Board (PMB);
- (b) coordinating and managing the recruitment of foreign and national consultants required by the registration and mapping components;
- (c) ensuring that all procurement contracts are in conformity with IDA's guidelines;
- (d) preparing and submitting for the IDA's review the annual work plans and consolidated semi-annual progress reports;
- (e) maintaining an account of project activities and expenditures; and
- (f) coordinating the monitoring and evaluation of project activities.

3.3 Aside from being responsible for overall coordination of project activities, the PIU would also assume direct responsibility for the project-related work of the IRC network (para. 3.5) and the Mapping Center (para. 3.6). All staff in the PIU would be hired on one year contracts renewable annually for the duration of the project. The PIU would be disbanded at the end of the project.

3.4 Project Management Board. As mentioned above, a unified registration system of real property was established by GOA resolution in July, 1997. The State Cadastral Administration (under the Ministry of Justice until June 15, 1998) was given responsibility for coordinating the surveying, mapping, titling, and data management for all land and other real estate in Armenia. Data management extends to recording property assessments, and information on property transaction, including leases, mortgages, and other encumbrances. The title registration system should be independent and must protect the interests of individuals, various organizations and ministries. However, to assure that the TRP funds allocated to the SCA are used to execute the process of title registration in rural areas as equally as in Armenia's cities and towns, this project will be supervised by the PMB (on which representatives of the Ministry of Finance and Economy and the SCA will be present). The PMB will monitor the allocation by the PIU of adequate funds to rural areas for maintenance of property registration offices and surveying and mapping activities as agreed in the SCA's business plan (final version August 1998) which has been discussed with the TRP PIU and the Bank.

3.5 IRC Network. As a basis for efficient execution of the Title Registration objectives, the PIU will work directly with the SCA to organize the procurement of equipment and necessary devices, establishment and furnishing of offices, training of the personnel, and organization of all other tenders. Under the SCA's umbrella, a network of Information & Registration Centers (IRCs) and a Mapping Center have been established. The central IRC will direct an information campaign aimed at the local level, will hold meetings with the property owners to explain to them the significance and importance of title registration activities and the type of information that will be maintained in the registry. The central IRC will also maintain direct links to local IRCs in the various marzes in order to manage the information flow from these local offices. The local IRCs will supervise contractor surveyor groups, providing them with agreed equipment, monitoring the work done, processing information received, and adjudicating land disputes.

3.6 Mapping Center. The Mapping Center will lead the process of finalizing the technical standards for surveying and agreed cadastral mapping procedures. It will also supervise the definition of technical specifications and logistics for the surveying contracts in direct cooperation with the IRC network. Various former state-run survey enterprises exist, and many of them are being trained and certified in the use of high efficiency land surveying equipment. Private land surveying enterprises are now also being set up, which are also going through the training and certification program operated by the SCA. Since one of the goals of this project is to foster the development of private land surveying companies by bidding out all survey contracts, the Mapping Center will continue to organize training courses, assisted by international experts, to instruct potential bidders on the use of pre-determined means of surveying, including the global positioning systems (GPS) and total stations technologies. Those enterprises which have already completed or will successfully complete the training will be pre-qualified to participate in the tenders for survey contracts.

B. Accounts and Auditing

3.7 Separate project accounts would be maintained by the PIU for the disbursements made under each of the TRP's components. Semi-annual statements of all these accounts would be submitted to the Director of the PIU, who would use them as a source of information for management report on the status of project implementation.

3.8 Independent auditors acceptable to IDA would conduct an annual audit of the project's special accounts. *The selection of an auditing firm acceptable to IDA will be a dated covenant in the Development Credit Agreement.* Certified copies of these audits would be submitted to IDA within six months of the end of the Government's fiscal year. The cost of these audits during the first five years would be borne by the project. The PIU would arrange with the IRC network and Mapping Center to have their accounts and financial statements audited in accordance with international auditing standards by independent auditors. The cost of these audits would be borne by the individual entity. The scope and content of the audits would be agreed in advance with IDA. Certified copies of the auditors' report would be retained by PIU for subsequent review by IDA missions and as a source of information for monitoring sub-borrowers' financial performance. *Assurance on the above was received at Negotiations (para. 5.3 (g)).*

C. Reporting and Evaluation

3.9 The PIU staff would be responsible for monitoring and evaluating the impact of the project. The Chief Cadastral Specialist of the SCA Mapping Center and of the Central IRC will monitor the implementation of the project's two components .

3.10 Reporting. The PIU staff would prepare semi-annual analyses of the project's financial management and implementation progress towards meeting the project's development objectives. These analyses would be consolidated by the PIU Director into a Financial Management and Implementation Report to be submitted to IDA within 60 days of the end of the period under review. The financial management sections of these reports would include detailed examinations of the project's procurement and disbursement status, including an analysis of contracts tendered, awarded, and concluded, actual payments made on contracts compared to previously forecast payments broken down by disbursement category and project component, etc. The final set of financial management reporting tables is included in the Project Implementation Plan for the TRP, *as the final format of the Financial Management and Implementation Report was agreed on at negotiations.* The sections of this report dealing with implementation progress would compile the set of monitoring indicators for the development objectives (see Table 4.1), present a brief description of the accomplishments of each of the project's components, and highlight problems encountered during implementation.

3.11 The proposed plan for Project supervision envisages an average of two supervision missions per year. The skill mix of supervision staff would ensure the presence of adequate IDA experts in cadastral mapping, information systems, and financial management, as well as knowledge of Bank/IDA procurement and disbursement

rules, as necessary. A mid-term review is planned for November, 2000 (earlier if considered necessary), at which time progress towards meeting Project objectives would be assessed.

3.12 Implementation Completion Report. Promptly after completion of the project, the PIU staff would prepare a report on the execution of each component, its costs, and the benefits derived. The PIU Director would consolidate these reports and add an evaluation of the performance of the institutions which took part in project implementation. The consolidated report would be submitted to IDA not later than six months after the closing date. *Agreement of the above, as reflected in Paras. 3.9-3.11, was reached at Negotiations (para. 5.3(f)).*

3.13 IDA's monitoring would focus on:

- (a) the performance of the IRCs, including the training programs, business plans and data collection;
- (b) the impact of loans and registrations on production and productivity;
- (c) the rate and cost of parcels' survey and property title issuance; and,
- (d) the pace of compilation of data on property transactions and collections of registration fees.

4. BENEFITS, RISKS, AND ENVIRONMENTAL IMPACT

A. Benefits

4.1 The primary beneficiaries of this project are the small farms, small to medium-sized enterprises, and urban home owners of Armenia. Title registration would be a particularly important social safety aspect for land owners, who could generate income by leasing their land, with the assurance that they have secure title. Over the long run, title registration is expected to increase the efficiency of the land market by reducing the cost of land transactions. This in turn would improve the turnover and consolidation of land holdings and facilitate the use of real property as collateral and greater availability of investment finance. Both of these steps would improve the productivity of agriculture in Armenia. These objectives will be supported in rural areas by the ARSP components which focus on as credit to farmers and agricultural institutional building, which provide a large range of financial, development, extension and information support to private farmers.

4.2 Although the project is expected to generate substantial benefits, it is not possible to measure these benefits using conventional economic analysis. However, with the removal of financial distortions and subsidies agreed recently under the Structural Adjustment Credits I and II and with sub-loans to enterprises widely required to have a high positive financial rate of return (on the order of 20% and higher), the project is expected to yield a rate of return higher than the opportunity cost of capital (15%). The project would also have a positive impact on Government revenue due to the increase in the tax base brought about by the title registration program and the improved incomes of both enterprises and farmers. An enumeration of the qualitative benefits expected from the project's components is presented below.

4.3 Real Property Registration would accomplish the following:

- (a) Reduction of land transactions costs by introducing a title registration system that will facilitate land leasing, exchange, and sales transactions in agriculture at fair market prices;
- (b) Promote investment in land by ensuring land and real property ownership rights and enhancing the development of land sale and rental markets;
- (c) Promotion of collateral-based lending throughout the economy by

adequately registering transaction information regarding specific pieces of real estate and making it available to the general public; and,

- (d) Rationalization of the tax system on the basis of the property ownership data that have been collected in the title registration system and with property assessments done with the knowledge of this data.

4.4 The fiscal impact. The main direct fiscal impact of the project will be a gradual increase in property tax revenue from enhanced assessment capabilities and future transaction fees. Initial registration fees will be minimal to encourage property development based on a systematic, mass registration. It is difficult to calculate the fiscal impact since much of agriculture is already paying land taxes (to date the payment of these land taxes paid is high; over 80% of rural land owners pay their taxes, with an average assessment bill of about \$25 per year). The main increase to property tax revenue will be in urban areas, where as low as 20% of property owners are registered property tax payers.

4.5 Title Registration fees. The State Cadastral Administration has a list of services to be provided and their fees. This list has passed the first reading in the government and will be the basis for revenue generation. The proposed fees are calculated based on Armenia's minimum monthly wage, which is currently about US \$2. For registration of a transaction and issue of information about titles, the proposed fee is about US \$60. The proposed fee is the same for registration of a mortgage and inquiry about mortgages. For other transactions such as transfer or inheritance, the proposed registration fee is about US \$30. Registration of a lease will cost US \$10. These fees will be revised as transactions activity is monitored and evaluated. In 1996, Armenia's Inventory Bureaus registered 13,460 sales of private homes and apartments and about 16,000 transactions of other types (transfer, inheritance). Assuming transaction rates remain constant during the five years of the property registration project, then with the proposed fees the SCA would achieve revenues of about US \$9 million over the four years. At least 20% of this revenue, or US \$1.8 million will go to the government in the form of VAT.

B. Risks

4.6 The project is complex and will inevitably be faced with various risks. The lack of experience of the SCA in handling similar projects and lack of exposure to international procedures could militate against full attainment of project activities. Broadly, the main risks which the project could face are the following:

- (a) resurgence of macro-economic instability that could deter the financial market (farmers and enterprises) from borrowing and commercial banks from lending;
- (b) delay and subsequent increased costs in the registration process due to: i) need for greater use of labor and time-intensive surveying (e.g. Thai experience and others), ii) lack of coherent rules as to how data should be collected, iii) lack of

trained surveyors, and iv) demand for excessively precise boundaries for the initial registration process;

(c) lack of sufficient focus and funding by the Government for title registration in the newly formed cadaster system; and

(d) lack of market demand for SCA's services stemming from an excessive fee structure; and,

(e) participating financial institution's failure to aggressively promote the complementary line of credit (under the ARSP) because of inexperience with investment lending and mortgage concepts.

4.7 The implementation risks associated with (b), (c) and (d) above would be mitigated through a clear legal framework, precise definitions and procedures in the operations manual, and a transitional provision whereby initial registration is systematic with low fees and freely accessible information. The ARSP is addressing the issues of the implementation risk associated with (e). Given the high Government commitment to liberalize the economy, macro-economic instability is unlikely to be a major risk to the project. In any case, there is a little that the project can do alone on this matter, but many donors, including the World Bank and the International Monetary fund, are encouraging and supporting GOA to continue its economic reforms.

C. Economic Analysis

4.8 In the rural sector, the TRP will build on the developments expected from the ARSP as well as stabilization of water supply and improved efficiency in the irrigation sector as targeted by the Irrigation Rehabilitation Project. The TRP will focus on property registration bottlenecks, which were identified in the Agricultural Sector Review (1994) and subsequent ESW as the limits to rural sector growth. The TRP clearly targets one of the key goals of the CAS (adopted for Armenia in August 1997) and NEAP, which is improving the environment for private sector development. Since the rural sector in Armenia currently accounts for 40-50% of GDP and serves as a safety net for a large share of the former urban population, (which has lost its industrial employment and been forced back into rural areas to engage in subsistence agriculture) addressing private property development in the agricultural sector is key to general economic growth as well as to the strengthening of social protection during the transition to a vibrant market economy.

4.9 The TRP also builds on a strong foundation of agricultural and urban development policy reforms which consist of one of the most widespread land reforms in the ECA region, virtually complete liberalization of domestic and foreign trade, well advanced privatization of small and large enterprises, demonopolization of agricultural input supply and marketing, and demonstrated commitment to restructuring of public sector institutions. The TRP addresses not only the supply side of land and real estate markets by giving property owners the means to secure their rights. In addition, by

facilitating pledging of collateral, it targets the growth of demand for land by fueling the development of financial infrastructure. Lastly, through improved availability of sustainable agricultural practices and emphasis on tradable property rights, the TRP aims to make a contribution to improving environmental management.

4.10 The economic analysis of the TRP focuses on the issues of whether market agents need and will make use of the information in the registration system and on the degree to which transactions which facilitate investment will be stimulated by the availability of registration information. In the area of rural credit, financial institutions are rarely taking land as collateral in rural areas. Virtually all of the lending (as discussed above) is on the basis on the pledging of moveable collateral. However, both ACBA and other institutions express the willingness and indeed the need to accept land and other real estate as collateral as the size of loans to farmers expands, since the amount of moveable property which each farm family has to pledge is limited.

4.11 These agents have expressed the confused nature of documentation of property rights: stamps in passports by local village councils and land ownership deeds are not acceptable as documentation for acceptance of collateral since they cannot record any history of obligations which have been entered into with the real estate. Thus, it appears that financial institutions will demand a more transparent and periodically updated base of property information if immovable property is to be used for collateralizing larger amounts of finance for working capital, equipment investments, land acquisition and other transactions that will increase the efficiency of land use and its productivity.

4.12 Outside of the rural sector, the demand for registration information will be largely from financial institutions, but here it would facilitate the consideration of productive investments in family businesses and transactions in the real estate market itself (home acquisition and purchase of urban and peri-urban land parcels). Since houses, apartments, and other dwelling are the urban population's main asset, it is also increase the security of ownership of a large share of the country's wealth. By improving the formation of the real estate market, title registration will also lower transactions for buyers and sellers. (Currently the process in Yerevan amounts to buyers and sellers meeting in a particular square carrying advertisements - verification of the their claims is often problematic.) Lastly, the Government expects to use the registration system to lay the foundation for recording property assessment information, on the basis of which real estate taxes will be charged. Though increased tax collection is usually considered a merely a transfer, some benefit to the economy can take place if increased tax revenue reduce the need for the Government to borrow from the population through issuing state obligations (treasury bills) at very high real interest rates (currently about 30% in dollar terms), thereby lowering upward pressure on interest rates. Currently, the risk premium charged by the market to the government on these obligations is higher than to many commercial borrowers since lending to the latter is collateralized, while lending to the government still raises the specter of default (as all Armenians recall the loss of their savings deposits less than ten years ago).

Table 4.1 - Project Objectives, Outputs, and Performance Indicators

Narrative Summary	Key Performance Indicators	Monitoring and Supervision
<p>CAS Objective</p> <p>(i) private sector enterprise development;</p> <p>(ii) private sector-based agriculture and agribusiness development;</p> <p>(iii) public institutions strengthening to establish enabling environment for private land tenure.</p>	<p>(i) growth of rural non-farm income;</p> <p>(ii) growth of agricultural production and income based on a non-distorted pricing system;</p> <p>(iii) decisions by GOA to implement a unified titling system based on Title Registration Law;</p>	<p>(i & ii) Survey of current status of Armenian agriculture and updates based on future periodic surveys;</p> <p>(iii) reports from the TRP PIU as well as TRP, ARSP and SAC II supervision missions.</p>
<p>Project Objectives</p> <p>Promotion of private sector development by increasing:</p> <p>(a) the productivity and value of land and other immovable assets through secured property rights; and,</p> <p>(b) the efficiency of rural and urban property markets.</p>	<p>(a) establishment of title registration system with defined procedures, network of trained personnel, and transparent data delivery and storage system;</p> <p>(b) measurements of the rate of transactions in formal property markets;</p>	<p>(a) PIU progress reports and IDA supervision mission reports on the number of IRCs established and property titles issued;</p> <p>(b) USAID reports on technical assistance executed by ICMA consultants to the SCA.</p>
<p>Project Outputs</p> <p>(i) generalization of the practice of pledging immovable collateral for working capital and investment loans;</p> <p>(ii) reduction of transaction costs in title transfer and mortgage lending.</p>	<p>(i) measurements of use of immovable collateral in ACBA and other commercial bank lending, and comparison to total lending made by same institutions;</p> <p>(ii) comparison of lending margins for loans backed by movable versus immovable collateral, and tracking of this differential over time.</p>	<p>(i) actual versus target performance based on ARSP reports on ACBA loans which have used collateral registered SCA offices;</p> <p>(ii) reports from Central Bank, and future study of development of Armenian banking system.</p>

4.13 Performance Indicators. The TRP intends to promote incentive structuring based on performance of both output and outcome. The key characteristics include: 1) establishing clear accountability between government and the SCA as well as between the SCA and the property owners; 2) delegating authority from the Central IRC to the local IRCs appropriately; 3) establishing incentives that reward and/or punish local IRCs on the basis of results compared to planned activity levels; and, 5) promoting transparency via reporting and monitoring of performance. These characteristics are the basis on which the TRP's performance indicators were constructed. Indicators have also been determined in tandem with each of the project component's institutions in order to reach a common understanding between the beneficiaries what is expected of each. The performance indicators target the most important project outcomes but in no way represent an exhaustive list of project impacts. As project implementation proceeds, the set of project performance indicators will be refined, bearing in mind the realistic ability to gather information on each indicator in a cost-effective manner. The set of project outcomes and performance indicators for each is presented in **Table 4.1** above

D. Sustainability

4.14 In the rural sector, the project's basic rationale is that the agricultural sector should, over time, become self-sustaining, thereby, eliminating government subsidies which are accorded through subsidized rates for irrigation water. However, to successfully bolster the rural finance component of the current ARSP, the TRP needs to build an efficient land market. Title registration is at the heart of reducing current constraints to development (i.e. high transaction costs such as lack of valid information, multiple authorities, lack of legal structure). Similarly, the banking sector must develop a disciplined, market-based financial intermediation strategy and continue to implement sound lending procedures (such as collateralization of loans) adapted to Armenia's legal, social, and economic environment. There must also be initiatives to build the capabilities of financial institutions serving small and medium-sized businesses to manage and protect the bank's funds invested in these communities.

4.15 The crucial issue is whether farmers and home owners value these services enough to pay, thus making this system self financing; titles without an information system to sustain their validity will create an informal and highly speculative market. Moreover, statutory law must define the fee structure and the system's administrative procedures and methodology. Development of a modern yet expensive system of title registration will undoubtedly delay the attainment of the TRP's objectives. It is estimated that reaching financial sustainability will require roughly seven years in urban areas and fifteen years in rural areas. In the medium-term therefore, the availability of local budget will be crucial in covering the salaries of government workers in the agencies involved in the TRP. This is assessed to be around US \$200,000 annually. Grant financed technical assistance to support the SCA and TRP implementation is being provided by the EU-FSP and USAID.

E. Environmental Impact

4.16 The TRP has been classified as category "C" in the Bank's environmental rating system because security of land title which the TRP supports will help to promote sustainable land management and improved agricultural practices. Since land registration is expected to improve the creditworthiness of farmers and the availability of credit to them, the TRP would promote farmers' ability to borrow and invest in conservation and other sustainable agricultural practices. Lastly, the TRP does not pose any environmental hazards. Therefore, no separate environmental analysis has been deemed necessary. Moreover, the TRP has been designed to support the procedures under the ARSP that require that farms obtaining sub-loans (through the Credit to Farmers component using collateral) comply with an environmental checklist based on existing regulations and environmental assessment procedures of the Ministry for Environmental Protection of Armenia.

F. Poverty

4.17 The project is not explicitly focused on poverty alleviation. Its focus is the development of the formal property market through mass systematic registration. Therefore, it has strong linkages to a large number of small private farmers and small private businesses. It would help increase the access of poor farmers to formal credit and also improve sustainability of agricultural practices in the medium-term. For these reasons the project will have an indirect but positive impact on poverty reduction.

5. AGREEMENTS REACHED AND RECOMMENDATION

A. Conditions of Appraisal

5.1 The following condition of appraisal was met by October 15, 1997:

- (a) The GOA should issue an official resolution on the organizational location of the government agency responsible for establishing and operating a unified registration system for land and other real estate outlining fee structure, personnel,

B. Conditions for Negotiations

5.2 The following conditions of negotiations were met by July 17, 1998:

- (a) The GOA will create the Project Management Board for the TRP to include representatives of the Ministry of Agriculture and the State Cadastral Administration (SCA).
- (b) The SCA will finalize a business plan acceptable to IDA for the sustainable, unified registration system for land and other real estate.
- (c) The State Cadastral Administration will submit to the Ministry of Finance and Economy of a request for budget for the yearly incremental operational costs and full labor cost of the TRP's encompassing network of Information and Registration Centers, Mapping Center, and the social fund payments for the PIU. This budget request should be at least the dram equivalent of US 300,000.

C. Agreements Reached During Negotiations

5.3 During negotiations, assurances were obtained that:

- (a) the submission of a Title Registration Law by the Armenian Parliament will be a dated covenant for the TRP (December 31, 1998); the Law will address to IDA's satisfaction the form of the Title Report from

the local IRCs, the nature of state guarantees for information in the IRCs' Title Report, the level of precision required in field surveys, and the de-classification of existing maps.

(b) the production of Operational Manuals, satisfactory to IDA, which address the methodology and procedures for (i) field surveying, (ii) production of cadastral maps, and (iii) production and issuance of registration information;

(c) all procurement activities under the project would follow the procedures outlined in **paras. 2.18 to 2.23**;

(d) disbursement arrangements would follow the procedures described in **paras. 2.25 to 2.27**;

(e) arrangements for establishing and operating the Special Account would follow the procedures described in **para. 2.28**;

(f) terms and conditions for the preparation and submission of the ICR would follow the arrangements outlined in **para. 3.12**;

(g) the scope and content of the audits of project's special account described in **para. 3.8**;

(h) the final format of the Financial Management and Implementation Report, referenced in **para. 3.10**;

(i) the selection of an auditor acceptable to IDA, to conduct annual audits of the project's Special Account and of the semi-annual financial management and implementation progress reports, will be a dated covenant in the Development Credit Agreement (**para. 3.8**);

(j) the GOA will maintain a PIU during execution of the Project under a suitably qualified Project Director, and with such facilities, staff and resources and under such terms of reference as shall be satisfactory to the Association, and a Project Management Board responsible for overall management of the project and supervision of the activities of the PIU (**para. 3.4**); and,

(k) the PIU will prepare, under terms of reference satisfactory to the Association, a Mid-Term Review Report, on or about December 31, 2000, which integrates the results of prior monitoring and evaluation activities reviewing the progress achieved in the carrying out of the Project, and which sets out the measures recommended to ensure the efficient carrying out of the Project and the achievement of the Project's objectives during the period following the Mid-Term Review (**para. 3.11**).

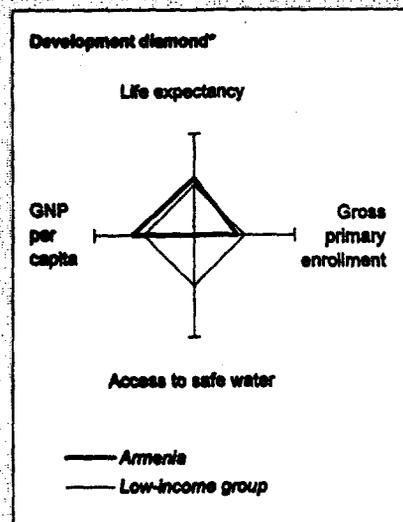
D. Recommendation

5.5 With the above assurances and conditions, the project would be suitable for an IDA Credit of US \$8.00 million equivalent for 35 years including 10 years of grace.

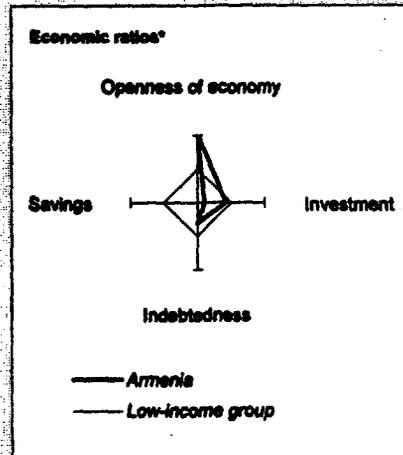
Armenia at a glance

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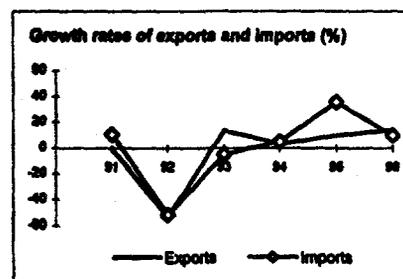
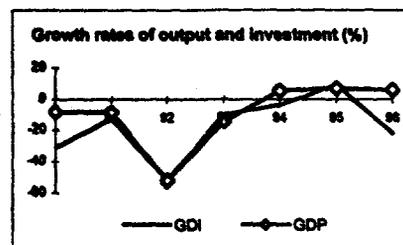
POVERTY and SOCIAL	Europe & Central Asia		
	Armenia	Asia	Low-income
Population mid-1996 (millions)	3.8	479	3,229
GNP per capita 1996 (US\$)	620	2,180	500
GNP 1996 (billions US\$)	2.4	1,043	1,601
Average annual growth, 1990-96			
Population (%)	1.1	0.3	1.7
Labor force (%)	1.1	0.5	1.7
Most recent estimate (latest year available since 1989)			
Poverty: headcount index (% of population)	..	..	..
Urban population (% of total population)	69	65	29
Life expectancy at birth (years)	71	68	63
Infant mortality (per 1,000 live births)	18	26	68
Child malnutrition (% of children under 5)	..	..	..
Access to safe water (% of population)	..	..	53
Illiteracy (% of population age 15+)	1	..	34
Gross primary enrollment (% of school-age population)	90	97	105
Male	87	97	112
Female	93	97	98



KEY ECONOMIC RATIOS and LONG-TERM TRENDS	1976	1988	1996	1996	
GDP (billions US\$)	..	2.6	1.4	1.8	
Gross domestic investment/GDP	..	35.0	10.2	7.1	
Exports of goods and services/GDP	23.7	22.9	
Gross domestic savings/GDP	..	40.0	-28.0	-25.9	
Gross national savings/GDP	-9.8	-8.3	
Current account balance/GDP (excl grants)	-16.9	-15.4	
Interest payments/GDP	1.0	0.9	
Total debt/GDP	30.2	38.7	
Total debt service/exports	20.4	16.6	
Present value of debt/GDP	
Present value of debt/exports	94.5	..	
(average annual growth)					
GDP	6.3	-12.9	6.9	5.6	6.1
GNP per capita	4.5	-14.1	3.9	4.8	4.3
Exports of goods and services	..	-3.8	10.0	14.2	9.8



STRUCTURE of the ECONOMY	1976	1988	1996	1996
(% of GDP)				
Agriculture	..	20.1	44.3	41.1
Industry	..	56.0	35.3	34.2
Manufacturing	..	..	24.9	24.2
Services	..	23.8	20.4	24.7
Private consumption	..	43.1	115.0	113.9
General government consumption	..	16.9	13.0	12.0
Imports of goods and services	..	..	61.9	55.9
(average annual growth)				
Agriculture	0.8	-6.0	5.2	3.0
Industry	5.8	-18.7	1.6	2.2
Manufacturing	5.8	-17.4	2.5	2.5
Services	8.4	-13.5	19.4	9.1
Private consumption	4.6	-11.5	21.9	9.2
General government consumption	1.2	-1.2	40.6	1.5
Gross domestic investment	8.8	-13.6	9.4	-22.4
Imports of goods and services	..	-4.7	35.8	9.9
Gross national product	6.3	-13.0	4.2	5.1

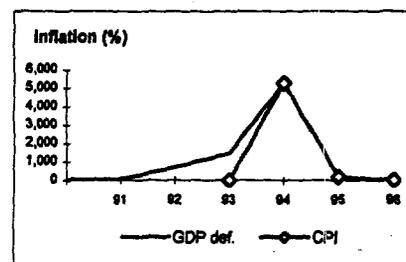


Note: 1996 data are preliminary estimates. Figures in *italics* are for years other than those specified.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

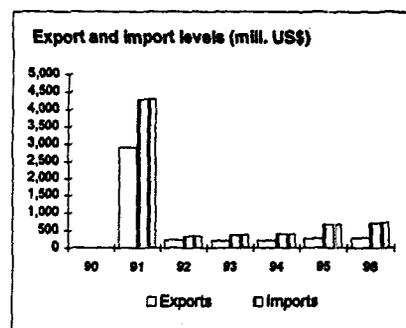
PRICES and GOVERNMENT FINANCE

	1975	1985	1995	1996
Domestic prices				
<i>(% change)</i>				
Consumer prices	176.7	18.6
Implicit GDP deflator	0.4	-4.0	161.2	19.5
Government finance				
<i>(% of GDP)</i>				
Current revenue	16.2	16.2
Current budget balance	-6.3	-3.5
Overall surplus/deficit	-13.5	-10.1



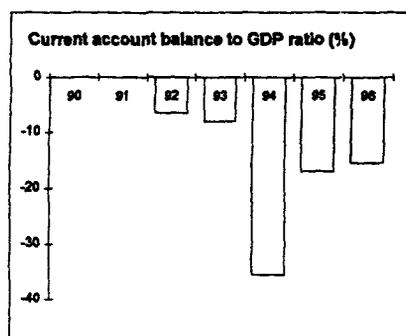
TRADE

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Total exports (fob)	271	290
Gold&jewelry	97	109
Machinery&mechanical	48	48
Textile&textile products	44	44
Total imports (cif)	673	726
Food	229	247
Fuel and energy	179	194
Capital goods	28	25
Export price index (1987=100)	108	113
Import price index (1987=100)	113	115
Terms of trade (1987=100)	95	98



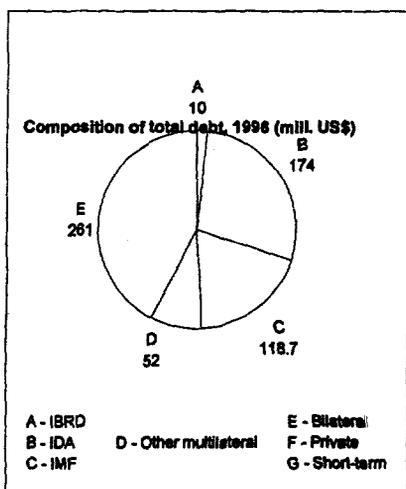
BALANCE of PAYMENTS

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Exports of goods and services	304	365
Imports of goods and services	796	890
Resource balance	-492	-525
Net income	-9	27
Net current transfers	264	253
Current account balance, before official capital transfers	-237	-245
Financing items (net)	266	255
Changes in net reserves	-29	-11
Memo:				
Reserves including gold (mill. US\$)	107	167
Conversion rate (local/US\$)	..	1.6E-02	359.7	414.0



EXTERNAL DEBT and RESOURCE FLOWS

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Total debt outstanding and disbursed	423	616
IBRD	5	10
IDA	91	174
Total debt service	63	68
IBRD	0	0
IDA	0	1
Composition of net resource flows				
Official grants	199	179
Official creditors	72	174
Private creditors	0	0
Foreign direct investment	19	22
Portfolio equity	0	0
World Bank program				
Commitments	88	64
Disbursements	92	92
Principal repayments	0	0
Net flows	92	92
Interest payments	0	1
Net transfers	92	91



Annex A

Description of Project Implementation Unit

1. The PIU is being formed on the basis of the existing Project Preparation Unit and will report to the Project Management Board (PMB), chaired by the Director of the State Cadastral Administration. The head of the PIU would be the Project Director and principal link between the Bank and the Government.

2. The functions of the Project Implementation Unit (PIU) are to:

(a) provide information to, and seek guidance from the PIC on all issues concerning progress in project implementation;

(b) coordinate the recruitment of foreign and local consultants for implementation of the Registration system including the Information & Registration Centers network (IRCs) and survey contracts;

(c) prepare semi-annual progress reports on the project to be submitted to IDA and the Government;

(d) ensure that the financial accounts of each of the components are audited annually as stipulated in the Credit Agreement; and,

(e) maintain a consolidated account of all the project's components to be available to IDA's supervision missions.

3. The PIU will be composed as follows:

(a) a Project Manager;

(b) an Information & Registration specialist and coordinator - Co-Deputy Project Manager;

(c) a Mapping specialist and coordinator - Co-Deputy Project Manager;

(d) six Registration and Mapping Junior Specialists;

(e) a Procurement and Contract Specialist;

(f) an Office Manager;

(g) an Accountant;

(h) an Interpreter;

(i) a Computer Specialist;

(j) a Support Assistant;

(k) 25 Regional Information Coordinators; and

(l) a Driver.

4. The projected budget for the PIU over the four years of the TRP is provided in the accompanying Annex C - Summary Table.

Annex B

Project Description And Implementation Plan

Summary

1. The Title Registration Project (TRP) will consist of two components: (i) the establishment of a network of Information and Registration Centers (IRCs) and (ii) the development of a unified, parcel-based Cadastral Surveying and Mapping system. The two components would be implemented, under the overall direction of the Project Implementation Unit (PIU), coordinating with the State Cadastral Administration (SCA) under the Ministry of Justice (MOJ).

2. The SCA is a new agency. It was established in 1997, under the general direction of the Ministry of Justice. In July 1997, staff were recruited primarily from other government agencies experienced in geodesy and cadaster work (legal, physical, and fiscal). A majority of the new agency is a carry over from the former Inventory Bureaus (IBs). Within the draft law on Title Registration, the Government has set an ambitious range of responsibilities for the SCA, which it is unlikely to be able to fulfill for some years. The responsibilities include the coordination of cadaster surveying and mapping activities (*physical cadastral activities*), legal registration (*legal cadastral activities*), and inventory assessment (*fiscal cadastral development*), as well as public information and research. These responsibilities together are beyond the scope of this project. The project would focus on supporting the administrative structure of the SCA via creation of a Central Information office, a Mapping Center, assisting with the re-organization of field offices to establish 25 fully functional marz IRC offices and marz satellite IRC offices, and financing targeted systematic surveys as required to achieve the objectives and targets of this project. The IRC network and parallel cadastral mapping works will serve as the nucleus to facilitate two major parts SCA's mission, building a *legal cadaster* (a chronological, parcel-based property registration system) and developing a *physical cadaster* (surveying and mapping).

3. The TRP is supported by a parallel group of institutional building activities for the legal framework development. During a follow-up to the appraisal mission (April/May 1998) in discussions with EU and USAID representatives, it was determined that ample legal technical assistance will be provided in advance of project implementation via USAID. Such work includes strengthening SCA; adjudication procedures; completion of a draft Title Registration law addressing the rights and obligations of the GOA, SCA, property owners, and those processing encumbrances (such as tenants and creditors); and procedural manuals for registration and surveying.

4. The specific expenditures under the Information and Registration Center Network component will provide financing to:

- Design, procure and install the IRC computer information network to manage the data produced;
- Further equip and furnish a central information center and 11 fully functional marz and satellite offices;

- Strengthen the resource capacity of the IRC network through international and short-term local consultants, who will provide technical assistance, training and administrative support; and,
- Support the non-labor operating costs of the IRC network at a decreasing rate over the TRP implementation period.

5. The specific expenditures under the Surveying and Producing Cadastral Maps component will provide financing to:

- Equip and furnish the Mapping Center;
- Contract satellite imagery, enhance GPS grid coordinate system, revise available survey data, and contract new systematic cadastral surveys for production of cadastral maps; and,
- Support the non-labor operating costs of the Surveying and Mapping works at a decreasing rate over the TRP implementation period.

Extent of Project

6. The TRP will support the development of cadastral mapping and registration process by introducing systematic surveying in four (4) marzes and the city of Yerevan. It will concurrently introduce (on a limited basis) systematic surveys and registration in the six (6) other marzes progressively over the four-year project period.

Marzes targeted for concentrated systematic surveying and formal title registration	Marzes selected for a limited number of systematic property surveys and formal title registration
City of Yerevan Aragatsotn Ararat Armavir Kotaik	Gegharkounik Lori Siunik Shirak Tauosh Vaik

Phasing

7. The project would be coordinated by the PIU to ensure the establishment of a centrally coordinated network of local Information & Registration Centers (IRCs). Concurrently, the Mapping Center will ensure that the operational capacity of licensed surveyors and service companies are synchronized throughout the 10 marzes and the city of Yerevan. A total of 21 local IRCs (14 financed by the EU-FSP) are expected to be established in Project Year 1 (PY1) and four additional offices (which may be split into smaller satellite offices) are expected to be established in PY2. Within four targeted marzes and the City of Yerevan, the IRC offices would be organized to assist with data filing of the general cadastral work. Their work will be supported by private survey contractors (supervised by the Mapping Center) as well as sporadic

registration, as requested and paid for on demand. Offices would be equipped progressively according to the workload and staffing requirements.

Outputs

8. The TRP will support the following outputs:
- (a) updating of the geodetic grid from the 1942 coordinate base, satellite imagery, and mapping works for general use;
 - (b) producing a unified cadastral system with parcel numbering and mapping of real estate inventories (land and immovable property), defining the location and extent of each land or property unit, its ownership and servitudes;
 - (c) assisting the newly created State Cadastral Administration (SCA) with local the IRCs in all ten regions and the city of Yerevan with the administrative expertise and resources to introduce and implement systematic surveys progressively and take on the other responsibilities as described in the draft Registration Law of 1998;
 - (d) establishing and testing of national standards and operational manuals for the general cadaster (geodetic control, mapping and location and extent of real estate units) that define the content, accuracy, quality of presentation and reliability of cadastral data, designed to meet user needs, variations in property values and budgetary constraints; and
 - (e) expanding resource capacity and expertise of the private sector to extend cadastral surveying and mapping throughout the country.

Component 1: IRC Network Establishment

8. **Objectives and targets.** The major objectives of this component would be to establish a nationwide common Information & Registration network for a secure registration of real estate parcels and associated rights. It would undertake the systematic registration of some 590,000 titles in ten marzes and some 250,000 urban dwelling titles (most within Yerevan). However, sporadic registration will occur across the country considering the cost and time constraints of systematic surveying the remaining six marzes.

9. **Scope.** The component would be implemented by the Ministry of Justice via the State Cadastral Administration (SCA) and would support the establishment of a real estate registration system with the potential of covering about 50% of the country in the first four years of a long term program in both rural and urban areas. The project would assist with the implementation of SCA's work as illustrated in the draft law on Title Registration (passage is a dated covenant). It would make operational the new title registration system and database network by: (a) training about 200 staff and managers in the new registration system procedures; (b) the designing, prototyping, and establishing a computerized title registration management information system in 25 IRCs with linkages to information systems across the cadastral network; (c) further equipping 11 local IRCs by furnishing and providing them with office supplies, equipment, and archive systems; and, (d) supporting the entry of data from an estimated 740,000 real estate titles and other documents into the new system.

Major Phases of the IRC Network Component

10. There are two major phases of this component: (A) Operational Trial Phase (Project Year 1 - first six months); and (B) Full Implementation Phase (beginning with the second half of Project Year 1 on through completion of the Project).

A. Operational Trial Phase - Network Establishment for the IRC Network Component

11. During the first 12 months, it is expected that 21 offices (supported initial investments in 14 offices via the EU-FSP) will be established. Extensive training and registration trials will be undertaken to refine the project design, to allow additional "learning by doing" process to take place by project and IRC staff, with the outcome resulting in refined operational manuals and work plans for full and successful implementation of the project. The trials would consist of:

- (a) **The establishment of a 21 IRCs across all 10 marzes** with a concentration within four marzes and the city of Yerevan selected for concentrated systematic surveying. Project financed operations will assist with public relations and data collection of acts which will be supported by surveys (per Surveying and Producing Cadastral Map Component). Initial period (six months) will capitalize on the experience of IRC staff and notaries to ensure the transfer of knowledge and fundamental lessons. After the initial 50 acts per IRC is entered in the title registration books a review will be performed to ensure proper work. The process will start by addressing only preliminary registration tasks. After further development of skills by staff, this could be extended to register all transactions coming into the office in the new system. The staff involved would be those of the existing IB office, who would be trained in the new law and procedures; and private sector surveyors. The Mapping Center specialists would be involved in assisting with the provision and updating of suitable base maps that may exist, and in the approval of cadastral plans / sketch plans. Also briefing sessions would be necessary for the marz area's private surveyors, notaries, as well as those in the parallel agencies (i.e. Tax Inspectorate) and publicity to potential clients (i.e., transacting land holders and financial institutions).

The initial operations would be continuously evaluated throughout the period; after 6 months a thorough review and a workshop will be held to illuminate lessons learned and their results evaluated in detail. The final result will be a clarification of the operations manual, recommendations for the property regulations and Title Registration Summary Report, and an experienced pool of staff ready to carry on the operation and to share across the IRC network.

- (b) **The establishment of four additional IRCs** (or splitting of such resources into smaller satellite offices) will occur during the first quarter of PY2. The second operational development for these additional offices will provide further training starting in the third quarter of the PY1. It would draw upon the lessons of the initial operations described in (a) above.

B. Full Implementation

12. The full implementation will involve limited systematic surveying and registration in six marzes and introduction of concentrated systematic surveying in four marzes and the city of Yerevan. After establishment of the office, including the training of staff and setting in place

procedures, the central IRC would commence the acceptance of data from the systematic surveying and provisional registration experiences for formal registering. Senior staff specialists from the network would be engaged to advise on the operations in this second phase. The task would be coordinated with the central IRC, cadastral component of the Mapping Center, the Project Implementation Unit, and the SCA under the MOJ. Some 830,000 rural and urban titles are expected to be processed by the end of the project.

13. The tasks and operations for the IRCs in full implementation would be twofold. The first set of operations would be to support the inclusion into the title registration system of the properties for which state acts (deeds) have been issued to date, most of which have been delineated with fairly accurate field surveys. Working with the Mapping Center and local notaries (where property contracts are being recorded currently), the IRCs will create initial parcel identifications and track ownership rights and obligations until formal systematic surveys are performed and approved. Thus, this activity, will lay the ground work for speedier official registrations and systematic surveying work that will follow.

14. The second set of tasks is the bulk of the project's focus. It would be the official registration of some 580,000 parcels resulting from both limited and concentrated systematic surveys in 416 villages (80 villages have already been partially surveyed and 336 villages will be targeted for full systematic surveying) and 250,000 urban dwelling titles will be the result of surveyed contracted to cover 30 km² of high population density in Yerevan and 150 km² in less density populated urban centers. TRP financed surveys will be performed in accordance to formal registration as required by the Title Registration law (currently a draft). Parcel demarcation and relevant data must be logged into the local title registration book and network system. This effort includes six marzes based on a limited number of systematic surveys (Gegharkounik, Lori, Shirak, Siunik, Tauosh, and Vaik) with nine local IRCs and concentrated systematic surveying efforts in four marzes (Aragatsotn, Armavir, Ararat and Kotaik) with 11 local IRCs and 4 IRCs in Yerevan. Each IRC will coordinate with the contracted surveyors and the Mapping Center. The contractor (engaged through the bidding process) would collect relevant data from the local IRCs and community as well as survey the parcels for production of cadastral maps, and entry into IRC databases. Such contracting will be coordinated closely with the project's PIU's specialists via the Mapping Center. The IRC staff would review the title copies, notary, and maps inspecting them for omissions and mistakes and then enter such data into the property book system.

15. To achieve the above tasks, project investments in this component would include: IRC office equipment and furnishings including the establishment of computerized property registration information systems; collection of relevant data, vehicles, furniture, and training. In addition, training courses for private surveyors as discussed further in the Surveying and Mapping Component.

Status and Staffing of the Local IRCs

16. Currently, former Information Bureaus, now under the jurisdiction of the SCA, have established offices in each of the marzes. The SCA plans to expand that office space and utilize some redundant personnel. The local IRCs in the six (6) marzes, where only a limited number of systematic surveys will occur would be undertaken during the project period, would require a smaller staff and minimal equipment. They are to approve survey plans (coordinated with a physical cadaster specialist) produced by private surveyors and collect existing maps and

cadastral plans to prepare cadastral index maps. In the four marzes and the city of Yerevan, selected for concentrated coverage of surveying and mapping and data entry will be fulfilled, a larger staff and office establishment would be required. The project would not support other activities unrelated to the project as outlined; although, it is recognized that some personnel time will be allocated to other parallel responsibilities. The directors and lead specialists will be appointed before the start of the project, but supporting staff should only be recruited as the workload justifies.

Staff included in the TRP	Limited Systematic Surveys and Registration in 6 marzes	Systematic Registration in 4 marzes and Yerevan
Director and assistant director (part time on Project)	1	1
Accounts/personnel clerks	1	1
Geodesist and assistant to approve and file sporadic survey plans	1	1
Geodesist and assistant to approve systematic contracts		
Digital data manager to manage general cadastral database		1
Digital cadastral specialist to approve digital data		1
Operator to enter and update database		1
Operator to undertake searches, print maps for customers		1
TOTAL	2 + 1 part time	4 + 3 part time

Sustainability of IRC Operations

17. The sustainability of the IRCs is dependent on several factors including the efficiency of the offices in terms of turn-around time and fee levels. If the property registers do not reflect the reality in field, then the system will start to be ignored by the intended benefactors and the market. The data collected must reflect what is deemed valuable in the market. Updating of the registers would be safeguarded by setting fees at a level which would not serve as a deterrent to register all transactions related to a given property. Moreover, such work must facilitate an efficient customer orientated system. Since transfer taxes are another deterrent to registration of transactions, these should be maintained at a reasonable level. These factors should form part of the cost-recovery study undertaken and to be reviewed by end of PY1.

Response Times for Registration

18. The response time to complete the survey, mapping, and subsequent registration of each transaction should be monitored in each local office by recording the date of submission of survey plans, the date of their acceptance, the date of the registration request submission to the IRC, and the date which formal registration is granted. Targets should be set to reduce the anticipated delay from two weeks after an office has been operational for the first six months to less than one week or less after full implementation (second quarter of PY2).

Component 2: Mapping Center and Cadastral Map Development

17. **Component Approach and Methods** The project's mapping and registration work focuses on the updating of existing surveys and/or contracting new systematic surveys for the

production of cadastral maps. Such work will be primarily undertaken by private licensed surveyors, which would be approved and recorded by the SCA's mapping unit and local IRC in coordination with the PIU. Currently, the local private surveying capacity includes a limited staff, equipment, and financial resources. Therefore, the early contracts would be smaller size. The size will increase as the capacity of the suppliers increases. In those areas where the existing maps are known to be outdated or inadequate, it is anticipated that it would be faster and more economical to utilize satellite imagery and update the maps by photogrammetry or to produce digital orthophotomapping. According to the draft Title Registration law, only those cadastral maps that are approved by the SCA will be valid and are a pre-requisite for official title registration. After formal registration, the State by law will guarantee such information as defined in the registration summary report. The lead mapping specialists, in consultation with the local IRCs, shall be responsible for selecting the areas to be updated within the budget allocation, taking account of the overall cost of the systematic cadastral surveys and maps produced entirely by field methods or by a combination of satellite survey and reduced fieldwork with GPS support. Again, the Mapping Center's work, contracted surveys and methods will be in parallel support to the IRC. Appendix D illustrates the timing and location of systematic survey contracts supported by TRP.

Surveying Methodology

18. In both areas where either a limited number of surveys are contracted or where a concentrated effort is targeted, the project will finance a similar approach based on systematic collection, surveying and registration of such properties. The process must adhere to the "Law in the Peasant Cooperative Farms" of 1991, "Law on Real Property" of 1995 and the "Law on Title Registration" (still in draft form), which together gave owners in the former collectivized farming areas 'acts' (deeds) to property, which are certificates that confirm the transfer of land and property from the State via the Ministry of Agriculture into private ownership. Today, most agricultural lands are presently under private ownership.

19. All surveying is systematic within the scope of this project and it will be contracted out to private companies employing licensed surveyors. The area and villages covered include: 180 km² selected urban areas where some recent large-scale mapping exists, and in 416 targeted rural villages. Under the guidance of the PIU, the Mapping Center with local support of the IRC would prepare the standard contract documents and initiate the first contracts in each marz. The IRCs mapping support staff would take over the routine supervision of contracts and introduce quality control procedures to approve the data delivered, using other private companies to undertake selective checking as necessary. The contractors would identify and plot each separate parcel of land or property under individual or joint ownership on the available maps or new orthophotographs (GPS based), and collect the names of the owners. The results would consist of the maps or orthophotographs showing the GPS boundaries of each property with a unique parcel number for each and a database entry for each parcel identifying the owner, evidence of title, a list of servitudes, and a minimal description of land use. The data would be delivered in convenient blocks to the Mapping Center for approval. When each block has been validated independently and accepted by the Mapping Center (or as otherwise stated by the Title Registration law and manuals), a copy would be delivered to the local IRC for entry to the title registration book registers and database. Only when the Mapping Center, notary and IRC has accepted all the available records within the relevant survey area and owner(s) formally register (with small initiation fee) would the IRCs be able to confirm the titles as final along with conferring State guarantees for the information in the title report and registration summaries.

Trials

20. The project will implement lessons learned from the USAID pilot project in Abovian. Moreover, the systematic surveying method is currently being further tested by the SCA in two areas: in Ararat and Yerevan, through the pre-project period giving additional field experience essential to this project's successful implementation. In the first, Ararat, the work is carried out in a rural village which does not have a readily available map and the other, Yerevan, an urban cadastral mapping exercise is already well advanced. Alternative methodologies for mapping and field surveying are being tested during the initial six months before project implementation via trials, including satellite imagery, field updating of existing maps, photogrammetric updating of existing maps and digital orthophotography. Moreover, title registration summary printouts are to be tested. Such trials and training including local surveyors will give staff insightful experience and flexibility in the operation of the new property registration system. After this preparatory trial period, some of the mapping and IRC staff would be transferred temporarily to assist in setting up the new IRCs, to implement title registration in new areas without previous experience with the new procedures for registration.

Alternative Design Approaches

21. The sporadic method, which is demand driven at the requests of property holders wishing to register their interests is further possible with the establishment of IRC offices, for the IRCs can provide such registration assistance services as required (surveying needs would be paid by the owner). However, based on worldwide experience sporadic registration means that it will be decades before all parcels are registered in the system. Thus, the SCA has opted for the systematic surveying method as the base for initial registration, which allows these long period to be shortened. This solution recognizes the urgency in Armenia for an efficient real property registration system to support the property market.

22. Some sporadic registration will also be facilitated on demand and paid by those property owners. Sporadic surveying cost per unit is expected to be much higher than for a systematic cadaster; therefore, it is only likely to be attractive to commercial enterprises and to families with disputed or uncertain titles. As this type of registration is demand-driven, the volume of applications cannot be quantified but is predicted to yield around 10,120 titles during the project period, at a conservative rate of a little more than 2 registrations per week for each operational IRC. The owner's expense for such work should decrease as the capacity of the IRCs and Mapping Center coordination to approve an increasing volume of surveys increases. In sum, no survey contracts are proposed under this approach. However, such registration is still provisional until systematic survey of the area is complete under the draft Registration law.

23. To adequately prepare for facilitating sporadic surveys (paid by owners) and registration procedures, the initial step for the SCA will be to setup a Commission to license private surveyors to undertake isolated surveys of properties to be registered and to train IRC staff in the approval process and archiving of data for this type of survey. Connection to the national GPS grid may not necessarily be mandatory at this stage provided the location of the property could be marked on an existing topographical map pending the extension of the systematic cadastral mapping system to the locality.

24. A licensed surveyor would prepare an isolated survey of the land parcel or property by defining the location and extent of the property relative to its neighbors and to permanent features in the neighborhood. Four copies of the survey plan would be produced and submitted to the

local IRC for approval within a few working days. (Initially this may be as long as three weeks; however, there should be a performance target for each IRC to reduce this progressively.) The IRC with assistance of mapping specialists will investigate surveys and carry out a small amount of selective verification of each licensed surveyor's work to ensure that acceptable standards are being achieved. Some of this selective verification would be contracted out to independent licensed surveyors with oversight from mapping specialists to insure reliability of the system. The approved plans would be stamped and signed by the local notary and IRC and distributed to the owner, the licensed surveyor and one copy retained by the IRC pending formal registration from the property owner. Rejected survey plans would be returned to the surveyor to be corrected at his/her own expense. One copy of each approved survey plan would be passed to the local IRC for registration without finality and would become final only when the systematic general cadaster is completed in an area.

Private Surveying Contracts

25. Private survey contracts accounts for a working budget of \$5.634 million. Within this budget 30 km² of densely populated areas in Yerevan will be surveyed, 150 km² of less populated areas in Yerevan (48 km²) and other urban cities, 80 updates to villages done by Giprozem and 334 new complete surveys of rural village areas. Full use of existing mapping at scales between 1:10,000 and 1:1000 will be utilized as the base for cadastral index maps and as survey plans of individual land parcels. Photogrammetric mapping and digital orthophotomapping would be produced from some previous aerial photography where existing maps are inadequate or seriously outdated. These air survey techniques should only be used where it can be shown that the total cost of the cadaster would be cheaper or faster using new GPS grid-based technology, photography and mapping than by producing it entirely by field survey methods using the existing maps. In making this cost comparison, an allowance should be made for the anticipated revenue that would be generated from the sale of up-to-date map products to other users. Based on experience in other countries, payment for their services will be paid on satisfactory completion of contracted work signed off by the local IRC, Mapping Center and PIU specialist. (A provision may be available for partial advance payment to cover operational field expenses based on assessed need. Moreover, collateral will be required as a deposit on survey equipment, if provided by the Mapping Center).

Private Sector Capacity

26. The surveying contracts expect to rely heavily on the participation of local survey companies. Publicity of such opportunity will provide an incentive toward capacity building of surveyors to engage in training, certification and the bid process. Pre-project training is scheduled and the growth rate of certified surveyors via parallel work under donors such as EU-FSP and USAID should deliver acceptable quality and quantity of surveying firms. Monitoring will be continued by the PIU specialists and Mapping Center specialists.

Appropriate Surveying Standards and Attendant Costs

27. The standards of accuracy, content and presentation of survey data would be redefined to satisfy the needs of land and property owners by taking account of the value of land, the unit cost of surveys and the capacity of the national budget and individual owners to pay for the standards of service proposed. The unit cost per parcel or property for surveys in areas of Yerevan with substantial surveying requirements (i.e. more servitudes and other complications) is estimated to

be \$6.68, and for urban areas with minimal surveying requirements the unit cost is \$3.67. For village agricultural land and properties requiring survey updating the unit cost is \$2.80 per parcel or \$11.30 per owner and for complete surveys the unit cost is \$6.27 per parcel or \$25.07 per owner. Performance would be monitored to introduce further cost savings. As the project progresses, comparative unit costs should be re-estimated and monitored. Such monitoring should include both project financed systematic surveying and owner paid sporadic surveys as well as the registration costs associated across all types of property registrations including apartments, urban property units, and agricultural land.

Entry of Existing State Acts into the Registration System

28. The project envisions cooperation with the local villages, notaries and owners for the entry of existing State acts into the registration system. Currently, two copies of each original acts (deeds) exist. One is held by the local notary office in each village and the other is issued to the owner. During the transition to title registration the contents of these certificates will need to be entered into a computer database and, after careful scrutiny, recorded in the title registers. The data entry and surveys will be done systematically in four selected marzes, as a least-cost method of facilitating the statutory requirement for transfer of the titles into the new property registers. This process will create numerous initial disputes; the inaccuracies in ownership dimensions currently surveyed is estimated to be approximately 10%.

Satellite Imagery and Declassification of Geodetic Control and Maps

29. A budget of \$283,000 dollars would be allocated for a nationwide satellite photo map, declassification of geodetic control, photogrammetric map revision, scanning, digital orthophotography, warped digital mosaics, high resolution satellite imagery and technical training of mapping equipment and methodology.

30. The existing geodetic network and the new GPS and total stations would require declassification to provide photocontrol for new mapping or digital orthophotography. Declassification could be undertaken before initial surveys begin. In the field, each area must add additional GPS points to the existing grid for further intensity of existing ground features assisted by satellite photography. The timing will be an operational decision as surveys begin.

Standard Scales of Mapping and Mapping and Digital Photographic Products

31. The standard scales of mapping and orthophotographs to be adopted for the project are expected to be 1:500 in urban areas, 1:2,000 rural settlements, 1:10,000 in arable rural areas and 1:50,000 in government managed forests and mountains (the latter is currently not covered by this project). All the updated mapping and orthophotographs produced would be available for sale to other users for special cadasters to recover some part of the costs.

32. It is anticipated that different scales and intensity of map production using the new satellite photography and total station-GPS system will be used to update existing maps and produce digital orthophotographs. In urban areas, it is recommended that the project assist with the updating and extending the existing 1:1,000 scale mapping by graphical photogrammetric revision and digital line mapping. In rural areas an appropriate mixture of techniques would be selected, including digital orthophotography, warped digital mosaics produced from alternate monoscopic photographs and high-resolution satellite imagery. Digital orthophotography would

be required in hilly areas. In the plains, a cheaper method of producing digital mosaics from aerial photography, by warping alternate non-stereoscopic photographs to fit points of detail on existing maps, may be later tested and adopted where this product is found to be satisfactory. Satellite imagery with one-meter resolution will be the initial base for targeting of surveys and assigning parcel numbers.

Sustainability of Mapping Operations

33. Due to the expected 10+ year window to complete surveying and mapping of all privatized arable lands and dwellings across the country of Armenia, it is advised that the Mapping Center should act primarily as a facilitator. As a facilitator, the Mapping Center will be responsible for supervision of the mapping contracts, contractors and production of final cadastre maps. Although there is a 10 year window for mapping completion of currently private lands and dwellings, further surveying and mapping will be required. This includes subdivisions, government lands, enterprise lands, and village 'community lands' which may later be sold and leased and added to the registration books. The sustainability of the IRC offices is dependent on several factors including the efficiency of the offices in terms documentation turn around, demand of its services (transaction volume), fee for transactions. Such focus requires both current and timely delivery of information as the market will demand (buyers, sellers, creditors and other agencies).

Incidence of Mistakes and Customer Satisfaction

34. The incidence of mistakes would be monitored as a key indicator of the quality of service. It would also reflect the effectiveness of training, management and staff motivation, and the efficiency of the information systems. Customer satisfaction would be measured by undertaking independent surveys of random samples of land and property owners and financial institutions, who had completed first registrations or subsequent transactions to assess whether the quality of service and speed of delivery were being achieved and to identify opportunities for improvement.

Annex C

Project Implementation Plan by Part
Yearly and Cumulative Cost and Investment Breakdown (US\$)

	PY1 (1999)	PY2 (2000)	PY3 (2001)	PY4 (2002)		
Component 1						
Information & Registration Network	827,243	814,727	638,507	638,507		
Central Information & Registration Center ¹	40,875	40,875	40,875	40,875		
Regional IRCs ² - 7 PY1 + 4 PY2	728,385	676,220	500,000	500,000		
Service Contract ³ (Equipment)	57,983	97,632	97,632	97,632		
Component 2						
Surveying and Producing Cadastal Maps	1,680,340	1,410,680	1,410,680	1,619,497		
Mapping Center ⁴ - Staff, Capital and Recurring Costs	96,100	56,100	56,100	56,100		
TA Support	168,000	75,000	75,000	75,000		
Satellite Imagery	150,000	-	-	-		
Collection/Creation/Survey	1,222,565	1,235,905	1,235,905	1,444,722		
Service Contract ³ (Equipment)	43,675	43,675	43,675	43,675		
Project Implementation Unit (PIU)	178,130	141,130	141,130	141,130		
Staff, Consultant Services, and Equipment	176,280	139,280	139,280	139,280		
Service Contract (Equipment)	1,850	1,850	1,850	1,850		
Yearly Total	2,685,713	2,366,537	2,190,317	2,399,134		
of which is GOA	484,127	554,542	610,031	695,213		
Contingencies	258,426	227,714	210,758	230,851		
of which is GOA	62,824	55,358	51,236	56,120		
Cumulative Total Cost	2,944,139	5,538,390	7,939,465	10,569,450		
Net Yearly World Bank Loan Disbursement	2,397,188	1,984,351	1,739,808	1,878,652		
WB Commulative Total Disbursement	2,397,188	4,381,540	6,121,348	8,000,000		

Yearly % WB Loan Appropriated for Recurring Costs

1999	75%
2000	60%
2001	40%
2002	20%

For PIU all 4 Years

100% Consultants
100% Non-Labor recurring costs

Yearly Service Contract % supported by WB Loan (based of 5% of total Fixed costs)
90%

Maintenance Service Contract Total

103,508	143,157	143,157	143,157
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Contingency rate per year 9.622%

% Under Credit 76%
% GOA 24%

Local Equipment Contract WB% 95%
Local Services Contract WB% 90%

¹ Includes: Staff, Equipment (1/2 total due to EU investment), and full at an incremental yearly rate to be paid by GOA of recurring costs.
² Includes: Staff, office equipment investment (7 PY1 plus 4 PY2) and recurring costs for all offices including 14 under EU startup investment.
³ Service contract is calculated at 5% annually, covering the total equipment investment (both WB Credit and EU).
⁴ Includes: Staff, Equipment (1/2 total due to EU investment), and full at an incremental yearly rate to be paid by GOA of recurring costs.

ANNEX D: TRP - Detailed Financing Table (in US\$ million)

Project Totals	National (GOA)	WB Credit	Total	% Total of WB Credit	% of Cost (Total Allocated)
Component Totals					
Information/Registration Centers (IRCs)	1.602	1.317	2.919	18.1%	30.3%
Surveying and Producing Cadastal Maps	0.740	5.381	6.121	73.7%	63.5%
Project Implementation Unit	0.003	0.599	0.602	8.2%	6.2%
Total Allocated	2.344	7.298	9.642	100.0%	100.0%
Contingencies	0.226	0.702	0.928	76%	9.6%
Total Project Cost	2.569	8.000	10.569	76%	100.0%

Total Cost	CY 1999	CY 2000	CY 2001	CY 2002
Annual	2.686	2.367	2.190	2.399
Cumulative Contingencies	0.258	0.486	0.697	0.928
Cumulative Total Cost¹	2.944	5.538	7.939	10.569

WB IDA Credit Disbursement				
Annual	2.397	1.984	1.740	1.879
Cumulative	2.397	4.382	6.121	8.000
GOA Cumulative Total	0.547	1.157	1.818	2.569

Total anticipated parallel support not included above (US\$ Million):

EU Equipment ²	1.978	
EU Survey Support	0.922	
USAID (Primarily Legal Assistance)	2.750	1.250

¹ Does not include Operation overhead such as electricity to be covered by GOA.

² Spread over CYs 1998 and 1999

Project Implementation Plan by Part																		
Yearly and Cumulative Cost and Investment Breakdown (USD)																		
	PY1																	
	1999	#	Labor	Total Labor	#	Non-Labor Recurring	NLR Total	WB % NLR	WB NLR	Diff. NLR Paid by GOA	#	Equipment, TA & Surveys	E, TA & S Total	WB %	WB E, TA & S	Diff. Paid by GOA	Total	
Component 1																		
Information & Registration Network	827,243																	
Central Information & Registration Center		1	21,375	21,375	1	18,500	18,500	75%	14,825	4,675	0	-	-	95%	0	-	40,875	
Regional IRCs		21	9,000	189,000	21	11,000	231,000	75%	173,250	57,750	7	44,655	308,385	95%	292,908	15,419	728,385	
Maintenance Service Contract						5%	1,159,655	57,983	90%	52,184	5,768							57,983
Component 2																		
Surveying and Producing Cadastral Maps	1,680,348																	
Mapping Center		1	29100	29,100	1	27,000	27,000	75%	20,250	6,750	2	20,000	40,000	95%	38,000	2,000	98,100	
TA Support												1	188,000	188,000	95%	159,600	8,400	188,000
Satellite Imagery & Aerial Photography												1	150,000	150,000	90%	135,000	15,000	150,000
Collection/Creation/Survey												1	1,222,585	1,222,585	90%	1,100,309	122,257	1,222,585
Maintenance Service Contract						5%	873,500	43,675	90%	39,308	4,368							43,675
Project Implementation Unit (PIU)																		
Consultant Services and Equipment	178,130	1	122,280	122,280	1	17,000	17,000	100%	17,000	-	1	37,000	37,000	95%	35,150	1,850	178,280	
Maintenance Service Contract						5%	37,000	1,850	90%	1,855	185							1,850
Yearly Total	2,685,713	24	181,755	361,755	24	2,144,655	398,008	6	318,282	79,728	13	1,641,620	1,925,950	7	1,761,024	164,928	2,685,713	
GOA	484,127																	
Contingencies	258,428																	
GOA % Amount of Total	62,824																	
Cumulative Total Cost	2,944,139			361,755			398,008		318,282	79,728			1,925,950			164,928		
Net World Bank Loan Disbursement	2,397,188																	
WB Cumulative Total Disbursement	2,397,188																	
Equipment Investment Cumulative													385,385					
Yearly % WB Loan Appropriated for Recurring Costs																		
1999	75%																	
2000	80%																	
2001	40%																	
2002	20%																	
2003	0%																	
Maintenance Service Contract % supported by WB Loan (based of 5% of total Fixed costs)																		
	90%																	
Maintenance Service Contract Total	163,888					5%	2,070,155	103,508	90%	93,157	10,351							103,508
Contingency rate per year	9.62225%																	
Average Equipment Contract WB%	95%																	
Local Services Contract WB%	90%																	

Project Implementation Plan by Part																	
Yearly and Cumulative Cost and Investment Breakdown																	
	PY2																
	2000	#	Labor	Total Labor	#	Non-Labor	NLR	WB	WB	Diff. NLR		Equipment, TA	E, TA & S	WB	WB	Diff. Paid	
						Recurring	Total	% NLR	NLR	Paid by GOA	#	& Surveys	Total	%	E, TA & S	by GOA	Total
Component 1																	
Information & Registration Network	814,727																
Central Information & Registration Center		1	21,375	21,375	1	19,500	19,500	60%	11,700	7,800	0	-	-	95%	0	-	40,075
Regional IRCs		25	9,000	225,000	25	11,000	275,000	60%	165,000	110,000	4	44,055	178,220	95%	167,409	8,811	676,220
Maintenance Service Contract					5%	1,952,645	97,632	90%	87,669	9,783							97,632
Component 2																	
Surveying and Producing Cadastral Maps	1,410,680																
Mapping Center		1	29,100	29,100	1	27,000	27,000	60%	16,200	10,800	0	-	-	95%	-	-	56,100
TA Support											0.25	300,000	75,000	95%	71,250	3,750	75,000
Satellite Imagery & Aerial Photography																	
Collection/Creation/Survey											1	1,235,005	1,235,005	90%	1,112,315	123,591	1,235,005
Maintenance Service Contract					5%	873,500	43,675	90%	39,308	4,368							43,675
Project Implementation Unit (PIU)																	
Consultant Services and Equipment	141,130	1	122,280	122,280	1	17,000	17,000	100%	17,000	-	-	-	-	-	-	-	139,280
Maintenance Service Contract					5%	37,000	1,850	90%	1,665	185							1,850
Yearly Total	2,366,637	28	181,755	397,765	28	2,937,645	481,657	6	338,742	142,916	5	1,579,960	1,487,125	5	1,350,974	136,152	2,366,537
GOA	554,542																
Contingencies	227,714																
GOA % Amount of Total	55,358																
Cumulative Total Cost	8,638,390			759,510			879,685		657,024	222,642			3,413,075			301,077	
Net World Bank Loan Disbursement	1,984,351																
WB Commulative Total Disbursement	4,381,540																
Equipment Investment Cumulative													561,605				
Yearly % WB Loan Appropriated for Recurring Costs																	
1999	75%																
2000	60%																
2001	40%																
2002	20%																
2003	0%																
Maintenance Service Contract % supported by WB Loan	90%																
Maintenance Service Contract Total	143,167				5%	2,863,145	143,157	90%	128,842	14,316							143,157
Contingency rate per year																	
Average Equipment Contract WB%																	
Local Services Contract WB%																	

Project Implementation Plan by Part																	
Yearly and Cumulative Cost and Investment Breakdown																	
	PY3					Non-Labor	NLR	WB	WB	Diff. NLR		Equipment TA	E, TA & S	WB	WB	Diff. Pakt	
	2001	#	Labor	Total Labor	#	Recurring	Total	% NLR	NLR	Paid by GOA	#	a Surveys	Total	%	E, TA & S	by GOA	Total
Component 1																	
Information & Registration Network	638,507																
Central Information & Registration Center		1	21,375	21,375	1	19,500	19,500	40%	7,800	11,700	0	-	-	95%	0	-	40,875
Regional IRCs		25	9,000	225,000	25	11,000	275,000	40%	110,000	165,000	-	44,055	-	95%	-	-	500,000
Maintenance Service Contract					5%	1,952,645	97,632	90%	87,969	9,763							97,632
Component 2																	
Surveying and Producing Cadastral Maps	1,419,686																
Mapping Center		1	29,100	29,100	1	27,000	27,000	40%	10,800	16,200	0	-	-	95%	-	-	56,100
TA Support											0.25	300,000	75,000	95%	71,250	3,750	75,000
Satellite Imagery & Aerial Photography											1	1,235,905	1,235,905	90%	1,112,315	123,591	1,235,905
Collection/Creation/Survey																	
Maintenance Service Contract					5%	673,500	43,675	90%	39,308	4,366							43,675
Project Implementation Unit (PIU)																	
Consultant Services and Equipment	141,130	1	122,260	122,260	1	17,000	17,000	100%	17,000	-	-	-	-	-	-	-	139,280
Maintenance Service Contract					5%	37,900	1,850	90%	1,665	185							1,850
Yearly Total	2,199,317	28	161,755	397,755	28	2,837,645	481,857	5	274,442	207,216	1	1,579,960	1,310,905	5	1,183,565	127,341	2,190,317
GOA	610,031																
Contingencies	210,768																
GOA % Amount of Total	51,236																
Cumulative Total Cost	7,939,465			1,157,265			1,361,322		931,465	429,857					4,723,980		428,418
Net World Bank Loan Disbursement	1,739,808																
WB Cumulative Total Disbursement	6,121,348																
Equipment Investment Cumulative														561,605			
Yearly % WB Loan Appropriated for Recurring Costs																	
1999																	
2000																	
2001																	
2002																	
2003																	
Maintenance Service Contract % supported by WB Loan																	
Maintenance Service Contract Total	143,167				5%	2,863,145	143,157	90%	128,842	14,316							143,157
Contingency rate per year																	
Average Equipment Contract WB%																	
Local Services Contract WB%																	

Armenia Title Registration Project
Annex E - Procurement and Disbursement Plans
(All Values Expressed in \$,000)

Description	Type	No. of contracts	Estimated cost	Procurement method	Document preparation	Invitation to bid	Contract signing	Contract completion
Equipment		6	615.6					
Vehicles	G	1	14.8	NS	Oct-98	Nov-98	Dec-98	Jan-99
Vehicles for PIU			14.8					
Computer Equipment	G	2	485.2	ICB	Oct-98	Dec-98	Through project life	Jun-00
Computer Equipment for Local Information Centers			464.9					
Computer Equipment for PIU			20.3					
Office Furnishings and Equipment	G	2	71.8	IS	Oct-98	Dec-98	Through project life	Apr-99
Office Furniture for Local Information Centers			66.3					
Office Furnishings for PIU			5.5					
Other Equipment	G	1	43.8	IS	Aug-99	Sep-99	Oct-99	Dec-99
Survey Equipment for Property Registration		1	43.8					
Technical Services	TS	66	6,382.3	-				
Field Survey and Property Data Collection		30	5,633.6	NCB (Slice and Package)	Nov-98	Through project life		Nov-02
Satellite Imagery and Aerial Photography		1	164.4	IS	Jan-99	Mar-99	May-99	Nov-99
Vehicle Maintenance Contracts		1	15.9	NS	Feb-99	Mar-99	Apr-99	Apr-02
Survey Equipment Maintenance		1	47.1	DC	Sep-99	Oct-99	Nov-99	Nov-02
Computer Equipment Maintenance Contracts		3	521.3	NCB	Mar-99	Apr-99	Through project life	May-02
Training and Technical Assistance	CF/CI	3	430.8					
Technical Assistance for Registration	CF	1	210.5	QCBS	Nov-98	Dec-99	Apr-99	Apr-01
Technical Assistance for Mapping	CI	1	118.4	QCBS	Jan-99	Feb-99	Apr-99	Apr-01
Training for Collection of Property Data	CF	1	101.9	QCBS	Jan-99	Feb-99	Apr-99	Apr-01
Project Implementation		45	435.2					
Consultants - Local Registry Offices	CI	25	-	I	Oct-98	Nov-98	Dec-98 to Dec-99	Dec-02
Consultants - Mapping Center	CI	5	78.9	I	Oct-98	Nov-98	Dec-98	Dec-02
Consultants - Information and Registry Center	CI	5	78.9	I	Oct-98	Nov-98	Dec-98	Dec-02
Consultants - PIU	CI	10	277.3	I	Aug-98	Sep-98	Oct-98	Dec-02
Operating Costs			2,705.5					
Operating Costs - PIU			74.5	-				
Operating Costs - IRC Network			1,243.1	-				
Operating Costs - Mapping Center			118.4	-				
IRC and Mapping Center Salaries			1,269.5	NBF				
GRAND TOTAL			10,569.5					

Note:

Type: G - goods; CF - consulting firms; CI - individual consultants; TS - technical services

Procurement Method: ICB - international competitive bidding; NCB - national competitive bidding; IS - international shopping;

NS - national shopping; MW - minor works; IC - individual consultants; QBS - consultants quality based; QCBS - quality and cost based selection;

**Armenia Title Registration Project
Annex E - Procurement and Disbursement Plans
(All Values Expressed in \$,000)**

Source of Financing Table (US\$,000)

World Bank Loan Funds - Allocated	7,297.8	
World Bank Loan Funds - Unallocated	702.2	
TRP Activities	<u>8,000.0</u>	
Government Contribution	2,569.5	GOA % of Total 24.3%
EU Co-Financing	-	
Other Co-Financing for TA	-	
Total Project	<u><u>10,569.5</u></u>	

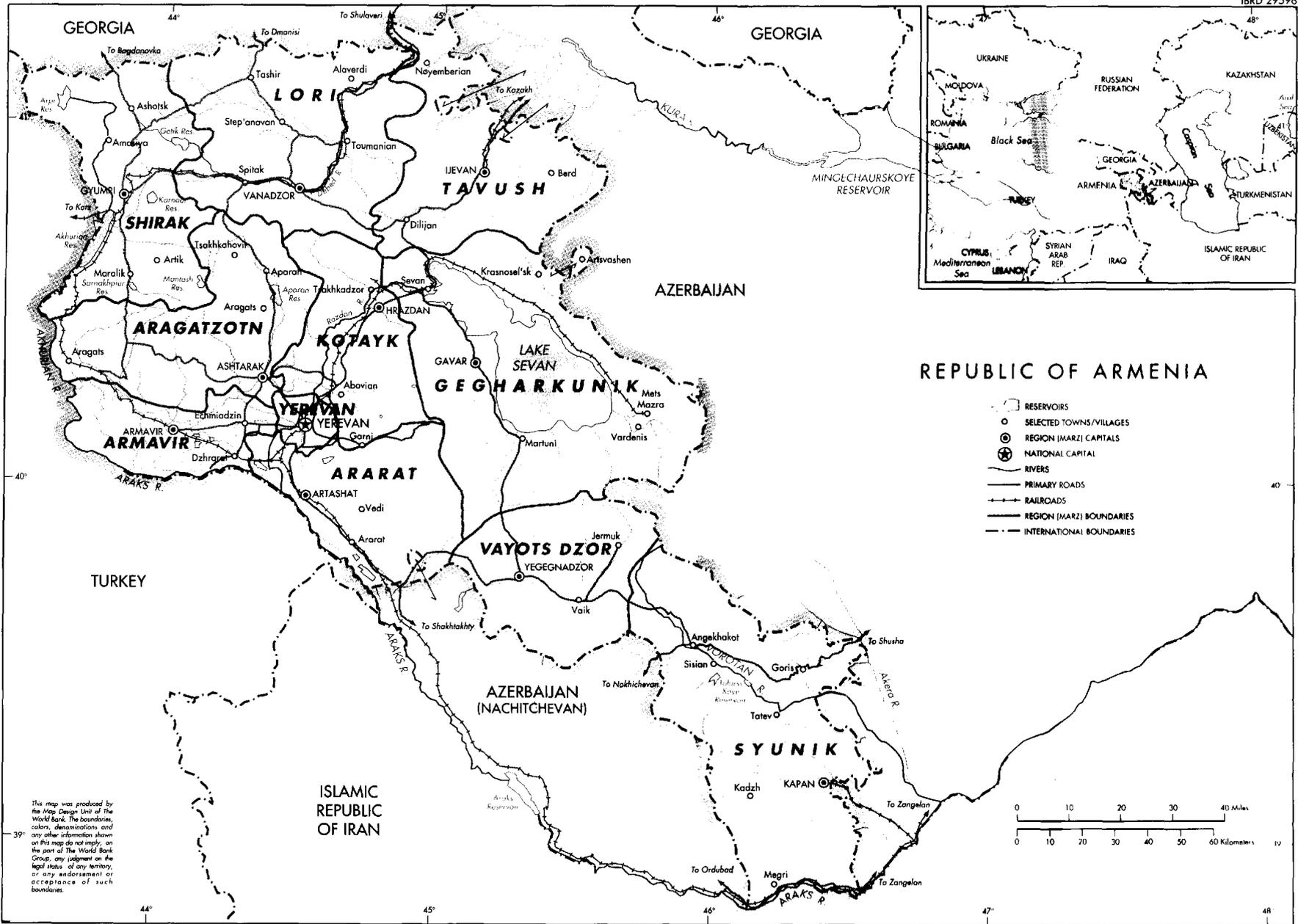
Disbursement Schedule - ALL (US\$,000)	CY1999	CY 2000	CY2001	CY2002	Total
Information and Registration Network	827.2	814.7	638.5	638.5	2,919.0
Surveying & Producing Cadastral Maps	1,680.3	1,410.7	1,410.7	1,819.5	6,121.2
Project Implementation Unit	178.1	141.1	141.1	141.1	601.5
Total Annual	<u>2,685.7</u>	<u>2,366.5</u>	<u>2,190.3</u>	<u>2,399.1</u>	<u>9,641.7</u>
Contingencies	258.4	227.7	210.8	230.9	927.7
Grand Total	<u>2,944.1</u>	<u>2,594.3</u>	<u>2,401.1</u>	<u>2,630.0</u>	<u>10,569.5</u>
Cumulative Grand Total	<u>2,944.1</u>	<u>5,538.4</u>	<u>7,939.5</u>	<u>10,569.5</u>	

Disbursement Schedule - IDA	CY1999	CY 2000	CY2001	CY2002	Total	Average Share
Information and Registration Network	532.1	429.5	206.4	149.5	1,317.4	45.13%
Surveying & Producing Cadastral Maps	1,477.3	1,240.2	1,240.2	1,423.8	5,381.4	87.91%
Project Implementation Unit	177.4	140.5	140.5	140.5	598.9	99.57%
Total Annual	<u>2,186.8</u>	<u>1,810.2</u>	<u>1,587.1</u>	<u>1,713.8</u>	<u>7,297.8</u>	
Contingencies	210.4	174.2	152.7	164.9	702.2	
Grand Total	<u>2,397.2</u>	<u>1,984.4</u>	<u>1,739.8</u>	<u>1,878.7</u>	<u>8,000.0</u>	

Disbursement Schedule - IDA	FY1999	FY2000	FY2001	FY2002	FY2003
Annual	1,093.4	1,998.5	1,698.6	1,650.4	856.9
Cumulative	1,093.4	3,091.9	4,790.5	6,440.9	7,297.8
Cumulative Contingencies	105.2	297.5	461.0	619.8	702.2
Grand Total - Cumulative	<u>1,198.6</u>	<u>3,389.4</u>	<u>5,251.4</u>	<u>7,060.7</u>	<u>8,000.0</u>

ANNEX F - ARMENIA: THE REGISTRATION PROJECT
Thresholds for Procurement Methods and Prior Review

Section 1: Procurement Review					
Element (Goods/Works)	ICB	NCB	IS	NS	Other methods
1. Procurement method thresholds	Works: n.a Goods: >\$200,000 Technical Services: >\$200,000	Works: n.a. Goods: n.a. Technical Services: <\$200,000	Works: n.a. Goods: <\$200,000 Technical Services for Satellite imagery (\$181,900)	Works: <\$25,000 Goods: <\$25,000 Technical Services: <\$25,000	Direct contracting for Survey equipment maintenance (\$52,100) Technical Services: n.a. No objection on budget for recurrent costs
2. Prior Review	all	first two for each procurement category	first	first two	yes
Element (Consultant Services)	QCBS	QBS - none	Sole Sourcing - none	Least Cost - none	Individual
3. Procurement method thresholds	All	n.a	n.a.	n.a	
4. Prior Review	yes	n.a.	n.a.	n.a.	yes (>\$50,000)
5. Ex-post Review	Explain briefly the ex-post review mechanism: The Bank will monitor procurement activities, contract management and project record keeping during periodic supervision missions. 20% of contracts will be ex-post reviewed.				
Section 2: Capacity of the Implementing Agency in Procurement and Technical Assistance requirements					
6. Brief statement: Primary responsibility for overseeing implementation of procurement procedures will rest with the staff of the Project Implementation Unit.					
7. Country Procurement Assessment Report or Country Procurement Strategy Paper status: Country Procurement Strategy Note was drafted in May 1997.			8 Are the bidding documents for the procurement actions of the first year ready by negotiations? No		
Section 3: Training, Information and Development on Procurement					
9. Estimated date of Project Launch Workshop: December 1998	10. Estimated date of General Procurement Notice publication: August 1998	11. Indicate if contracts are subject to mandatory SPN in Development Business: No		12. Domestic Preference for Goods/Works: Yes/No	13. Domestic Preference for Consultant Services: No
14. Retroactive financing No			15. Advanced Procurement No		
16. Explain briefly the Procurement Monitoring System and Information System: TORs for all consultant service contracts will be submitted for no-objections by the Bank. In addition, the PIU will develop a monitoring/reporting system for timely implementation of training.					
Section 4: Procurement Staffing					
17 Indicate name of Procurement Staff as part of Project Team: Snezana Mitrovic, Procurement Analyst,			Division: ECSRE	Ext. x32182	
18. Explain briefly the expected role of the Field Office in Procurement: n.a.					



REPUBLIC OF ARMENIA

- RESERVOIRS
- SELECTED TOWNS/VILLAGES
- REGION (MARZ) CAPITALS
- ★ NATIONAL CAPITAL
- RIVERS
- PRIMARY ROADS
- RAILROADS
- REGION (MARZ) BOUNDARIES
- - - INTERNATIONAL BOUNDARIES

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