

Land Administration and Management Projects (LAMP)  
in the Europe and Central Asia Region (ECA)  
Experiences, Lessons Learnt and the Future Agenda  
**The ECA Land Assessment**

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## PREFACE

In the ECA (Europe and Central Asia) region there has been a major reform in the Land Administration and Management (LAM) sector because of the political changes that occurred following the collapse of socialism in the late 1980s to early 1990s. The World Bank has been in the forefront of assisting countries with their land reform throughout the region over the past 15 years. Many countries have made remarkable progress and some have gained EU membership status. Within the LAM sector it is an opportune time to evaluate the impact the Bank has had with projects focused on LAM in the region *and to assess what still needs to be done.*

The focus of this study is on ECA experiences and requirements. Only parts of this paper are applicable to other regions. The authors have been involved with many of the projects and the paper has been reviewed by others that have been involved in the sector for many years. *Gavin Adlington* is Lead Land Administration Specialist and the land program team leader in the ECA region, and has been involved with most of the ECA projects, either as a consultant before joining the Bank, or as a staff member since joining the Bank in 2005. *Victoria Stanley* is an Operations Officer within the Bank and has been instrumental in both the development and management of projects over the past six years. The other three authors have worked on many of the projects as consultants. *Maria Bina Palmissano* has been instrumental in developing the monitoring and evaluation frameworks for the projects and *Suha Satana* has been the economist reviewing the impact of many of the projects both during preparation and as they are completed. *Richard Baldwin* is a well known land administration specialist.

The study has been reviewed by: *Lynn Holstein*, who was instrumental in developing and managing a large amount of the portfolio of projects during his time at the Bank; *John Manthorpe*, the former Chief Land Registrar for England and Wales; *Paul van der Molen*, a director of Kadaster International in the Netherlands and Professor at the International Institute for Geoinformation Science and Earth Observation (ITC); and *Joseph Goldberg*, who was the Sector Manager for many of these projects up until 2005. Comments were received from project task team leaders for some of these projects: *Maha Armaly*, *Jessica Mott* and *Ed Cook*. Comments on some of the information technology sections were provided by *Rumiana Tontchovska* from FAO.

In recent months the world has been ensconced in a financial crisis unseen since the days of the Great Depression. The 'blame' for this situation has been placed at the door of the 'sub-prime' mortgage and irresponsibility of lenders and borrowers. The financial systems of the world depend heavily on the use of property as collateral for borrowing, realistic valuation of those properties and effective banking systems. If these fail or are inadequate, trouble ensues. Consequently, the conclusions and lessons learnt from the ECA project experience in LAM are particularly appropriate at this time.

## TABLE OF CONTENTS

	<u>page</u>
PREFACE .....	2
LIST OF TABLES .....	5
LIST OF FIGURES .....	6
ABBREVIATIONS AND ACRONYMS .....	7
DEFINITIONS .....	8
EXECUTIVE SUMMARY .....	9
THE LAND AGENDA IN ECA .....	14
1.1 Projects in ECA .....	14
1.2 Background .....	14
1.3 Project Stages and Country Groups .....	18
THE ECONOMIC IMPACT OF LAMPS .....	20
2.1 Introduction .....	20
2.2 Overview of Economic Benefits from Land Administration and Management Projects (LAMPS) .....	21
2.3 The Land Tenure Security and Investment Incentive Linkage .....	23
2.4 Collateral and Credit Linkage .....	25
2.5 The Land Markets, Transactions and Investment Efficiency Linkage .....	27
2.6 Labor Mobility and Efficiency Linkage .....	29
2.7 The Land Liquidity, Deposit Mobilization and Investment Linkage .....	30
2.8 Fiscal and International Trade Linkages .....	32
2.9 The Investment Linkages and the Role of Taxes .....	33
2.10 Consolidating the Linkages for Overall Economic Impact - Summary .....	34
2.11 Conclusions .....	37
Lessons Learned From LAMPS .....	39
3.1 Introduction .....	39
3.2 Policy, Legal and Institutional Frameworks .....	40
3.3 Institutional development .....	42
3.4 Building Capacity .....	45
3.5 Automation and Information Technology .....	46
3.6 Cadastral Systems and Surveying Methodologies .....	51
3.7 Improving Service .....	54
3.8 Business Orientation .....	56
3.9 Monitoring and Evaluation .....	58

3.10	Transparency and Public Awareness .....	59
	The Future Agenda .....	61
4.1	Introduction.....	61
4.2	Key Issues for the Future .....	62
4.2.1.	The major objectives for the future agenda .....	63
	Objective 1 .....	63
	Objective 2 .....	66
	Objective 3 .....	69
	Objective 4 .....	71
	Objective 5 .....	72
4.3	Conclusions.....	73

DRAFT

LIST OF TABLES

<u>Table</u>	<u>page</u>
Table 2-1. How Conceptual Linkages Affect National Income Based on the Expenditure Approach.....	36
Table 2-2. How Conceptual Linkages Affect National Income Based on the Income Approach.....	37
Table 3-1. Summary of ICT Development in ECA Land Administration Projects.....	47
Table 3-2. Efficiency of Registering Property by Region .....	55
Table 3-3. Increasing Property Transactions throughout the Region .....	56
Table 4-1: Land Administration System Reforms.....	77

DRAFT

## LIST OF FIGURES

<u>Figure</u>	<u>page</u>
Figure 1-1. Land as the source of all wealth and development .....	17
Figure 1-2. Project stages and country groups.....	18
Figure 2-1. Schematic representation of the linkages between economic growth and real estate registration.. ..	21
Figure 2-2. Security of Landownership and Farm Productivity .....	25
Figure 4-1: Cadastral Systems .....	64
Figure 4-2: Stages of e-government.....	73

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## ABBREVIATIONS AND ACRONYMS

The Bank	The World Bank
BiH	Bosnia and Herzegovina
CAP	Common Agricultural Policy of the EU
CEEC	Central and East European Countries
CIS	Confederation of Independent States
CORN	Continuously Operating Reference Network
CORS	Continuously Operating Reference System
ECA	Europe and Central Asia
EU	European Union
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
GMES	Global Monitoring for Environment and Security
GPS	Global Positioning System
GTZ	German Technical Assistance Agency
IACS	Integrated Agricultural Control System (under EU CAP)
ICR	Implementation Completion Report
ICT	Information and Communications Technology
INSPIRE	Infrastructure for Spatial Development in European Community
KfW	German Reconstruction Credit Institute
LAM	Land Administration and Management
LAMP	Land Administration and Management Project
LARIS	Land Reform Implementation Support
LIS	Land Information System
LBS	Location Based System
LPIS	Land Parcel Identification System
LRERP	Land and Real Estate Registration Project
M & E	Monitoring and Evaluation
OECD	Organization for Economic Cooperation and Development
PAD	Project Appraisal Document
REC	Real Estate Cadastre
SAR	South Asia Region
SDI	Spatial Data Infrastructure
SIDA	Swedish International Development Agency
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe

## EXPLANATION OF TERMS

Definitions of commonly used terms in LAM vary considerably between regions, and even within a region. Perhaps the biggest difference for the ECA region is the term “**land**”. In most parts of the world ‘land’ includes anything attached to the land, such as buildings, trees, hedges, water, minerals, etc. In ECA ‘land’ is often not assumed to include buildings, and buildings might even be recorded separately or in a separate register. Thus, we tend to use the term ‘real estate’ to be inclusive of both land and buildings. However, in this paper, quotes from other literature and the subsequent discussion might refer to ‘land registration’ and it would usually include the registration of the combined land, building and other permanent attachments to the land.

Also in ECA, the ‘**cadastre**’ is a record of the position of objects and it can come in many forms. There can be forest cadastres, water cadastres, soil or land use cadastres, etc. I have even seen a cemetery cadastre! The land cadastre is by far the most common and it records the position of land parcels, often, but now always, with buildings and owners or users also recorded in a ‘cadastre register’. However, the legal rights are often recorded in a separate register of legal rights or in a form similar to the ‘land book’ used in German or Austrian systems. Often the cadastre and register of legal rights are combined in one new system, but the separate terms retain their usage.

Generally the terms used will have the following meanings:

Cadastre	A public register of land boundaries that defines the separate holdings of land.
Cadastre Map	The map showing the land boundaries.
Land Administration	The process of determining, recording and disseminating information about ownership, value and use of real estate when implementing land management policies.
Real Estate Registration	The process of recording rights in real estate.
Real Estate	Land and the property permanently attached to the land.

Some of the more technical terms that require explanation are:

Continuously Operation Reference System (CORS)	A set of satellite receivers dispersed around the country that provide signals to GPS receivers so that the location of a point can be determined.
Global Positioning System (GPS)	A navigation system comprising 24 satellites that send signals to receivers (GPS equipment) on the ground that can be used calculate a location of a point on the Earth. GPS refers to the US satellite system, but equipment can often also collect data from GLONASS (the Russian satellite system) and, more recently, Galileo (the European satellite system). In coordination with the CORS, locations can be determined to a few centimeters within seconds.
Orthophotomaps	Maps consisting of photo-quality digital images of the ground in their geometrically corrected, true map position. As they provide a ‘picture’ of the ground at a particular time they are ideal for checking parcel locations against plans or records and can be used as the basis for a cadastre index map.
Spatial Data Infrastructure (SDI)	A set of rules and standards that enable the sharing of digital spatial (geographic) data or spatial information between organizations.

## EXECUTIVE SUMMARY

In ECA, Land Administration and Management (LAM) has been included within 37 projects, 21 of which were 'stand alone' LAMPs. Over US\$1 billion in loan or credit funds from the Bank has augmented government programs and assistance from bilateral donors in a region that has seen a greater level of land and property redistribution than has been experienced anywhere else in history. The injection of funds through making property assets more liquid and the establishment of effective and efficient property registration systems that have allowed or promoted the introduction of these assets into the economy have been a major factor in the positive economic trends that have been seen in the region.

The overriding and predominate policy behind the projects and the reforms was to rebuild the systems of secure real estate tenure by developing, within a framework of laws, good systems of real estate registration and cadastre. The Bank has recognized that no country can sustain stability within its boundaries, or economic development within the wider world, unless it has a real estate rights policy that promotes internal confidence between its people, its commercial enterprises and its government.<sup>1</sup> Establishing trusted and efficient systems would make possible the re-establishment of private land rights for citizens and businesses. Such systems are in turn making possible the development of a property and mortgage market. This is the essential foundation for a functioning market economy where the property assets of all players are secure.

The stage of establishing the initial cadastres and property registration systems in ECA has been largely successful and there are only a few countries left in the region still lacking this basic infrastructure. The stage is now set for consolidating the gains and building upon the results of these projects. It is estimated that real estate markets may contribute up to 25% of GDP in a developed country, and that the share of global capital stock represented by real estate is about two thirds. However, the new paradigm of utilizing 'geo-information'<sup>2</sup> that is now so common in fully developed countries is still in its infancy in the region. The benefits of bringing 'geo-information' into programs for e-government that increase accountability and transparency, while encouraging economic development and saving government resources, are as impressive as the benefits gained from establishing efficient and effective cadastre and registration systems. It is a multi-billion dollar industry that impacts areas like urban planning, rural development (including land consolidation), local government services, environmental monitoring and management (including climate change issues), local government or State property management, land and property taxes, and leisure activities.

This paper has two objectives:

1. To review the impact and lessons learnt from the LAMPs completed or underway; this will be useful for other countries envisaging similar interventions.
2. To assess the unfinished agenda and the role that the Bank should have in the future.

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<sup>1</sup>UNECE Statement on Social and Economic Benefits of Good Land Administration 2005

<sup>2</sup>'Geo-information' is information that includes a reference to location. Most information provided over the internet or through local and central government includes maps or information about location. Indeed, nearly all information on any subject has some reference to location.

Chapter 1 provides a brief summary of implemented projects and the stages of implementation. The program of LAM projects originated in the early 1990s following a series of studies that led to a strategy of involvement in the LAM sector at that time. Much of that agenda is completed and the time is now propitious for setting the new agenda for the next five to ten years. The full program of LAM activities experienced in the region is outlined in three stages: (1) Assignment of property rights to individuals and companies following the collapse of the socialist systems in the region; (2) Protection of property rights and encouragement of the real estate market; and (3) Improving the efficiency of the management and administration of land and property. The 'new agenda' is primarily in Stage 3. Countries of the region are also divided into 'Groups' to show which stage they have reached.

The interventions have affected 29 countries all at different stages of development. For some (Group 1 countries) land and property rights are still weak and basic reforms are still needed. Others (Group 2 countries) are in the development stage where problems still exist but good or steady progress is being made. For yet others (Group 3 countries), much progress has been achieved and new systems are producing clear social and economic benefits. Much has been achieved. The Bank's programs have supported governments' own programs, and in many instances, success has been achieved in association with bilateral donors. In 2005, 2007 and 2008 'Doing Business' recorded that most positive reforms in property registration were recorded in the ECA region. Almost 60% of all property registration reforms in the last four years took place in Africa and ECA regions.

Chapter 2 considers the economic impact of the LAMPs. The economic impact is assessed using five main linkages as a basis for the analysis. These are: (1) the real estate tenure security and investment incentives linkage; (2) the real estate title, collateral and credit linkage; (3) the real estate markets, transactions and efficiency linkage; (4) the labor mobility and efficiency linkage; and (5) the real estate liquidity, deposit mobilization and investment linkage. For each linkage the case is made that LAMPs have had a highly beneficial impact and examples are provided from project activities to support this theory. For example, the investments made to establish an irrigation system in Kyrgyzstan that produced a 50% increase in crop yields were only possible because the initial land titling had already been completed. Additional examples provide evidence of massive injections of funds into the economy through an astronomic rise (often measured in several 100 or 1000%, but from a very low base) in credit being provided to people using their real estate as collateral (e.g., Moldova, Kyrgyzstan). LAMPs have helped to provide the basic systems that give the owners and lenders assurance that these transactions are safe. Increases in property values and a high percentage increase in numbers of sales and leases, indicate that the public are utilizing their assets and have sufficient trust in the registration systems and the security of their title to move house, either to change jobs or just to upgrade or set up home. There is clear evidence that investment in the land (or on the land) is multiplying dramatically and that in many countries real estate administration systems have been put in place to provide the security and efficient systems to let this happen.

The chapter concludes that although the interventions in LAMPs are put in place to deal with the need to provide secure tenure and the ability to allow transactions to occur smoothly, the impacts are felt throughout the economy. Real estate can comprise between a half and three quarters of a nation's capital wealth, and the 'micro' level interventions in real estate administration can have major 'macro' level impacts. Although outputs in LAMPs are measured in terms of transaction

numbers, property values and credit given, it is argued that the overall influence can be felt in increased GDP and individual incomes. The interventions have been comparatively recent in the ECA region and the macro-economic impacts are really felt in the long term. In the short term the investments by government in establishing and improving real estate administration systems are recovered in a few years even if only measured in terms of fees and taxes generated.

Chapter 3 reviews the practical lessons learnt from implementing LAMPs. The chapter is broken down into sub-headings covering: Policy and law; institutional development; capacity building; automation and information technology; cadastres and surveying methodologies; improving services; business orientation; monitoring and evaluation; and transparency and public awareness.

Whenever a LAM project is prepared the legal and institutional arrangements for the project are investigated first. As LAM concerns legal rights and the security of those rights, and also the law and regulations that allow transactions, changes in use and permissions to use real estate, it is a fundamental requirement that the basic laws are in place and satisfactory. From the institutional perspective, projects had to address existing institutions that could see their role disappearing in the new order. The opportunity afforded itself for a new activity, 'the registration of property rights,' that would give them a role in the future and protect their staff from redundancy. It was common for land committees, property committees, mapping agencies, bureaus of technical inventory and Ministries of Justice to lobby for the responsibility, and this resulted in much infighting. Eventually the decisions on institutional responsibility were made, but we learned that it was counter-productive to try to establish systems while the infighting was going on; instead, we had to provide advice and then wait for the political decisions to be made.

The 'champion' from the government side is of key importance when seeking change and improvements. The head of the designated agency or another high level official with influence can make projects work more effectively than any amount of good preparation or project supervision from the Bank side. Conversely, changes in management at critical times, often as a result of frequent elections, had very detrimental effects, especially with delays incurred while the new management re-assesses the project activities and how they should be implemented. Institutionally, single agencies responsible for both the cadastre (or at least identifying and recording property boundaries) and the registration of property rights have been much more effective, and projects involving single agencies have been much more successful. Good project performance also depends on a core of committed local staff that will take ownership of the systems being developed and work in partnership with project funded consultants.

Information technology is key to good service delivery and many lessons have also been learned with the development of such systems. Overall simpler modular approaches in which systems are built within the country have been more effective than large system developments tendered internationally. They have been much less expensive, quicker to install and more likely to meet the requirements of the implementing agencies. Larger tenders suffer from long and complex tendering procedures and many complications when trying to manage such complex activities. New technology in surveying can also be extremely effective. The use of digital orthophotomaps, GPS position fixing equipment, and integrating survey results in digital maps has cut costs and time frames for completing systematic cadastral survey to the sub-\$10 level for each parcel. There are still often vested interests or traditionalists that like to keep to old

methodologies, and the use of new technologies and new methodologies is only gradually taking place in some countries.

The primary focus in many projects has been improvement in service delivery. Reduction in levels of corruption, the adoption of service standards and public information campaigns have been fundamental in achieving success in LAMPs. The more progressive countries have gone one step further and established self-funding agencies running along business lines. In these cases the quality of the service they provide is directly linked to the income they receive.

Chapter 4 deals with the future agenda of work in the ECA region. The future agenda is broken down into five broad categories: (1) Completion of property registers and cadastres to provide safe and secure property rights, and facilitate privatization and land reform; (2) Development of a more integrated approach to real estate management through land policies that reflect environmental and sustainable development concerns; (3) Encouraging innovation and the use of Spatial Data Infrastructure (SDI) or spatial information underpinning new products and services. (4) Improving the management of the organization and use of space; and (5) Supporting governance and quality and method of service delivery.

Many countries are now moving from establishing real estate markets to the issues of sustainable development. Although there is still a need to complete cadastre databases and improve service provision through automation and ‘on-line’ access, there are many more aspects of LAM that need addressing. Some of the drivers are EU requirements for pan-European conformity and standards, such as the INSPIRE directive that is attempting to establish the infrastructure for spatial information. In other cases it is the efficiencies that come about through using new technology to provide open and transparent information and services in mapping, cadastres, registers, zone plans, construction approvals, land use changes, etc. The advent of advanced technology, for example, has revolutionized society in Western Europe and North America. Commonly used facilities, like in-car navigation systems, require a basic infrastructure of digital maps; reference networks for GPS position fixing; and telecommunications that is not available in many countries in the ECA region. Case studies show that investments in digital spatial information can have a fourfold return on investment annually and that the investments have major knock-on effects in the private sector.

In summary the ‘new agenda’ needs to include:

Completion of cadastres and registration systems – especially with regard to service improvement and transparency through e-systems;

Land Consolidation (involving rural development as a whole rather than just re-parcellation)

Geo-information: Including the requirements for Spatial Data Infrastructure (SDI), Continuously Operating Geodetic Reference Systems (for GPS measurements), digital mapping systems and GIS, enabling:

Monitoring land use for: climate change and environmental monitoring (INSPIRE directive); agricultural subsidies (eg. IACS); Natura 2000, pasture management, erosion or pollution monitoring, etc.

Improved real estate management by local and central governments

The management of State and local government land and property – in the sense of portfolio management on the basis of highest and best use.

Urban and rural planning (including building or use permits and inspections).

Local government property taxes (and associated local government financing).

E-government: joined up government linking the various actors in LAM and improving governance

The economic justification is made for being involved with these basic objectives. For example, some studies estimate that participation in the INSPIRE directive would benefit the EU member states by more than €1 billion per year. Studies in Australia have shown that their SDI has helped to generate a 'spatial' industry worth AUS\$1.4 billion and that this generates AUS\$12.6 billion to Australian GDP. Governments in the ECA region need to understand and benefit from these possibilities. If the information is provided for easy access on the internet, as is now often the case in Europe and North America, it will have a marked impact on transparency, service provision and economic growth.

Annex 1 provides a list of all the projects completed or underway in ECA;

Annex 2 is a copy of a paper prepared for the Bank in 2000. It provides an overview of real estate registration as a business;

Annex 3 provides a review of the Monitoring and Evaluation parameters used in Bank funded projects according to standard Bank practice, and a series of sheets showing the project development objectives, key performance indicators and results of each project.

## CHAPTER 1 THE LAND AGENDA IN ECA

### 1.1 Projects in ECA

The ECA region can be considered to comprise: (1) The Commonwealth of Independent States (CIS) comprising 12 countries of the former Soviet Union, excluding Lithuania, Latvia and Estonia;<sup>1</sup> (2) Central and Eastern Europe (CEE) comprising the former socialist bloc countries in the Balkans, Baltics, and Central and Eastern Europe;<sup>2</sup> and (3) Turkey.

Over the past 13 years, 36 projects involving land administration have either been implemented or are under implementation; there is one further project in the pipeline. Of these, 21 are 'stand alone' land administration projects as they deal with only land administration issues, while 16 are larger projects that have significant land administration components. Twenty-two projects are currently active and the pipeline project is expected to be submitted for Board consideration this year (2009). The loan and credit amounts associated with land administration are in excess of US\$1 billion, but this is just a small part of the funds expended in the sector as counterpart funds, other donors, and the governments' own programs are often larger. The full list of projects undertaken using Bank financing in the ECA region are contained in Annex 1.

The purpose of this paper is to report on the work and outcomes of the LAMPs in the ECA region, which has generally been positive, and to highlight the emerging need for further Bank support in order to capitalize on the investments already made and to help countries develop further.

LAMPs in ECA have benefitted generally from good inter-donor coordination and much of the technical assistance from international experts has been provided by donors from various countries in tandem with the projects funded by the Bank. Donor funds from Sweden, the USA, the Netherlands, Austria, Germany, the UK, Switzerland, Norway and the EU have all been of critical importance.

### 1.2 Background

It has been estimated that real estate markets may contribute as much as 15-25% of GDP in a developed country, while the share of global capital stock represented by real estate is estimated at two thirds.<sup>3</sup> Real Estate (here defined as land and the property attached to the land) is also the principal asset (and therefore wealth) that is held by individuals. Once a country has made the political decision to allow capitalism to operate, it becomes a necessity to support the development of stable, transparent and efficient real estate markets. This is needed for land

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<sup>1</sup> Russia, Belarus, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan.

<sup>2</sup> Albania, Serbia, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, Macedonia, Bulgaria, Romania, Hungary, Czech, Slovakia, Poland, Lithuania, Latvia, Estonia. Kosovo is included, but it is currently under the administration of the United Nations Interim Administration Mission in Kosovo (UNMIK) under terms of UN Security Council Resolution 1244 (1999).

<sup>3</sup> 'The Economist'. May 29, 2003.

acquisition (for development), asset re-allocation (for both business and private purposes), and as a source of credit.

Shortly after the collapse of the socialist systems in the early 1990s a number of studies were completed by the Bank to assess what needed to be done in the real estate sector.<sup>4</sup> The Bank initially focused on the need to reform the agriculture sector and concluded that land reform and farm privatization were key issues to resolve. Problems relating to skewed ownership patterns,<sup>5</sup> customary tenure<sup>6</sup> and dysfunctional real estate registration systems<sup>7</sup> that were common in other regions were not the main areas of concern in ECA. The focus in ECA, then, was generally the redistribution of land from State ownership to the public, and the establishment of new land administration systems were included as components of larger land or farm reform projects.

In the CEE there was often a focus on the restitution of property rights to those that were dispossessed unfairly during, and after, the Second World War. In the countries of the CIS and Albania land and property rights were distributed according to rules established in each of those countries.<sup>8</sup> Large Collective and State farms were no longer considered viable and land and property in urban areas was to be privatized. The rules were usually based on current occupancy and the rights established through working in State or Collective farms and enterprises. The amount of land and property redistribution achieved in the region is unparalleled historically, and the assets brought into the economy (for use by the private sector) in both rural and urban areas are immense. In the rural sector, for example, approximately 35% of the 412 million people in ECA are classified as rural dwellers. Moreover, there are approximately 30 million small private farms in an area that was previously characterized by State or Collective farms. In Russia alone 129 million hectares were redistributed to individual households by 1998 (this equals the surface

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<sup>4</sup> The most recent full summary is found in *Agriculture in Transition: Land Policies and Evolving Farm Structures in Post-Soviet Countries*. Lexington Books (2004). The bibliography at the back of this book includes a full reference to the numerous studies conducted since the early 1990s.

<sup>5</sup> Many areas in South America and South Asia have problems because large tracts of land are owned by a few private individuals, while much of the population are landless and have few opportunities to get out of poverty. Often large tracts of land remain unused or under-utilized at a time when the poor are desperately in need of land. Although ECA had huge areas of 'skewed' ownership because the State had taken over large tracts, it was not as problematic as other regions. The State could develop a policy for changing ownership patterns without having to satisfy or compensate wealthy individual land holders.

<sup>6</sup> Many areas of Africa and South East Asia have historical tenure patterns relying on unwritten records and equity of land use established through community decision making and tradition. As land becomes more scarce (and valuable) and population mobility increases, some of these systems are breaking down.

<sup>7</sup> Many countries around the world have cadastres and registration systems that have been established for a long time. Following years of corruption, poor government and inefficiencies the systems have become a huge constraint on property markets. Legal documents and records may go back over a hundred years, but may also be contradictory or fraudulent. ECA countries were fortunate that they were starting from 'scratch'. Although they had historical records about properties, they did not tend to have a history of conflicting or unclear legal documentation or seriously dysfunctional government held records.

<sup>8</sup> In Albania legislation has recently been passed for the restitution of property rights and is being considered in some of the countries of the former Yugoslavia.

area of Germany, France, UK and the Benelux countries put together).<sup>9</sup> In urban areas there has been a massive assignment of apartments and other dwelling units to the population, usually free of charge. Businesses, and the property they were occupying, have also been transferred to private ownership at minimal cost. *The injection of liquid assets into the economy is enormous. It has benefitted hundreds of millions of people and been a major factor in transforming the economy of the region.*

The studies completed in the mid-1990's led to policy decisions that we are still benefiting from today as our portfolio grows. In the LAM sector it was recognized quite early on that for economic growth to be sustainable it is not enough to just privatize, it is necessary to also establish secure cadastral and registration systems that give confidence to investors and (a) permit the real estate market to grow; (b) allow credit to be given using real estate as collateral; and (c) form the basis for property taxes and municipal development. It was also recognized that this was not a 'rural' or an 'urban' phenomenon, but that the requirements cross the urban and rural divide. Additionally, it was decided that the initial focus should be on privatization and registration. At this early stage the introduction of property taxes could be complex and might inhibit the public from accepting their new land and property rights. More 'control'<sup>10</sup> through promoting planning and land use monitoring could also wait until property rights were established. Of course, each country had its own priorities and these policies were adapted to country needs and internal requirements.

There have been very positive results in most of the Bank funded projects undertaken in the ECA region, but the registration of property rights is only one part of the land administration and management agenda. Even if we include assistance that has been provided in planning, building permitting, legislation permitting greater investment, the injection of real property assets into the economy, etc., the increases in real estate market activity cannot be attributed to these issues alone. The overall economic climate, banking capacities and political stability will have a greater impact. However, by ensuring that land administration and management systems are in place and effective, we ensure that economic growth is not hindered or halted because of the lack of such systems.

It should also be recognized that the Bank's interventions have generally supported the governments' own programs and have been working in association with government counterparts and many bilateral donors. It has been common for bilateral donors to provide technical assistance and support or establish pilot programs prior to the Bank providing the needed capital for investment and rolling out systems. For example, in Bosnia and Herzegovina, the Austrian, Swedish and German governments had helped with consultancies to develop the legal framework, basic software, and procedures, and then the Bank brought the funds for building renovations, cadastral survey, etc. In Kyrgyzstan, USAID funded the early pilot work

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<sup>9</sup> Overchuk, AL 2004 'Mass valuation in the Russian Federation'.

<sup>10</sup> The countries in ECA had historically based their land administration and management systems on central planning and control. At this early stage it was felt that an approach that was less constrained by central government was needed. At the time there was not a great deal of analysis looking into urban planning and individual project team leaders were not inclined to include planning systems, as it would have been made the projects much more complex and less manageable.

that enabled a larger Bank funded intervention to be successfully implemented. Achievements in the region are a mixture of the combined efforts of many, and not attributable to one organization.

There are many definitions of land administration.<sup>11</sup> The UN Land Administration guidelines from 1996 states: *“the process of determining, recording and disseminating information about ownership, value and use of land when implementing land management policies.”* The fundamental role of land administration in the national wealth is clearly outlined in subsequent chapters, but the very fact that ‘land’ is a primary factor of production in classic economic theory and that between a half and three quarters of a nation’s capital wealth are its property assets, the importance of recording, managing and using property assets effectively are crucial. This is represented diagrammatically below. The diagram is taken from the paper *“Land Registration as Business”* produced in 2000 for the Bank by John Manthorpe. The paper itself provides a very useful description of the importance of registering property rights and is attached as Annex 2.

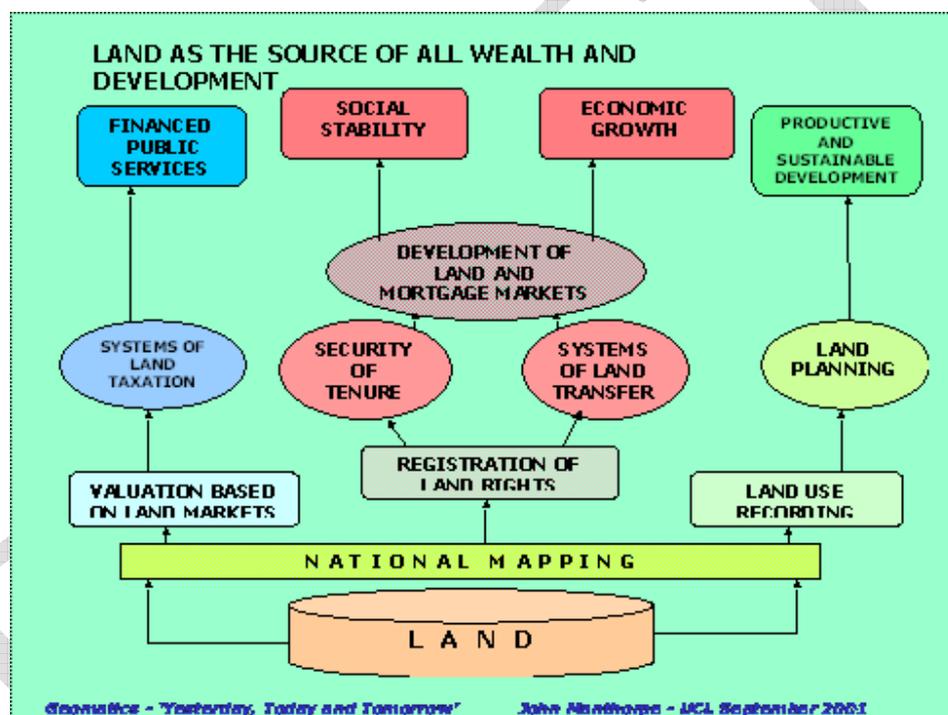


Figure 1-1. Land as the source of all wealth and development.

<sup>11</sup> For example: The Food and Agriculture Organization (FAO) defines land administration as “the way in which the rules of land tenure are applied and made operational”. It comprises an extensive range of systems and processes to administer the:

- a. Holding of rights to land (allocation, delimitation, transfer, disputes)
- b. Control of land use (regulation, land use planning, disputes)
- c. Economic aspects of land (gathering revenues valuation, disputes).

### 1.3 Project Stages and Country Groups

Projects in ECA have evolved over time. Assistance has evolved as countries needed to move into more complete or more sophisticated activities. For the ECA region we have identified three distinct stages:

#### **Stage 1- Assign Property Rights to individuals and companies**

- Business, Housing and Enterprise Privatization
- Farm Privatization – Mainly CIS countries
- Restitution of Property Rights –non-CIS countries urban and rural

Bank projects completed in: Latvia, Estonia, Georgia, Armenia, Azerbaijan, Kyrgyz Republic.  
Ongoing in: Ukraine, Tajikistan.

#### **Stage 2- Protect Property Rights and Encourage Real Estate Markets to Operate Efficiently**

- Establish Cadastres and Property Registers
- Systematic Registration of Property Rights
- Efficiency in registration (IT systems, service standards, sustainability)
- Legal Aid (for land and property rights).
- Public acceptance, Mortgage finance, Realtors

Bank projects completed in: Georgia, Armenia, Slovenia, Kazakhstan, Moldova, Russia, Romania.  
Ongoing in: Azerbaijan, Kyrgyz Republic, Ukraine, Bulgaria, Croatia, Macedonia, Serbia, Bosnia, Russia, Turkey, Albania, Kosovo, Montenegro.

#### **Stage 3- Efficiency in the management and administration of land and property**

- Improved Planning systems
- Municipal Finances and Property Taxes
- Efficient Management of State and Municipal Property
- Information systems (coordinating the work of land administration and management agencies)
- e-government in the real estate sector (for improved services and governance).
- Land consolidation

Bank projects in: Slovenia (completed), Azerbaijan, Albania, Montenegro, Turkey.

The above 'stages' are a generalization depending upon the individual conditions of a country. Some of the stages may overlap or may be completed in a different order. The Bank has mostly supported Stages 1 and 2 in ECA, though many client countries have begun to recognize the need for reform along Stage 3. The bulk of *current* projects are focused on Stage 2 and developing efficient land administration systems to support the property market.

The ECA countries can be divided into groups depending on which ‘stage’ they have reached. This helps us to consider the new interventions needed in those countries.

*Group 1*, where land and property rights are still weak and basic reforms are still needed, includes: *Belarus, Kazakhstan, Tajikistan, Turkmenistan, Ukraine and Uzbekistan*. Belarus, Kazakhstan and Uzbekistan do have reasonable cadastres and registration systems, but still do not give their citizens full ownership rights unhindered by excessive State interference.

*Group 2*, where cadastres and property registers are still being built or have problems with coverage, includes: *Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kosovo<sup>12</sup>, Kyrgyz Republic, Macedonia, Moldova, Montenegro, Romania, Russia, Serbia and Turkey*. However, some of these countries are quite close to achieving a complete and effective coverage (Armenia, Georgia, Kyrgyzstan, Moldova and Turkey).

*Group 3*, with functioning land administration systems and more sophisticated systems. EU member States: *Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia*.

The reference to ‘groups’ and ‘stages’ continues throughout this paper.

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<sup>12</sup> Kosovo is currently under the administration of the United Nations Interim Administration Mission in Kosovo (UNMIK) under terms of UN Security Council Resolution 1244 (1999).

## CHAPTER 2 THE ECONOMIC IMPACT OF LAMPS

### 2.1 Introduction

This chapter utilizes and ultimately expands upon an existing conceptual framework (as adapted from Byamugisha<sup>15</sup>) to guide the empirical analysis of the effects of LAMPs on development and economic growth. The framework has a broader view and represents an improvement upon most current and past investigations which have focused on one, or few, sectors. LAMPs generally affect many sectors and the economy as a whole. The methodology also builds upon the well-tested conceptual framework that links landownership security to farm productivity (Feder's work<sup>16</sup>), and is supported by the theory of positive information and transaction costs. The framework is built around five linkages in order to map the relationship between real estate registration and financial development and economic growth. These linkages as cited by Byamugisha<sup>17</sup> are:

- a. the land tenure security and investment incentives linkage;
- b. the land title, collateral and credit linkage;
- c. the land markets, transactions and efficiency linkage;
- d. the labor mobility and efficiency linkage; and
- e. the land liquidity, deposit mobilization and investment linkage.

One important aspect of this methodological framework is that these linkages are not totally independent from one another and there are cases of overlaps. Also, the above described framework is a partial one because its emphasis lies on the establishment of linkages for development and economic growth emanating from private ownership in real estate. We will hence supplement the framework by adding to it further linkages to account for the public sector impacts such as fiscal income linkage and trade linkage.

A schematic representation of the basic five linkages, expanded to include sub-links, is shown below.

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<sup>15</sup> Byamugisha, F. The Effects of Land Registration on Financial Development and Economic Growth: A theoretical and Conceptual Framework, World Bank Policy Research Working Paper no. 2240

<sup>16</sup> Feder. G. Land policies and evolving farm structures in transition countries.

<sup>17</sup> The term 'land' in Byamagusha's and Feder's work should be read to include all fixtures permanently affixed to the land.

**A Conceptual Framework Linking LAMPs to Financial Development and Economic Growth**

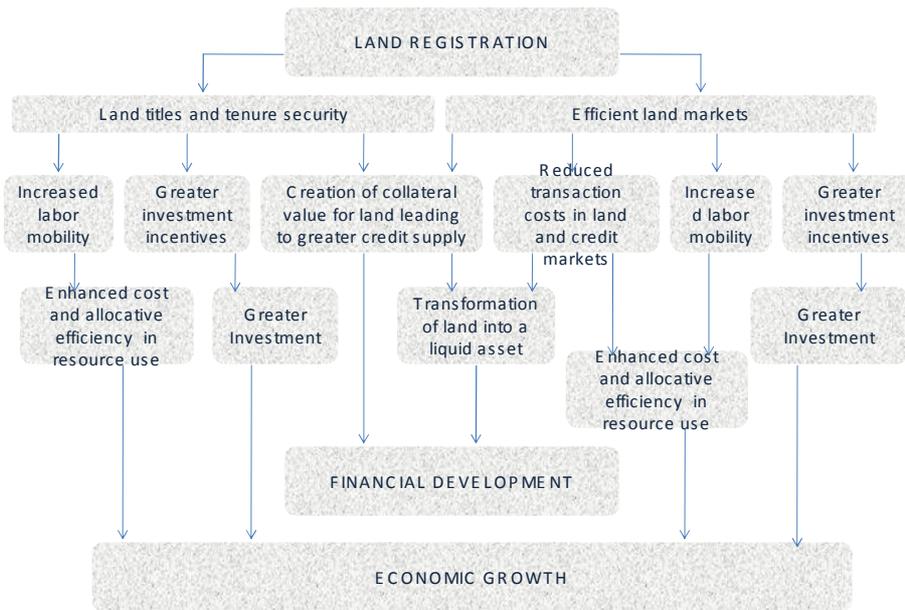


Figure 2-1. Schematic representation of the linkages between economic growth and real estate registration.

## 2.2 Overview of Economic Benefits from Land Administration and Management Projects (LAMPs)

Formal property rights in real estate, achieved through LAMPs, have numerous benefits. Focusing narrowly on the economic ones, these benefits can be summarized as:

- Assurance - clear definition of rights to enable the owner to defend those rights against the claims of others;
- Conflict management – enable conflicts over real estate to be solved more easily, reducing costs and time associated with disputes;
- Credit – to enable use of real estate as good collateral for loans from credit institutions;
- Improvements to land - increased tenure security from a title provides adequate certainty and incentives to the owner to invest in long term land improvements;
- Productivity - increased tenure security and access to credit promotes investment and increased productivity;
- Liquidity - formalization of rights promotes cost-effective exchange and the unlocking of resources embedded in real estate;

- Labor mobility - opening up real estate markets and increased tenure security promotes labor mobility in search of higher returns for labor while real estate is sold or rented out;
- Property values - expected increases in productivity and incomes associated with titling raise the property values of real estate;
- Public sector income – cadastre and registration provides the necessary information to facilitate the assessment and collection of land-related taxes (property and transfer taxes);
- Public services - increased revenues from land and property together with improved cadastral data availability provide great savings in expenditures and facilitation of the planning and financing of infrastructure services—such as public transport and utilities

Project documents usually justify financing of investments in LAMPs on the basis of economic returns, while also taking into account the need to provide for the necessary social and environmental safeguards. In this vein, considerable research was carried out on the conceptualization and measurement of the economic benefits particularly following the seminal work by Feder et. al in 1988. Through these sector studies, the economic effects of land titling on land productivity and rural or urban real estate incomes have been quantified. Attempts have been made also to estimate economy-wide effects by measuring the relationship between real estate registration on one hand and financial development and economic growth on the other, such as Byamugisha work. Indeed, the “Doing Business” reports produced by the Bank annually include the registration of property rights as one of the major indicators for ‘ease of doing business’ in a country.

Specific objectives and related benefits from the formalization of property rights have varied with the stages of economic development of the countries and regions. In the ECA Region, the objectives and expected benefits have been primarily aligned with the creation of private ownership and the transferability of property rights. A remaining important benefit that has not been adequately quantified is the value of cadastral data as the basis for land information systems (LIS) for other central and local government bodies. This forms part of ‘Stage 3’ as defined in Chapter 1, and the economic and social development impacts are addressed in Chapter 4.

#### Poverty Reduction and LAMPs:

Poverty reduction is as economic a consideration as it is social. This type of far-reaching impact is usually the less discerned and mostly unaccounted for impact of LAMPs. It can be argued that access to assets, rather than access to income, is a more fundamental issue in sustained reduction of poverty. Simple examples in the poorer countries of the region have shown that:

- In Moldova and Kyrgyzstan, where land has been privatized and efficient registry systems have been established, the rural population is using their property in the villages as collateral to access credit for agricultural inputs and business development.
- In Albania, where land has been privatized but the registry system is not so efficient, the level of accessing credit is much lower. (It is also much lower in

Azerbaijan where privatization occurred early on, but the registry system is only now being established).<sup>18</sup>

- In Tajikistan, where neither the land privatization moved forward nor was the registry system established, there is very little opportunity for the poor to utilize property assets for investment.

Despite the critical importance of this linkage few countries engaged in processes of land policy reform in the ECA region have paid serious attention to this critical connection. One reason for this phenomenon is that the linkages between land and the wider development agenda have often not been articulated with sufficient clarity and rigor. Secure access to land and an environment of good governance of land resources (including access to common lands and their products) are key objectives in reducing the vulnerability of the poor. To this end, there has been considerable work in Kyrgyzstan to help with the management of pasture lands, and in Turkey to promote simple land consolidation programs that include irrigation and local roads.<sup>19</sup>

It worth noting that rural land by itself is rarely used for collateral in the ECA region. Agricultural land sales are rare and the area of the land holding following the restitution or privatization programs is usually small. This provides little security to a lender because the value of the asset is low and not easily tradable. In rural areas it is more common for real estate in the village to be used for collateral. However, during the final project review in Armenia in 2004 a representative of a local bank informed the team that the ‘title’ document basically provided the bank with assurance that the person was local and would not disappear with funds that were lent. They have no desire to foreclose and loans were based on good business plans. Loans tended to be short term and comparatively low in value (a few thousand dollars). The speed and cost of registration were such that it was a simple matter to register the loan as a mortgage and this provided added security.

Naturally, the economic impact of LAMPs and which of the above linkages would be triggered is closely correlated with the nature of the initial intervention model adopted by the specific LAMP, depending upon which stage of development the country is in.<sup>20</sup> It usually takes many years for the benefits of interventions through a LAMP to be realized, but changes have been so rapid in the ECA region that some impacts can already be seen. It should, however, be noted when drawing comparisons that there are cultural issues that affect the dynamics of the property markets, especially with regard to the frequency of moving house, sentiment concerning land that has recently been restituted or a reluctance to get into debt by mortgaging.

### **2.3 The Land Tenure Security and Investment Incentive Linkage**

The real estate tenure security and investment incentives linkage is a fundamental one which underlies private property rights in real estate. Because real estate registration defines the

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<sup>18</sup> In Moldova there were 17,400 mortgages registered in 2007 of which one third were for agricultural areas. For the first half of 2008 Kyrgyzstan registered 27,700 mortgages to a value of US\$900 million. Neither Moldova nor Kyrgyzstan had recorded any mortgages before 1999. In the much richer country of Azerbaijan only 11,000 mortgages were registered in 2006.

<sup>19</sup> So far the Bank funded project in Turkey has included 65,662 ha in 77 villages. The program is very popular with villagers who claim that their costs are greatly reduced and that the irrigation provided and access roads have made a great difference in their productivity.

<sup>20</sup> See references to the ‘Stages’ and the country ‘Groups’ in Chapter 1.

nature and content of rights in real estate, provides legal protection and guarantees these rights, the real estate owner or a purchaser of real estate enjoys the certainty of ownership - including exclusive use and safe access to the stream of benefits accruing from the real estate and the freedom to transfer the rights in real estate. Consequently, there is incentive to invest in real estate improvements and/or to place long term investments on real estate. In the land registration/farm productivity conceptual framework, the link between land ownership security and investment incentives is articulated at farm level. For example:

Investments financed under the Kyrgyz On-Farm Irrigation Project (OIP) covered rehabilitation and repairs of irrigation infrastructure serving 250,000 ha. The project rehabilitated key infrastructure of 20 irrigation systems in the seven oblasts of the country, including the rehabilitation or reconstruction of 15 headworks, cleaning of about 160 km of canal, construction of about 70 km of concrete lining, rehabilitation of some 300 hydraulic structures of various kind, rehabilitation of four sediment basins, and construction of five new sediment basins. The new irrigation system benefited an estimated 50,000 households and the estimated productivity gains were up to 50%. None of this would have been possible without the basic motivating incentive - clearly associated with clear land ownership – and the consequent cost sharing and commitment from the farming community.

The chart below illustrates schematically how LAMPs can affect agricultural productivity. In addition to secure ownership rights, the enhancement of farm productivity is contingent upon availability of long term and affordable credit in order to implement the on-farm investments needed. Similar arguments can be made for the urban sector, where access to property rights and credit are needed for business development.

Security of Landownership and Farm Productivity: A Conceptual Framework

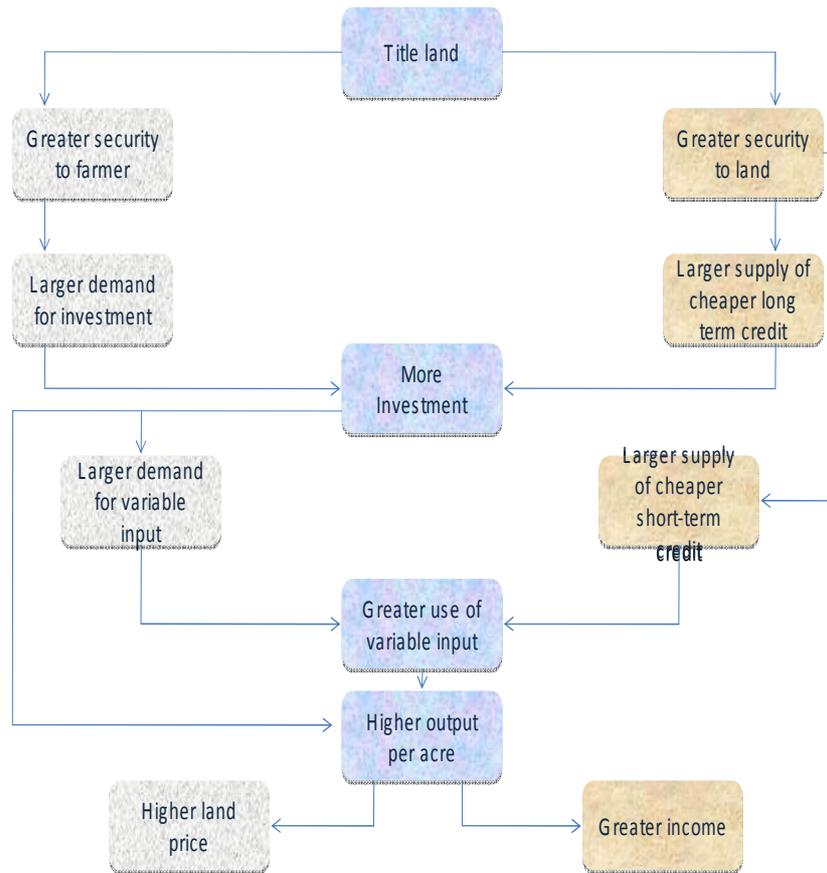


Figure 2-2. Security of Landownership and Farm Productivity

## 2.4 Collateral and Credit Linkage

In addition to augmenting demand for investment in real estate as a resource, secure formal real estate ownership can increase the supply of credit to undertake investment from formal sources, thus making an important contribution to the emergence of financial markets in more general terms. Hence, this linkage differs from the previous one in that it relates to commercial credit that is secured against collateral in real estate which includes both land and other types of properties.

Land is not only a basic factor of production, it also has a number of specific features such as indivisibility, lack of mobility, lumpiness,<sup>21</sup> and relative durability that distinguish it from other factors and make it ideal as collateral; this can greatly reduce the transaction costs associated with provision of credit. There is significant evidence in the ECA region that real estate has indeed become an ideal instrument to serve as collateral and that rural credit and commercial credit activities have gained momentum. Formal title to real estate would therefore not only increase individuals' incentive to undertake land-related investments but also reduce the cost of credit that might be needed to undertake such investment. The

<sup>21</sup> Characteristics such as 'lumpiness' and the other characteristics specified relate to the fact that you can't hide land, destroy it or remove it to another place.

importance of this 'credit supply effect' is supported by evidence from both the inside and outside the ECA region.

The establishment of efficient land administration systems in ECA have made it possible for the real estate and financial markets to flourish and for the private sector involved in real estate valuation, real estate conveyancing and associated industries to develop. Some examples from within ECA follow:

- a. The Latvia Rural Development Project, which closed at the end of 2001, had an embedded component of Land Reform and Creation of Land Market whose principal objectives included (a) provision of basic registration services, (b) stimulation the flow of commercial bank financing to rural clients by improving the efficiency and self-sustainability of the financial institutions; and (b) facilitation of rural business development and continuing support for land reform. After the basic real estate registry services were provided for some 600,000 properties, this LAMP was quite successful in helping to make an interactive land book system available for use by commercial banks and other entities that allowed private real estate to be used as collateral for commercial loans. Starting from a baseline of almost nil for both transactions and mortgages, in its final year (2001), the project reached 45,000 transactions (with an implied market turnover of 8%) and 26,000 mortgages.
- b. Increased activity on the collateral-to-credit linkage certainly spreads out the economic activity to involve market players and broadens the scope for the generation of added value in the economy. In some projects the **strengthening of the private sector** has been an additional outcome of the reform of the land administration system and the funds injected. This certainly has its own economic impact implications. In Estonia it was a requirement of the project that the State cease land survey activities and hand the work over to the private sector. This proved very successful and now there is a flourishing private sector capacity in the country. In Macedonia funds were allocated to help people leave the public service and set up in private practice. In Moldova, Armenia, Georgia, Romania, Ukraine and Bulgaria the funds made available for private sector tendering have helped to establish strong private sector capacities. Business has built up enabling real estate agents, notaries, lawyers and private surveyors to build their business and it is common to see office premises for these services established in close proximity to the registration office premises.
- c. In Armenia the banks developed new mortgage departments to deal with the increase in mortgage activity. Registered mortgages rose rapidly when it first became possible to pledge property in 1999 and 2000, followed by a mild initial decline as the market settled. However, since then there has been rapid growth (38 percent in 2002 and 48 percent in 2003) as the economy improved and people used their property to invest. Most mortgages are in urban areas, and land-based agricultural mortgages accounted for only about one-fifth of all registered mortgages in 2003.
- d. In Kyrgyzstan, the annual number of mortgages doubled between 2002 and 2007 (from 22,387 to 43,001), and the value of those mortgages increased from

US\$85 million in 2002 to more than US\$1 billion in 2007.<sup>22</sup> In Romania, the private sector grew and expanded during the course of the project responding to projects contracting needs including cadastre surveying, data entry, digitization of cadastre plans, and document scanning. In Bulgaria the number of mortgages increased by 30% from 62,600 in 2005, to 81,400 in 2006.

None of these improvements would have just occurred by themselves. They were stimulated by the appropriate LAMPs.

## 2.5 The Land Markets, Transactions and Investment Efficiency Linkage

Many investments in the economy involve real estate.<sup>23</sup> Investments may involve land directly, but other investments that take place on the surface or below the surface (e.g. agriculture, forestry, fishing, industry, mining, construction or services) require the use of land indirectly. For the most part, the investment activity here concerns “investment on the land”. Hence, the cost, speed and convenience with which land is acquired contribute to the level of efficiency of the investment in question. It should be noted here again that real estate registration provides the necessary information to overcome the disequilibrium and asymmetries in information available between the two contracting parties to a real estate transaction. In addition, real estate registration provides in one place all the necessary information to enable contracting parties to conclude a real estate transaction, and usually provides a guarantee. Consequently, real estate registration plays an important role in reducing real estate transaction costs, thereby raising the efficiency of the planned investments on the land.

Real estate registration and ensuring security in property rights increase land use efficiency in another dimension. Efficiency in land use may be determined, among other things, by resource endowments, level of technology, skills, and entrepreneurship, which are not uniformly distributed among individuals in one country. Real estate registration facilitates a market in real estate and/or increases market efficiency, thereby enabling property rights in real estate to move from less to more efficient users of real estate. The flow of property rights in real estate may be between individuals within one sector such as agriculture or between sectors such as from agriculture to industry. Such a flow of property rights from less efficient to more efficient users of real estate raises the allocative efficiency of real estate, with resultant increases in its productivity and in its contribution to economic growth.

Development of the real estate markets for all kinds of real estate: land, buildings, houses, commercial premises, industrial estates etc., has been a compelling storyline for the economic justification of most recent LAMPs in ECA. The absence of an objective counter-factual instrument (i.e., the scenario that would have prevailed if the project was not undertaken) for comparison renders the analysis difficult, but we may still resort to anecdotal evidence and making comparisons with the baseline data to appreciate the impact.

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<sup>22</sup> This is a very high figure, representing about 30% of GDP. Many of these loans are very short term and they may even use the same real estate for collateral more than once in a year.

<sup>23</sup> The World Bank Development Report from 2005 reports that in CEEC countries where property rights are secure, private investors are 14-40% more likely to reinvest profits.

For example: (a) in 2001, the National Bank of Romania recorded 1,948 mortgage loans; in 2005 they recorded 82,675 mortgage loans, (b) in Slovenia real estate taxes increased by 15% between 1999 and 2004, and (c) in Armenia the number of real estate transactions more than doubled between 2000 and 2003.<sup>24</sup> Here lies a success story because a part of the market activity certainly deals with urban development, new housing and new construction. We may not know exactly how much credit is due to LAMPs funded by the Bank, but investments in LAMPs are micro-level investments targeting few agencies (mapping, training, IT for agencies, establishment of basic records, etc), but they have significant macro-scale impacts. Secure individual property rights not only help reduce transaction costs, facilitate completion of demarcation, improve land administration systems, enhance transparency, and improve access to information on the real estate market, they also help with the development of the **real estate rental markets**. There is some anecdotal evidence that successful LAMPs implemented in the ECA region have generally:

- **Encouraged efficient land rental markets** while protecting the rights of small landholders by (a) providing better information about transactions to small landowners to enhance their bargaining power, and (b) by providing trusted mechanisms for resolving contract disputes.
- **Activated the land rental market** by addressing constraints in other markets—in credit and output markets to help family farms become more competitive and stimulate the demand for land, and in labor markets to facilitate both the movement of labor out of agriculture and the release of agricultural land.
- **Prevented further land fragmentation and complicated landownership arrangements** by simplifying laws and procedures to divide land among heirs.

In ECA countries, renting land is more common for land exchange than land sales. Less than 5 percent of rural households have sold rural land in all countries surveyed (Albania, Azerbaijan, Bulgaria, the Czech Republic, Hungary, Kazakhstan, Moldova, Poland, Romania, Slovak Republic, and Tajikistan), and in many cases the share is below 2 percent. The share of land rented as a percentage of cultivated land area varies across the region, from more than 90 percent in Slovak Republic and the Czech Republic, to between 50 and 60 percent in Bulgaria, Hungary, and Moldova, to 35 percent in Azerbaijan and 10 percent in Albania. At the same time, the vast majority of rural households in the region (more than 90 percent) own some land, though the average amount of land owned by households and family farms in ECA is small—fewer than 7 hectares in most countries.<sup>25</sup>

Real estate markets—particularly rental markets—can raise productivity, help households diversify their incomes, and facilitate exit from agriculture.<sup>26</sup> As farmers age, as rural economies diversify, and as migration accelerates, well-functioning land markets are needed to transfer land to the most productive users and to facilitate participation in the rural non-farm sector and migration out of agriculture. The absence of LAMP interventions in the ECA region would certainly have resulted in greater insecurity in property rights, poorer contract

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<sup>24</sup> V. Stanley, Monitoring and Evaluation in ECA, World Bank, Land Thematic Group Retreat, November 2007

<sup>25</sup> The World Bank, Emerging Challenges with Land Rental Markets, ECA ECSSD, March 2006

<sup>26</sup> The World Bank, World Development Report 2008 – Agriculture for Development (Overview)

enforcement, and more stringent legal restrictions on the performance of real estate markets, which itself would reinforce existing inequalities in access to real estate. In ECA, land reform efforts have already promoted smallholder entry into the market, reduced inequalities in land distribution, increased efficiency, and helped recognize women's rights.<sup>27</sup>

Part of the process of privatization in CIS countries has involved the re-distribution of land from large State or collective farms to smallholders. The impact of this redistribution has varied from one country to another. Much depends on the prevalent crop and the attitudes of the population. For example, the redistribution was successful in the Ferghana valley (Kyrgyz Republic part) and the Caucasus where smallholder crops, market gardening and orchards were prevalent, but not in the large wheat growing areas of Ukraine, Russia and Kazakhstan where economies of scale still persist.

## **2.6 Labor Mobility and Efficiency Linkage**

LAMPs have a positive contribution to the mobility of labor which enhances its allocative efficiency. The mode of operation of the linkage between real estate registration and efficiency of labor use is that formal and documented real estate ownership enhances security of transactions and helps develop real estate sales and rental markets. With security of real estate tenure guaranteed, the landowner can lease part or all his land and move out of agriculture in search of better opportunities either in terms of jobs or self-employment.<sup>28</sup> Possibilities of losing ownership rights are eliminated since such rights are guaranteed by the national real estate registry.

Similarly, it becomes easier to find tenants and lessees to use the land as real estate registration improves the rental market. Alternatively, the landowner could sell part or all his land to take advantage of better opportunities elsewhere with full knowledge and confidence that, if he wished to repossess land in future, he could always re-enter the market and buy land in some other location. The existence of efficient real estate markets created by real estate registration enables the owners to easily sell, lease, or buy real estate whenever desired. The ease with which people can buy, lease, or sell real estate creates a favorable environment for mobility of labor from areas of low labor productivity (with low economic returns) to those with higher productivity, thereby raising overall labor productivity, efficiency of investment, and economic growth.<sup>29</sup>

Leasing is now very common in the ECA region. In some countries, up to 60-70% of the owners are pensioners that cannot farm the land. Often the land is rented out, but there are also many cases where the land is simply left idle. Often people move to towns, but keep land plots back in the village. It is common for the old collective or state farm management to

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<sup>27</sup> The research team has found that, generally, gender issues are not a significant problem for land administration because the law is generally clear and gender neutral. Notary systems help protect spouses and dependants if they are utilized correctly. In some of the '-stans', custom appears to supersede the law and some women can lose their rights if they were not officially married (either as common-law wives or second wives).

<sup>28</sup> The authors have no specific data on labor mobility following improvements in security of tenure or the marketability of real estate. However, increased labor mobility is a recognized trend in the transition countries of ECA and logic tells us the tenure security positively influences decision making.

<sup>29</sup> The Effects of Land Registration on Financial Development and Economic Growth, Frank Byamugisha.

create a new farming enterprise that leases most of the land that has been privatized. Leasing may be constrained by the fact that there is only one possible lessee, so the owner may not get a reasonable return on the investment. In Ukraine, where agricultural land sales are still not permitted, minimum rental rates are fixed by government and these tend to be the actual amount paid to land owners. In Estonia, following the restitution program, vast areas were left without an owner because people either did not claim or asked for compensation instead of the land. The government eventually sold off much of the 'spare' land, thus bringing the land into productive use and obtaining a windfall income at the same time. In Bulgaria, again following restitution, there is often a problem in finding all of the owners, and thus difficulty in agreeing sales or leases, when a large developer or new farm needs to acquire land. Large fragmentation can also make it impossible to use land as collateral.

Economic impacts of labor mobility become apparent when governments also choose to remove impediments to migration. Labor market liberalization can increase employment opportunities in potential destination regions. Reductions in unemployment benefits and social assistance (for the working age population) can increase pressure to move. Land or building allocations provided during the land reforms can also provide potential migrants with a stake to finance the costs of relocation.<sup>30</sup>

Meanwhile, it is known that liquidity constraints inhibit migration. Relocation costs are non-trivial and may be beyond the means of potential migrants in poor regions--raising the prospect that rising incomes in a lagging region provide potential migrants with the wherewithal to relocate just as the incentive to do so vanishes. For instance Andrienko and Guriev estimated that one-third of Russian regions are locked in poverty traps merely because residents lack the wherewithal to finance a move to more prosperous regions. Liquidity constraints particularly affect rural areas, where uncertain real estate title prevents potential migrants from converting their assets into a form (i.e., cash) which they can use on arrival.<sup>31</sup>

## 2.7 The Land Liquidity, Deposit Mobilization and Investment Linkage

It is estimated that the **capital value** of real estate (including land) constitutes one half to three quarters of a nation's wealth. What is true for a nation is also true for the family, the individual, and the corporation. Real estate is therefore likely to be by far the largest class of asset in most economies. Its efficient use and management must be one of the keys to successful economic development.<sup>32</sup>

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<sup>30</sup> This is supported largely by anecdotal evidence, because data collection efforts accompanying LAMPs (M&E systems) usually do not aim to create an exhaustive data set. Most M&E simply collect data on basic transactions and costs of the transactions.

<sup>31</sup> Issues in Regional Development in Eastern Europe and Central Asia, January 2007, World Bank, Web address:  
[http://wbln0018.worldbank.org/Apps/CCKDoelib.nsf/0ccd2811fe496e8785256896006bf443/d450449c3e72fd2b852571450074d399/\\$FILE/Regional%20Development%20Jan%2020%2007.doc](http://wbln0018.worldbank.org/Apps/CCKDoelib.nsf/0ccd2811fe496e8785256896006bf443/d450449c3e72fd2b852571450074d399/$FILE/Regional%20Development%20Jan%2020%2007.doc)

<sup>32</sup> P. Munro-Faure, Sustainable Development and Land Administration, Infrastructure Reforms: the Role of Markets and Land Valuation Systems – Agenda for Change? Web address:  
<http://www.sli.unimelb.edu.au/UNConf99/sessions/session4/munro-faure.pdf>

Competition and the price mechanism will move the key economic resources of land and buildings towards the highest and economically most efficient use, subject to restrictions imposed for environmental or planning reasons. The functioning of the market must be straightforward and flexible to achieve this, not simply through buying, selling, mortgaging and leasing of the absolute ownership, but also through a variety of less formal kinds of agreement.<sup>33</sup>

In support of the economic virtues of the real estate market, Hernando de Soto (the *Mystery of Capital*, 2001) argues that *formal property plays a key role in economic development*. De Soto contends that formal property has been the driving force behind the emergence of capitalism as a new economic order and that it has had the ability to expand and consolidate in the West. He also asserts that it is the absence of formal property that explains why capitalism has failed elsewhere. The real estate market, supported by an efficient real estate registration system, is the instrument that helps mobilize the hidden wealth for the benefit of the entire society. The key performance indicators of an efficient real estate market are property sales, leases and mortgages. An analytical framework can be based on these which would help highlight the fact that even very small improvements can lead to significant impact and high rates of economic return. For example, in the UK, land and buildings were estimated to comprise a total of 57% of the national wealth in 1997, while in the United States, real estate (including land) was estimated to represent almost 70% of all tangible capital in 1993, and the taxable value of real property in the USA were estimated at nearly US\$6 trillion in 1991. More recent data from the USA portray even a more impressive picture. According to the Flow of Funds data published by the Board of Governors of the Federal Reserve System, household real estate assets totaled about US\$20.6 trillion dollars at the end of 2006. Thus, with mortgage liabilities totaling about \$9.8 trillion, household net real estate wealth (or simply put net housing wealth) totaled a little less than US\$11 trillion at the end of 2006. When net housing wealth is benchmarked to GDP, it is seen to fluctuate over time—rising for extended periods and falling for shorter periods.<sup>34</sup>

It is hard to provide this type of evidence for the ECA countries, and associate the changes or improvements with LAMPs. However, the case of developed countries clearly illustrates what may lie ahead, and help delineate the frontiers of possibilities for the potential progress to be made. Therefore, for the ECA region liquidation and mobilization of the wealth embedded real estate can considerably boost financial development, aggregate investment and economic growth. To mobilize the locked-up resources in real estate, real estate registration is the necessary first step to underpin the transactions.

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<sup>33</sup> This may include verbal agreements to use real estate, loans based on retention of the title document by the lender but with no recordation, licenses to extract materials, etc. Also, written agreements that have little support in law because they are not notarized or not registered.

<sup>34</sup> A useful perspective arises from expressing aggregate data in real, or inflation-adjusted, per capita terms. Per capita real net housing wealth has risen rather sharply over the past decade. After remaining at about US\$25,000 per person from 1991 to 1997, real per capita net housing wealth rose by more than 60 percent to US\$41,600 in 2005. Although significant, household real net housing wealth is still only about half of the level of tangible financial assets held by households. At the end of 2006, real household financial assets totaled about US\$37 trillion, or nearly US\$186,000 per person. By contrast, the value of household real estate assets totaled nearly US\$18 trillion at the end of 2006, or about US\$78,500 per person. (Real estate in the economy, Federal Reserve Bank of St. Louis.) However, these figures need to be considered in the light of the recent downward trend that has occurred during the 2008/2009 financial crisis that was partly caused by over-inflated valuation of real estate and bad lending practice.

Financial development refers more to the enabling environment in which the economy operates and grows. It is an instrument for the land and property markets. With varying degrees of success, there is evidence that LAMPs in ECA have supported financial development through transformation of real estate into a liquid asset thereby unlocking the resources embedded in it for use directly in investment or indirectly through financial intermediaries. As all the necessary real estate transactions (sales, mortgage, leases, exchanges, etc.) involve asymmetries in information between contracting parties, the information supplied by the real estate registration system had indeed enabled both parties of the contract to have the same information about the real estate, easily obtained in one place in the real estate registry. In addition, ownership information is guaranteed by the state.

As a result of real estate becoming securely and efficiently transferable, real estate transactions take place at low cost, quickly and securely. Consequently, the resources embedded in real estate flow fairly freely away and back into real estate. Moreover, these unlocked resources become more divisible. With the free flow of real estate resources and in highly divisible units, the real estate owner is availed a wide spectrum of investment choices including direct investment and purchase of investment instruments such as those offered by credit, stock and insurance markets. A further example of a financial instrument is the recent emergence of Real Estate Investments Trusts (REITs) in the Balkans, Russia and Turkey. For the moment REITs are more active in business premises and shopping centers, with ongoing projects in the residential housing markets as well.

## **2.8 Fiscal and International Trade Linkages**

The real estate market is an issue for macro-economic concern. It has direct and indirect effects on the entire domestic economy.<sup>35</sup> The real estate market includes both transactions of existing properties as well as new property developed: apartments, buildings, houses etc. It is well established that the housing and construction sector together with the automotive sector are among key drivers in advanced economies and they constitute classical indicators of good health of an economy. Also, these two sectors provide for a great amount of employment. The construction sector – which requires real estate as an input - is particularly important for the ECA economies because it can absorb both skilled and unskilled labor. The larger the share of the sector in the economy the more significant the tax base it offers to the public authority.

The most important real estate taxes are property tax and transaction tax. Property tax is a percent of the value of the property and, excluding exemptions, is paid on all properties at rates that vary widely. As they are a relatively new tax in ECA countries rates of up to half a percent are the average, but rates in other countries may be higher.<sup>36</sup> If enforced properly, property tax is a very important source of local government revenue.

Transaction tax is charged when the property is sold to another party. This is a very important source of income for the central governments. The more active the real estate market, the higher the transaction tax income. It is however important to keep the transfer tax at a

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<sup>35</sup> The 2008 financial crisis has shown that the effects of the real estate market in the major economies are felt internationally.

<sup>36</sup> Rates in Montgomery county, Virginia, USA used to be as high as 3%, but they have since reduced. Municipalities with a high concentration of businesses may be able to charge much less to home owners because they get more income from the businesses within their community.

reasonable level. Initial rates of 5% to 7% in some countries led to avoidance of official procedures, massive under-declaration of sale prices or a reluctance to sell. Transfer taxes in the region of 1% to 3% appear to be reasonable.

The higher the value of property the greater the property tax income can be.<sup>37</sup> ECA countries are in general underachievers in the collection and enforcement of both types of taxes. *Most countries still need fiscal cadastres, objective valuation systems and good enforcement policies.*

Fiscal cadastres, valuation, and property tax are really part of the LAMPs Stage 3 projects, but some work has already been done in this area. There are large differences between countries concerning collection rates and the issues surrounding valuation, which is a key ingredient of property tax administration.

In many ECA countries there are considerable problems in relation to the valuation for property tax. Often market rates are not used and calculations are based on replacement value or assessments of production capacity for agricultural land. There exist many problems which result in reduced revenue and in an unfair distribution of the tax burden. Taxpayers are sometimes able to influence the assessment process, false rent receipts are presented, the valuation procedures lack transparency, the basic data are insufficient, and the administrative capacity and staff qualifications are insufficient.

It is important to bear in mind that in many ECA countries the problems with the collection of property tax are more serious than the problems with valuation. Enforcement steps are not taken and as a consequence many taxpayers choose not to pay. Because of this the revenue is reduced and the tax is perceived as unfair. It is, therefore, imperative that collection is improved before, or, at the same time, as valuation is improved. In transition countries the main challenge is to replace both the area based property taxes, and any property taxes based on the book value, with new property taxes which are based on the market values of the properties. In 1993, Estonia introduced a land tax based on the market value of land using a simplified valuation system. Latvia introduced a new property tax based on the market value of land and buildings also using a simplified valuation system. Slovenia introduced a market value based property tax using Bank funded project support. Poland and the Czech Republic are preparing to introduce market value based property taxes, but no political decisions have been taken yet. In Russia, a US-supported project has carried out pilot projects in two cities where market values have been estimated for the properties to be used as a basis for a new uniform property tax and the current Bank funded project is helping to establish a mass valuation and property taxation system for all real estate.

## **2.9 The Investment Linkages and the Role of Taxes**

The economic impacts discussed under the five linkages above are mostly additive while taxes are not quite so, because tax is not an income per se, although it constitutes income for the central and local government. The gross domestic product of an economy is defined as the

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<sup>37</sup> As property taxes are usually fixed to a 'rate' or percentage of the value charged to achieve an overall income this argument is not always true. The 'rate' could just reduce if the property values go up. However, as property taxes are only gradually gaining credence in the region and amounts collected are very small, it does provide the opportunity to keep rates fixed so that the income generated could gradually build up.

total of all consumption, investment and government spending in an economy as shown in the following relationship:

$$\text{GNP} = \text{Consumption} + \text{Investment} + \text{Government}$$

Although tax represents a bite out of income and does not count for income per se, it has a very useful function in the above relationship because the tax income from one year influences the availability of budget for government spending in the next. Some projects in ECA track fiscal impact.

For instance, Russia LARIS ICR notes the following:

A financial rate of return was not calculated for the SAR. However, the Project has had a financial impact through facilitating increased real estate tax revenues. The extent to which LARIS contributed is difficult to pin down as data are not available for non-project regions or for project regions prior to their inclusion in LARIS. From the figures available for the project sites, the income from real estate taxes has almost doubled between 2000 and 2002, making an increase in income of approximately 1 billion rubles per year (about US\$35 million per year).<sup>38</sup>

The revised development objectives focused on cadastre for providing the basic information about land parcels and the valuation and recording of all land parcels for tax purposes. The impact of an efficient and equitable cadastre system for land taxes has a huge and fundamental benefit. It provides the funds necessary for local government to operate and gives the necessary social infrastructure and support to local communities. The investments in technology and creation of the cadastre record are paid back within a few years.<sup>39</sup>

International trade implications of real estate markets may be considerable. Those countries in the ECA region that have been marketing properties to foreigners have attracted FDI and earned sizable sums of foreign exchange (about US\$ 5 million per year in Turkey, and about US\$ 1.5 million per year in Montenegro). There still remains a great potential to tap on this by expanding this opportunity.<sup>40</sup>

## **2.10 Consolidating the Linkages for Overall Economic Impact - Summary**

There is a relationship between the above described linkages and how national income is calculated. Basically, there are two common approaches to calculate the national income.

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<sup>38</sup> More details on the financial impact of the Project are available in the LARIS Center's Project Implementation Report.

<sup>39</sup> Local government can receive income through local property taxes, business fees, directly from government, etc. For small countries with small municipalities that lack capacity it may be better to hold off instituting property taxes because the cost of instituting such a system and collecting the taxes may not be justifiable. The Republic of Ireland, for example, does not have a standard property tax for this reason.

<sup>40</sup> There is often a reluctance to allow foreigners to own real estate, and especially land. This is not entirely logical because investors can not 'take away' the asset and the income and employment generated to the community can be very high. The situation does need to be carefully monitored, for example, the development of the Montenegro coastline was adversely impacted in aesthetic terms because of the large amounts of foreign money that suddenly became available, and the lack of good urban planning and management in the resort towns.

**The Expenditure Approach for Calculating National Income:** The first approach is the expenditure approach, which involves the following relationship

$$GDP = C + I + G + (X - M)$$

Where:

- C = gross consumption expenditures
- I = gross investment expenditures
- G = government spending
- X-M = difference between exports and imports

Tax does not figure in this relationship, but we have included the fiscal aspect in the below analysis.

We have not included ‘governance’ as a direct linkage, but LAMPs have had a positive impact in this area. Land administration is notorious for being susceptible to corrupt practices because of the value and importance of the assets, and the monopolistic nature of the authorities responsible for registering property rights or allowing property developments. Improvements in governance in the LAM sector will have a direct influence on national income – through making the whole system more efficient and transparent.

Another prerequisite for the linkages to work effectively is the availability of banks and funds available to those banks so that they are willing to lend using real estate as collateral.

Linkage	Impact Upon			
	Expenditure method for calculating GDP = C + I + G + (X-M)			
	Consumption	Investment	Government	(X-M)
<b>Linkage 1: Investment Incentive</b>	Enhances consumption due to increased productivity	Investment <u>in land</u>	Increase in income leads to increases in income tax revenues and more funds available for spending.	
<b>Linkage 2: Collateral and Credit</b>	Enhances consumption due to increased production	Some investment in land and commercial enterprises		
<b>Linkage 3: Land Markets and Transactions</b>	Enhanced consumption due to transactions	Some investment in real estate.	Increase in transaction tax revenues. More available for spending.	
<b>Linkage 4: Labor Mobility and Efficiency</b>	Increased wage and rental income positively impacting consumption			
<b>Linkage 5: Land Liquidity, Deposit Mobilization and Investment</b>	Significant consumption implications for those earning an income	Investment <u>on land</u> , huge potential in ECA to replace existing housing stock of deficient quality		
<b>Linkage 6 (added): Fiscal</b>			Tax income from one year influences the finances available to Government for spending in the following year	
<b>Linkage 7 (added): FDI in real estate</b>		Promotes further investment in real estate		Acts like investment and helps with balance of payments
<b>IMPACT</b>	Positive balance in the category implies growth in national income			

Table 2-1. How Conceptual Linkages Affect National Income Based on the Expenditure Approach

**The Income Approach for Calculating National Income:** Another way of looking at the national income involves the so-called income approach, where the income accrues to various factors of production. The factor earnings consist of:

$$\text{GDP} = \text{rent (land)} + \text{interest (capital)} + \text{wages (labor)} + \text{profits (entrepreneurs)}$$

The income impact of the above described linkages are being captured in the below table. The increase in each income category implies increased national income, and hence economic growth.

Linkage	Impact Upon			
Expenditure method for calculating GDP = Rent + Wages + Interest + Profit				
	Rent	Wages	Interest	Profit
<b>Linkage 1: Investment Incentive</b>		Ability to hire off-farm labor	Implies returns to the capital tied in land	Profit to farmers from increased farm productivity
<b>Linkage 2: Collateral and Credit</b>			Interest earnings to financial intermediaries	Commercial activity profits accruing to entrepreneurs
<b>Linkage 3: Land Markets and Transactions</b>	Ability to rent and enhanced rental rates			Capital gains to transacting parties
<b>Linkage 4: Labor Mobility and Efficiency</b>	Ability to lease out land to others	Increased wage income and reduced poverty		
<b>Linkage 5: Land Liquidity, Deposit Mobilization and Investment</b>	Rental income to owners from real estate development	Wages to labors working in real estate development	Significant interest earning by financial intermediaries.	Significant income from appreciating property values and expanding markets
<b>IMPACT</b>	Positive balance in the category implies growth in national income			

Table 2-2. How Conceptual Linkages Affect National Income Based on the Income Approach

## 2.11 Conclusions

LAMPs generate economic growth through the five linkages described above. Review of literature and sample studies from the ECA region reveal that investing in LAMPs yields high economic returns both in the short- and long run. Even in the short-term, LAMPs can sometimes generate impressive results. In Armenia, for instance, the number of real estate transactions more than doubled between 2000 and 2003, showing how LAMPs can improve the volume of transactions in real estate markets in a short span of time. Also it is important to capture inter project synergies, which usually go unnoticed. For example, in the case of rural Kyrgyzstan, the Kyrgyz LAMP (or LRERP) has contributed to the emergence of 50% increase in crop yields reported by the On-Farm Irrigation Project, which is a promising outcome for similar projects with a complementary character in the region.

The relationship between micro-level interventions and their macro-economic impacts is the most significant characteristic of LAMPs. Compared with infrastructure projects or most other projects, LAMPs are relatively low cost projects, while their target is either the entire country or a good part of the county. In other words, LAMPs constitute micro-level interventions with a technical focus on a single or few agencies. Their repercussions, however, are unquestionably macro-economic. Future projects should take this micro-macro relationship and try to exploit it further, while accumulating data and contributing to a better understanding as to the nature of this relationship. The economic and financial impact of LAMPs is so startlingly high that, they may sometimes defy conventional cost-benefit analysis. Evidently, there is still a need for more data and information to consolidate the evidence. Ex-post evaluations for LAMPs are scarce. These project specific assessments should be held systematically in the future, providing further insights and data. The feedback from these efforts within the ECA region would inform future interventions much more than the experiences drawn from countries with totally different settings.

Some of the investment linkages discussed above have a more sophisticated character than others, or they may be prerequisites for the subsequent action that may follow. For example, investment on the land would offer a case of a stronger linkage for development if investment in the land has already been realized beforehand, thereby contributing to agricultural income and capital accumulation. Similarly, improved access to collateral and credit enhances domestic financial markets as a first step, and later, international trade of real estate through FDI would ensue. This level of sophistication is consistent with the current level of development of host countries. As a result, it can be concluded that, specific objectives and related benefits from the formalization of property rights have varied with the stages of economic development of the countries and regions.

In the ECA region, the objectives and expected benefits have initially been primarily aligned with the creation of private ownership and the transferability of property rights. When real estate-related problems, such as tenure security and lack of efficient real estate markets are resolved, the outcome translates into “security and safety of real estate” and stimulates the participation of various other economic actors. As land and labor are the basic factors of production for almost all economic activities, improved mobility and secured availability of these key endowments increases productivity. Increased production triggers consumption and increases savings, which stimulates investment environment. Finally, it must be acknowledged that LAMPs cannot function in isolation. LAMPs need certain complementary reforms, especially concerning the legal framework of investment strategies and liberation of markets in order for them to be more effective. Also, the social impact on the population must be monitored. The reforms should not be so focused on ‘economic development’ that the vulnerable or poorer members of the community are neglected or excluded from the benefits.

## LESSONS LEARNED FROM LAMPS

### 3.1 Introduction

Of the 37 land projects in the ECA Region over the past 13 years, some 21 are stand alone land administration (registration and cadastre) projects and most of the lessons learned relate to these projects.<sup>41</sup> This Chapter covers the practical lessons learned about how to implement projects and ensure they are successful. The first, and most important lesson learned is that the policy, law and institutions need to be in place before a project should commence. Once these are in place there are many common elements that have characterized successful projects in LAM.

Often ECA country governments had developed legal frameworks and assigned institutional responsibilities before the Bank become involved with LAM. Sometimes there had been some involvement by Bank advisors (including the inclusion of some conditionality in structural adjustment loans) or by bilateral donors, but on the whole the changes were so rapid that governments made urgent decisions based on necessity. In many countries of the region in the early to mid-1990's currencies were devalued drastically, savings soon became worthless, salaries were not being paid to government workers, utilities were failing and simple laws had to be passed quickly. Civil Codes, Land Codes and laws affecting real estate registration often contradicted each other or contradicted other laws that were being passed at the same time. Many decisions were made for political popularity or out of dire need. For example: (i) in Tajikistan legislation was passed in 1998 allowing the public to locate, occupy and utilize defined land areas lands. This was done to ensure people had access to land to grow food and avoid starvation; (ii) in Kazakhstan the registration of property rights was established by a simple Presidential decree in 1995 (and not changed even by the end of the Bank funded project in 2000); and (iii) in Kyrgyz Republic in 1999 people were still often paying for services (including registration services) with sacks of wheat. Privatization was often done very quickly with little oversight regarding accuracy (and sometimes fairness) of the process, and unpaid government officials were unsure how to register the changes and were often tempted with 'under-the-counter' payments.

There were common activities in most Bank funded projects that flowed from necessity:

- a. Reviews of real estate policies, laws and regulations to make them consistent and meet the standards of international good practice;
- b. Assistance with institutional development, including building works, furniture and equipment;
- c. Capacity building, especially providing training and assistance with study tours to see how such systems worked in countries with developed real estate markets;
- d. Information technology for land administration;
- e. Surveying methodology and systematic registration of real estate rights;

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<sup>41</sup> In the early years land issues were included as part of larger projects in the Agriculture sector, but it soon became apparent that LAM: (a) covered both urban and rural areas, and the greatest demand was in urban areas; (b) often involved agencies that had little relationship to the Ministry of Agriculture; and (c) were complex. It was therefore decided that 'cadastre and registration' needed to be 'stand-alone' projects.

- f. Improving service delivery through improving management, establishing service standards and establishing monitoring and evaluation systems;
- g. Public awareness campaigns, improving transparency and provision of directed assistance to the more vulnerable members of the community; and
- h. Developing a more business oriented land administration service.

### 3.2 Policy, Legal and Institutional Frameworks

In many countries of the region the basic policy decisions to allow some level of private ownership and encourage economic development through privatization of land, homes and enterprises was made at the same time that the socialist systems collapsed in the early 1990's.<sup>42</sup> The specific policy statements and decisions had to be developed, and with regard to land rights, this included land issues in the civil codes and development of Land Codes that clarified land rights, and what use the public could make of the land and property rights. A second level of policy then was needed to define in greater detail the policies that affected a persons right to sell, lease, encumber, change usage, pay taxes, etc., on the land and property. A third level requires policies that address issues of interaction between agencies throughout government that deal with land and its development. As virtually all human activity involves the use of land for shelter, sustenance, social interaction or profit – this is a never ending activity.

The policy environment in most ECA countries is still under development and even the word 'policy' is often misunderstood or not well translated. It is often confused with 'politics' or translated as 'strategy'. In the Kyrgyz Republic, Gosregister's charter gives the Agency just about every responsibility associated with land and property and it has become a de facto one agency policy driver as well as implementer. However, other Ministries sometimes feel resentful or left out. It is more common that there is no single Ministry dealing with land issues. For example, in 2005 a comprehensive policy document was developed in coordination with the Albanian government, but little has been implemented because of the lack of a central authoritative driving force.

Interdisciplinary, consultative, policy processes and alternative mechanisms for advancing certain policy decisions are quite new in ECA and civil society is also largely underdeveloped, thus public pressure for better policy solutions is limited. Some projects have stand alone components focused on land policy (Tajikistan, Macedonia), while most others incorporate this into the regular work of the project as part of the regular 'legal development' activity, because laws should be developed after policy decisions are made. In Macedonia the land policy component suffers due to lack of a clear champion for overall land policy. The cadastre agency, though interested, lacks the mandate to lead policy discussions on topics such as state land management and land use planning, and no other champion has emerged. In Bosnia and Herzegovina (BiH) an inter-entity Land Administration Board was established to make strategic decisions for the project, other donor projects and the whole land policy area. The composition of this Board includes representatives from different Ministries and

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<sup>42</sup> This is a generalization. During the 1980's some experiments with privatization were made and even in the 1990's there were great restrictions on the ability to sell or mortgage in many countries. 'Private' ownership is still not permitted in Belarus or Tajikistan and agricultural land sales are still not permitted in Ukraine.

interested parties. This is very commendable because of the difficult political environment in BiH.

The experience to date has been mixed. While projects that have stand alone policy components have struggled, those that focus on the main land administration focused laws have done quite well. In effect policy discussions take place while laws are drafted, but they do not have the breadth of input that ought to occur.<sup>43</sup> No law is passed without being passed around the various Ministries for review, but contradictory legislation does get passed and this, in effect, defeats the policy that one of the agencies might be trying to promote.

Lack of access to real estate and insecure or uncertain property rights are a barrier to investment and a constraint on economic development. Lack of accurate or realistic information about property values can also cause problems in the credit market (as evidenced by the recent world-wide financial crisis) or inhibit transactions. Projects in the ECA region have supported many transition countries to build more effective and efficient land administration systems focused on customer service with the objective of supporting land and property market development. We have learned from experience – very difficult implementation experience – that projects that begin without the basic laws and institutions in place have much longer and more complex implementation. Though it is possible to see the project through (Romania<sup>44</sup>, Russia<sup>45</sup>, Bulgaria<sup>46</sup>), projects often falter if the necessary basics are not in place (Ukraine<sup>47</sup>). The issue of institutional responsibility is still not resolved in Ukraine.

The basic legal framework includes the necessary laws for land administration (land code/property law; registration and cadastre laws) and most countries of the region now have good basic legislation. Additional legislation that supports mortgaging, multi-occupancy apartment blocks, changes of land use, property taxes, restitution, compulsory purchase, valuation and real estate agency, etc. are mostly completed. Regulations governing cadastral survey, compensation for mistakes, registration office procedures, land allocation, dispute resolution, etc. have also been prepared, or are under preparation in most countries. The review of these issues in all project preparation has been highly beneficial. The basic legal framework and clear institutional roles and responsibilities for implementing the law need to be addressed and agreed if the project is to be successful. Other than the basic laws and institutional responsibilities it is unusual to have the full legal framework in place, and projects also often require amendments to the basic laws during the course of the project.

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<sup>43</sup> Issues can include the holding by the military of large tracts of land, confusion in ownership of land between public bodies (especially the State as opposed to Local Government), forest or pasture development and its control, squatters, Roma settlements, etc. Then the management of publicly owned assets and management to reduce the impact of pollution, climate, erosion, etc. are all related to developing good land policies.

<sup>44</sup> Non-functional institutional arrangements were changed drastically during the latter part of the project.

<sup>45</sup> In Russia the LARIS project went ahead on the basis of a Presidential decree, but when the law came through responsibility was given to the Ministry of Justice - which was not part of the project. The project was restructured to cater for this.

<sup>46</sup> In Bulgaria the requirements for cadastral work were too expensive and time consuming. It took a lot of time and effort during project implementation to change the regulations into something that was workable.

<sup>47</sup> In Ukraine the law was in place but the necessary regulations were never passed because of opposition by the Ministry of Justice. The registration system could not be implemented and the component dealing with this was cancelled during project restructuring.

Key lessons learned:

- a. The basic legal right to own property and transfer it, and the institutional responsibility for doing so, are pre-requisites for LAMPs - but refinement of policy, laws, regulations and procedures should be a project activity.
- b. An overarching Ministry, agency or commission making policy decisions is preferable for developing a land policy environment in which all LAM activities are catered for.
- c. Policy and legal development is an area that still needs substantial input in the ECA region.

### 3.3 Institutional development

Once the basic legal and institutional framework is in place, there is still the fact that many of the agencies responsible for managing land administration services lack the necessary capacity, human resources and skills. Projects therefore need to also support institutional and human development. Institutional development involves not only training and human resource development, but also organizational and financing aspects, as well as improving access and transparency. To be effective it is necessary to understand the organizations involved and the institutional arrangements for land administration and the challenges these institutional arrangements may present.

Most countries begin the reform process with institutions already in place and this can have an impact on the pace and ease of reform. *Reform has been slower and more costly in those countries which have a dual land administration system.* This system was set up in the late nineteenth and early twentieth centuries in Eastern Europe and some parts of the Balkans (Slovenia, Romania, Bulgaria, Croatia, and Bosnia-Herzegovina); at the time that the region was under the Austro-Hungarian Empire. It has left a legacy in the region with courts or Ministries of Justice responsible for registration of rights on property, while cadastre agencies, usually reporting to a different ministry or to local government, are responsible for the location of parcels and other spatial information. The UNECE guidelines for land administration recommend that a single agency be responsible for land administration. Single agencies have certain advantages: they can operate more efficiently and are less costly than multiple agency models; the cadastre and legal data are naturally linked and harmonized; automation is simpler and less costly; and it is easier to be financially self-sustainable.

Several of the transition countries of Eastern Europe that had a tradition of two agencies took the opportunity to convert to a single agency when they re-established their cadastre and registration systems (Czech Republic, Slovakia, Hungary, Lithuania, and Latvia). During the course of the Bank financed General Cadastre and Registration Project, Romania took the decision to combine its land book registration system with the cadastre creating a new National Agency for Cadastre and Real Estate Publicity. This was not an easy decision and came after some four years of difficult project implementation, but it was recognized by the Romanian government that the existing dual-agency structure was not working – either for project implementation or for the citizens of Romania. The rationale for this type of organizational merger is the cost-savings and efficiency of a single agency for maintaining the spatial and ownership rights data in one. Registration is an administrative function that does

not require a judge or court decision, but involves a willing buyer and willing seller.<sup>48</sup> Serbia has also chosen a single agency and the Republic Geodetic Authority is taking over the registration function from the land book courts and this is supported by the Bank financed Real Estate Cadastre and Registration Project. This decision was made by the government of Serbia prior to the project preparation. In both Romania and Serbia the courts are overloaded with other matters of justice, and land registration, as an administrative function, is seen as a natural place for the courts to disengage. This is in fact the recommendation of the Council of Europe Committee of Ministers of 1986<sup>49</sup> in which they respond to the problems of overburdened courts in Europe. The recommendation outlines a number of administrative tasks, including land registration, which should not be the responsibility of judges and courts.

For those countries that have chosen not to merge the cadastre and registration functions in one organization, most problems relate to the coordination of activities and lack of harmonization of records and data with the cadastral agencies. If institutional integration is not possible for political or other reasons, then information technology provides an additional opportunity. Croatia and Bulgaria have chosen integration via information technology, along the lines of Austria. In Croatia, a new IT system is currently under development that will have only one database of real estate information including the cadastre and registry. The relevant agency will be responsible for maintaining its part of the data but for customers the goal is one record of location, ownership, encumbrances, etc. In Bulgaria, two linked databases have been created.

In the countries of the former Soviet Union the previous systems were focused on technical inventory and they treated land and buildings separately in separate agencies.<sup>50</sup> The objective in these countries is to bring together the records on land and buildings and again to move towards supporting the property market with a streamlined, customer oriented land administration system. As change has occurred, several countries have merged their institutions into a new unified cadastre and registration agency. This enables property rights to be recorded without fear of overlap or mismatch, and provides good service to those that want to be involved in raising capital through mortgage or to otherwise do business with their property. The agencies are often self-funding and thus do not require government intervention. Countries such as Moldova, Kyrgyz Republic, Armenia and Belarus took this approach and have benefited from reduced bureaucracy and have coped well with a rapid growth in real estate market activity. In Kazakhstan, the Ministry of Justice took over the Bureau of Technical Inventory (BTI) to create a new registration service, but they have retained a separate cadastre (land and buildings) run by the land agency. The registration service runs effectively on fees for service, but the land agency relies on government budget and is often unable to complete all the work it needs to do. In Russia the public had to go to

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<sup>48</sup> Consultants from countries that still retain the dual system often argue that legal control by an independent non-government agency (the judiciary) is required to avoid government interference and provide legal safeguards. The authors do not see any problems with very many countries in the developed and developing world that do not have this 'safeguard' and can not agree with this stand point. The single agency model is generally far more efficient and to be recommended. In the last few years Norway, Sweden and Finland have changed to single agency or 'non-judicial' systems, joining Netherlands, Ireland, Italy and New Zealand that did this some years ago.

<sup>49</sup> Council of Europe Recommendation No. R (86) 12E of 16 September 1986

<sup>50</sup> Bureau of Technical Inventory (BTI) recorded buildings and Land Committees recorded the land. Sometimes Property Committees or other agencies were responsible for commercial properties, government properties, restricted access properties, multiple occupancy properties, etc.

three agencies (the BTI for building registration, the land Committee for Land Registration and the Ministry of Justice for the registration of legal rights). Service was very poor. The building and land registers were combined in 2006. A recent decree (May 2008) has now dissolved even the two remaining agencies and is establishing a unified service within the Ministry of Economy.

Azerbaijan has established a unified registration and cadastre system based on the old BTI and their initial progress is very positive. In Russia and Ukraine attempts to build registration systems in new organizations not utilizing the previous capacities of BTIs has not progressed well and the public suffer from insecurity, very high fees and slow procedures. In Georgia, a similar attempt to establish a registration system based on the land agency without BTI involvement ended in failure and the government disbanding both the BTI and the land agency to establish a new agency for registration under the Ministry of Justice, which now functions well.

Some countries have made use of existing notary systems to process documents, provide advice and authenticate signatures, while others have continued without notaries and the courts or the registration agencies themselves ensure that the persons dealing with properties are the legal owners and that dependents or spouses are protected when a transactions occurs. Each model seems to work well if implemented effectively and the only drawback of introducing notaries, especially private sector notaries, has been the associated cost. The additional cost is mitigated to some extent if competition is allowed, but systems that institute a monopoly for notary services can be very expensive for the user. Bulgaria, for example, has competition and costs are not excessive. In any event a professional adviser is needed when transactions occur (this is true worldwide) and this service is often provided by notaries, real estate agents, mortgage departments in the banks or the responsible agencies for registration. The LAMPs have not identified any preferred model, apart from a reluctance to allow monopolies for providing advisory services or notary functions.

Finally, and *often most importantly*, in several Bank financed projects in ECA a **champion** within government has proven to be a key success factor. Whether a senior government official who provides political cover, or a senior bureaucrat who provides continuity and leadership it is a key factor in establishing good land administration systems. Projects can succeed without a champion, however, it can be a much slower process and more difficult. In Kyrgyz Republic the first director left his job as a Presidential Advisor to take on the role as director of Gosregister and acted as a strong champion for the agency and the project. He visited each of the municipalities personally in order to ensure good quality premises for the local offices that Gosregister would open. He oversaw every aspect of implementation, secured sufficient funding and quality staff and helped to make sure the municipalities agreed to approve the registration of properties that lacked full legal documentation for their homes. In this way they “regularized” over 600,000 properties free of charge and enabled the residents to come out of the ‘informal’ sector. Both Moldova and Armenia also had strong directors in the early years of the projects. What these directors had in common was a strong commitment to the reform and the political backing to see it through. In Croatia the long standing director of the cadastre agency has remained throughout project preparation and implementation, even as the officials from the Ministry of Justice have changed three times. Without this continuity of leadership in at least one key implementing agency it is questionable if the project would have made it this far.

The converse of the ‘active champion’ is also true. In several countries the head of the counterpart agency is a political appointment and the person in charge is changed whenever there is a new election and a new government appointed. This has severe detrimental impacts on the projects. In some cases the incoming official may not like any aspect of the project or what it is trying to achieve and wishes to make radical changes. This has happened several times in Bulgaria, Ukraine, Romania and Serbia. Sometimes the new head of the agency improves matters, sometimes the reverse is true. In some cases the Project Implementation Unit head and his/her staff are also changed. In any case the change will involve delays of many months while new officials get to understand the project, recommence procurement activities and revise activities that are already underway.

Key lessons learned:

- a. Institutional reform is challenging and requires a long term commitment and political will as there are often winners and losers.
- b. A champion can be a key success factor; projects can succeed without one but are much more difficult and lengthy.
- c. This kind of reform takes time and does not always fit the Bank’s schedule – but if both the Bank and client carry on, results are possible.
- d. Single agencies (which include both: rural and urban areas; land and buildings; cadastre and the registration of property rights) work best, but they are not always politically feasible, and it should not prevent projects going forward if a single agency cannot be agreed. It is important to keep the institutional arrangements as simple as possible.
- e. Support services providing advice in valuation, transaction processing, etc. will develop through market forces. Notary services can be provided by the private sector, government or the responsible agency. Services provided should be controlled through legislation or professional bodies, and monopolies should be avoided.

### **3.4 Building Capacity**

The type of land administration reform that ECA projects have supported requires not only institutional and technological change but equally large investments in human capital. World Bank financed projects in ECA often include funds for training and staff development. Other donors such as Norway, Sweden, Germany, Netherlands and the European Union have joined in this support. Training activities have been part of a separate project component or integrated into technical components. Training plans combine structured classroom training with on-the-job skills development in areas such as legal and technical procedures, information technology, GIS, management, customer service, and professional skills. In Croatia, staff of the cadastre agency and the courts have participated in more than 400 training courses since 2002, and the training program is integrated with training provided by Bank financing and a SIDA grant.

The first land administration project in Russia (LARIS) had a very heavy focus on training, that included a substantial number of overseas visits and training programs in order to understand how modern market economies function in the whole land administration sector.

Study tours have been exceptionally valuable for counterpart agencies across the region as the opportunity to see systems operating in practice and to talk with colleagues in the host countries has been invaluable. In Russia over 1,000 people were involved in international training programs and 1,555 in local training programs. In addition, the counterpart agency established regional training centers to impart the gathered knowledge and provide structured training courses throughout the country. Local offices then had the basis for improving their own cadastral systems successfully. This was considered the most successful part of the LARIS project, which ran from 1994 to 2004.

In Georgia (using KfW funds from Germany) and in Kyrgyz Republic (using Bank funds) basic training was provided en masse to large groups (several hundred in total) of people hired mostly from outside the land administration sector and these teams completed the systematic registration (including all survey work) quickly and at a low cost. Georgia, Armenia, Macedonia and Moldova focused on private sector development and encouraged surveyors to establish companies and bid on work. This model has been very successful and has helped these countries establish a vibrant private sector. In Estonia it was a Loan Covenant that the national land board stop doing surveys. A brand new private sector developed and now the private sector does all the survey work in the country.

In a number of ECA countries, Bank financed projects have helped to build the capacity to manage human resources and provide on-going professional training and development. This has included the establishment of training centers. The skill sets are required for the future work of the agency, and recruiting and retaining staff requires advance planning that is in line with business needs. In Macedonia and Serbia, the WB financed projects together with SIDA are providing assistance to prepare a human resource strategy as part of the overall strategic business planning process. Overall the goal is a longer term one of professionalizing the staff, not just training them for today's needs. This professionalization of the staff also supports improvements in service, transparency and good governance of land administration systems.

Key lessons learned:

- a. Human capacity to carry out and sustain the reforms in the land administration sector is a long term activity and should be built into the project design from the start.
- b. The ability of the institution to sustain such training and capacity building activities should be included – so that the training programs can be transferred to the agencies/ministries upon project completion and promote long term professionalization of staff.
- c. Capacity to manage future projects and significant large contracts, such as IT contracts, is needed and should be built into training programs early on.
- d. Projects provide an opportunity to build private sector capacity.

### **3.5 Automation and Information Technology**

The need for improved information access and data packaging requires more and better information technology. Among the key lessons learned from ECA land administration projects is the need to start with the strategy and business case. Automation must include

business process reengineering and understanding different users and their requirements. Several projects in ECA failed to do this and the results were difficult, long implementation periods and IT systems that do not meet user requirements.

Within Bank financed projects in ECA, land administration information systems have been developed either through large contracts bid out to the private sector or through building systems in-house.<sup>51</sup> The ‘in-house’ approach has generally been more successful because the systems can be built in a modular form as the agencies build their own capacity to utilize and manage the different modules and technology. Moldova was the first to establish such a system developed by the agency’s own staff with technical support, packaged software and equipment financed by the project. As it upgraded the system further, the cadastre agency utilized part of the credit funds to hire international consultants for advice on the design and latest technology, yet the agency remained in the leading role. In Armenia, Kazakhstan and Azerbaijan foreign companies produced workable software but in all cases parallel locally produced software was eventually the preferred option. In Kyrgyz Republic, Russia and Ukraine systems with varying degrees of functionality were produced internally. In Russia, the work was (and is) overseen by a state-owned enterprise that has to fund itself from fees. Much of the work was subcontracted to private developers and the rest was developed by the state-owned enterprise itself.

In Romania, a functional system externally tendered was established after many difficult years. There are ongoing contracts to international suppliers in Croatia, Bulgaria and Serbia. Georgia had a variety of donors developing systems (Bank, GTZ, UNDP), which they eventually utilized in their own system development. In Azerbaijan and Montenegro the Bank financed projects will support locally developed systems to be enhanced and further developed using a combination of in-house, local and international support. Azerbaijan, BiH and Kyrgyz Republic took the approach of developing the registration system using attribute data only and are now adding the more complex graphical system and data more gradually. The approach used throughout the region is detailed in the table below:

**Table 3-1. Summary of ICT Development in ECA Land Administration Projects**

Country	Method Of Development	Comments
Bulgaria Croatia Romania Serbia	Large international contracts.	In each country the time taken to develop technical specifications and to tender took 2 to 3 years. This was <i>after</i> the IT project concepts and initial designs were prepared. The Romanian system development and implementation in 7 locations (about 15% of the country) took 3.5 years to develop and was very problematic. In Bulgaria the system was successfully developed and implemented nationwide within a period of 2.5 years. The first year of development was problematic, but the system now has both alphanumeric and graphical information accessible for internal and external users through Web access. The registration system is fully centralized and data is available in real time. All data is migrated. In Croatia the system is still under development. The first year and a half

<sup>51</sup> Two-stage bidding (a Bank procurement procedure in which the bidders propose a solution first, and then in a second stage all bidders are requested to bid on a design that has been abstracted from the proposals) was tried in Romania, but proved to be very time consuming and did not end up with a better result.

		were mainly focused on business process reviews and re-engineering. The full system is expected to be developed and implemented in pilot locations by the end of 2009. In Serbia the system is still within the first year of it's development, but is progressing well.
Armenia Azerbaijan Kazakhstan	Large international tenders, and locally developed systems.	Large international tenders produced good workable systems, but the countries themselves were reluctant to rely on outside contractors for improvements and maintenance, and developed their own systems in house. These local systems are now the preferred option.
Moldova	Internally developed	Successful system developed in-house with international technical assistance as and when required.
BiH Kyrgyzstan Montenegro	Modular approach using local resources.	In all three countries the simpler attribute databases were developed first and the more complex graphic data added (or will be added) later. Systems built in country (but with donor aid, in the case of BiH). Produced good workable systems that could be quickly used at very low cost.
Estonia Latvia Russia Slovenia	Developed in house	Successful systems developed by the agencies themselves (using donors and local contractors as needed). In Russia a self-funding state enterprise belonging to the cadastral agency has been responsible for the cadastre system development.
Turkey	Internally developed	System developed by a State owned enterprise, but it is not yet used throughout the country. It is in the process of being implemented nationally and the cadastre and registration information being integrated.
Georgia	Donor assisted	In Georgia, three systems were developed by local contractors funded through German, Bank and UNDP assistance. The registration agency took the best parts of these to make their own, well functioning system.
Kosovo <sup>52</sup>	Partially developed using donor assistance.	Progressing satisfactorily using donor expertise and funds.
Macedonia	Local, with donor assistance.	A donor assisted system was not successful and old (DOS based) systems developed internally continue to be used. The agency is now trying to develop a new system using government funds. An international company has been contracted to develop the system.
Albania	Under Development	Locally produced systems and previous local tenders have not been very successful. A large recent international tender failed. Now considering development through 'twinning' with Sweden or more gradual development.
Tajikistan Ukraine	Under development	The institutional responsibility for the cadastre and registration system is not yet resolved. Locally developed systems cope with current activities but no unified system for cadastre and registration is under development.

Although the Bank originally favored large international contracts for system development, experience has shown that this probably is not the best model. The in-house development has generally been more successful. Another advantage of in-house development is that the

<sup>52</sup> Kosovo is currently under the administration of the United Nations Interim Administration Mission in Kosovo (UNMIK) under terms of UN Security Council Resolution 1244 (1999).

agencies can retain their own specialists (or use local companies) to amend and maintain the software. Large internationally bid contracts have proven to be very difficult to manage, very time consuming to tender, and very slow to produce a functioning system.

The management expertise in implementing large ICT systems has usually been underestimated – even in the most advanced countries. Good IT knowledge, contract management and project management experience is essential. In every case that a major contract was to be tendered the process of developing the technical specifications and tender documents took at least two years, and this was true even where an initial design had been prepared during the project preparation phase. Tendering and evaluation using Bank procedures has also proven to be time consuming and problematic. The most recent tender for an automated land administration system for Albania was cancelled 17 months after the request for proposals was sent to interested firms. The cancellation was due to the failure of the evaluation and award procedure. In countries without the expertise to manage large IT contracts, the incremental ICT development procedure is likely to be more successful. IT professionals can then gain management experience as they go along.

Information technology is only a tool – it allows for better data integration and access. IT also provides land administration agencies with great potential for data packaging and sales. This requires an understanding of the market and its data needs. When designing these types of systems it is very important to have the users (registry and cadastre staff) involved in the design and development phase. In both Romania and Bulgaria, the IT staff and programmers from the contractor initially led the development. In Bulgaria a business processes working group was established after one year and they worked closely with the contractor on the development of the business model, test cases, training modules, procedure manuals and system testing. However, without the business people involved from day one, the system that was developed needed many modifications once the users got involved. In Croatia, work describing the existing business processes and future changes began nearly a year before the IT development, and was led by business users. They are now working closely with the programmers to ensure that what they have described is what is programmed. The development of any software system must be driven by the business needs and by the business users.

External users should also be consulted when developing cadastre and registration systems. Few land administration systems function without the participation of professional intermediaries (lawyers, notaries, surveyors, real estate agents) and their needs should be considered in the design and development of automated systems. They will usually be the main users of systems that are designed to provide information about properties and rights to properties on-line. Often the ultimate goal is ‘e-conveyancing’, involving little contact with the land administration agency staff. This requires good linkages to the professional users who will act as agents for their clients – submitting applications electronically and searching online for the most recent information. The needs of these user groups should be considered early on with business process re-engineering even if e-conveyancing is years away.

Experience with software development is that it is always difficult and never keeps to schedule. Project extensions in Romania, Bulgaria and Croatia were necessary because of the slow pace in tendering and completing the software development. In each case the time for development and implementation of such complex systems was underestimated. In Albania, the first project cancelled the software development because it was far behind schedule and could not be completed in the project time frame. Testing, piloting and training are amongst

the final stages of any IT contract or process. They are essential but are often rushed because other phases are behind schedule. Testing is best done with real transactions. For example, in Bulgaria, one area was selected as a pilot and fully tested over a couple of months before rolling out the system. The Bank has not had any case where the full software development could be completed within a standard five year project, and perhaps it is too optimistic to think that this can be achieved.

There is also experience from ECA that placing too much importance on digital graphical data can delay important automation of registration and service delivery functions. Often countries have limited digital graphical data and the graphic systems associated with cadastre tend to be more complex to build and implement. The graphic data needed to populate systems can be time consuming and expensive to gather and digitize. Again, the incremental approach can work well in this case providing for immediate needs to secure and improve registration services, with graphical data to follow. Alphanumeric data for both cadastre and registration can be integrated at the start.

Training for users should focus on the business not the IT. Often ICT developments include changes to processes and standardization, and staff in decentralized offices do not know the new way of doing business. Learning how to use the computer will not help staff do their jobs – they need to understand the business and changes to the processes and this cannot be left to IT trainers. Training must be comprehensive and timely and this should be included in the ICT project timeline from the start. In Bulgaria the user training was provided in two phases with self training in-between and on the job training during the first days of the system implementation in each office. The two training phases covered legal, procedural, basic IT training and training on the system functionality. The training was provided by the developer in close cooperation with the company providing legal advice to the cadastre and registration agencies. The help desk system was operational before the system roll out.

World Bank bidding procedures have evolved over the past decade often in response to failures of IT systems procurement (not just land administration related). The ECA Region now employs two IT procurement specialists to support the significant amount of IT development under ECA projects. Combined hardware and software bids have not been successful to date. At the same time bids that do not include standard software licenses in the original system design bid run the risk of expensive requirements from programmers later down the line and a request for the ‘sole source’ purchase of licenses once the software is developed. The cost of the licenses, and the annual fees for those licenses, needs to be taken into account. Open source (free) software that can be used for the development of registration and cadastre systems has not yet been tested in the region.

The decision on how to procure an automated system using Bank bidding procedures will vary depending on the country. If the responsible agency has limited capacity an incremental approach will work better. If the IT project management capacity is in place, tenders should include detailed specifications and the software license requirements (costs and maintenance) for the system to be implemented nationwide. Hardware can be bought separately when the system is ready to be installed.

Key lessons learned:

- a. IT can play a role in helping to improve efficiency of the land administration agencies, but it is not a cure-all. Automating poor or overly complex procedures will not improve efficiency.
- b. The understanding of different users (including external users) and their requirements, and the business process reengineering, are essential. It is necessary to take the time needed to work with the client to ensure that what is automated is a good way to do business.
- c. Both the Bank and the client have underestimated the complexity and management requirements of large IT implementations. Need to plan for this during the preparation phase and ensure sufficient resources (staff, consultants) are provided or developed early on.
- d. LAMPs have had more success with home grown solutions (Moldova, Kyrgyz Republic) because the systems are ready in stages and they can be utilized more quickly<sup>53</sup>, thus providing better services earlier on.
- e. Make sure to allow sufficient time for piloting, testing, and training. These should be included in the planning up front. It is not just IT training, but processes and procedure training.
- f. Recognize that IT development will take some years and include realistic time schedules in project time frames. Support is needed not just for design and development, but for piloting and roll-out.

### **3.6 Cadastral Systems and Surveying Methodologies**

#### Surveying Methods

In many countries in the ECA region, the cadastre has a long and proud tradition and many cadastre agencies are reluctant to recognize the need to reform their methodologies and technologies for cadastre surveying. Modern trends and technology that simplify the field work and increase efficiency have not always been welcome as they go against traditional methods and entrenched regulations, and they also have staffing implications for many agencies because lower numbers would be needed. Some advances have been welcomed, including the establishment of Continuously Operating Reference Systems (CORS). These systems allow GPS equipment to be used easily and cost effectively by both the government sector and the private sector for the survey of property boundaries. In other cases the production of orthophotomaps is being used for analyzing the accuracy of cadastral information and as a base for cadastral index mapping, though there are still some agencies that are reluctant to accept this technology.<sup>54</sup>

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<sup>53</sup> It should be noted that the end product in Bulgaria, for example, is far superior in functionality than the much simpler system developed in Kyrgyzstan. Home grown solutions do have a better chance of being sustainable in the long run.

<sup>54</sup> Orthophotomaps provide a 'picture' or 'photograph' of the land but with true scale and fully rectified for errors in a similar way to conventional maps. They are cheap and quick to produce. Property boundaries can be seen on the ground or drawn on top of the orthophotomap. It is clear to see if the development on the ground coincides with the boundary positions, and it is also possible to adopt the boundary that is visible on the

Often staff are reluctant to use new technology or new methods because of fear of the changes these will bring to their work and their institutions. Identifying staff who are interested in the new methods and new technology, and who are respected by their peers, is important. These staff can act as 'change agents' and bring along others who may be more reluctant. It is also true that staff may become redundant because fewer are needed. If they don't get up-to-date with the technology or be ready to enter the private sector, the prospect of unemployment can be daunting.

Apart from ensuring that the same piece of land is not registered to two different owners, the primary purpose for surveying a boundary should be the ability to recreate that boundary in times of dispute. The people to be 'satisfied' with the result are the owners and the courts. Too often, the surveyor is the one that decides what is acceptable and insists on a level of accuracy that few others would either understand or be interested in. Indeed courts will often take verbal evidence and physical features on the ground as evidence superior to measurements made by surveyors. The key is to find a balance between acceptable accuracy and the time and cost for doing the work. There is a 'risk analysis' that should be undertaken. For example: Suppose a simple survey costs \$10 per parcel and a complex survey costs \$100 per parcel and takes several days longer. Suppose there is one case in 1,000 that ends up being disputed because of less accurate survey.<sup>55</sup> Then \$90,000 has been spent to ensure that this one boundary does not become the subject of dispute. In fact, experience in countries that have used less accurate survey methods does not show any noticeable increase in disputes over boundaries, so the additional cost is actually much higher. It is much cheaper, and much quicker, to rapidly survey boundaries using simple methods and to pay for the few disputed cases separately. By using simplified survey methods countries all across the CIS have managed to complete entire national coverage of registered real estate, while countries in Southeastern Europe are (generally) still trying complete their coverage and are expecting to be working on this for many more years.

#### Systematic vs Sporadic Registration.

Many countries in ECA are involved in systematic registration and cadastre activities. Systematic registration includes resurveying every property, adjudication of property rights and the public display of the rights being recorded so that owners can agree or object. Following this a register is created for every property in the district undergoing systematic registration. In many cases the records on both location (cadastre) and ownership (registration) already exist and the purpose of systematic registration is to update, upgrade, and harmonize the data. This can be a long term and expensive process, and, if the objective of the project is to develop the real estate market this can be achieved through methods of sporadic registration, i.e. registering the property at the time a transaction occurs. It may only be necessary to do systematic registration if: (a) there are tenure security problems to resolve; (b) a major land privatization or restitution program is underway; or (c) full records are required for a property tax to be implemented.

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orthophotomap. Adoption of these boundaries as the de facto legal boundaries is often challenged by surveyors as they do not conform to accuracy level of a few centimeters that is possible from ground measurements.

<sup>55</sup> In fact this is a very high percentage compared to reality, but is used for illustrative purposes. One case in 10,000 is a more likely figure.

It is essential to be able to meet market demand by providing cadastral and registration services immediately and systematic registration can delay establishing a registration system. This is especially so if: (a) the country is large (with millions of properties) and/or (b) the surveyors are unreasonable and insist on very outdated methods or extreme technical accuracy in survey work. It is slow painstaking work to complete the systematic work in Bulgaria, Croatia, and Albania – because systematic cadastre and registration has been chosen and the methodologies and procedures are overly complex.<sup>56</sup> Systematic registration has worked well in Georgia, Armenia, Kyrgyzstan, Moldova, and Estonia. In each country simple survey methods were adopted and costs were low (less than \$10/parcel). In Serbia and Macedonia a compromise was reached in which records that are apparently correct are just converted from existing records with no surveying or investigation, and only urban areas or areas where great change has occurred are included in the resurvey.

If the project does include systematic registration, the experience from ECA is to focus initially on the urban areas (where the bulk of the property market activities occur) in order to maximize the early impact. Systematic registration should occur according to a focused strategy, district by district, region by region. This approach has worked very well in Macedonia, Kyrgyz Republic and Montenegro.

The “sporadic” registration method is particularly effective in urban areas where there are already many transactions. Sporadic registration was chosen for Kazakhstan, Russia, and Ukraine. These are large countries that would require huge resources to register systematically. In Russia systematic registration has continued in rural areas in parallel with the sporadic approach used in towns and cities. Romania, Moldova and other countries have also included a sporadic registration approach to supplement systematic registration, which was limited to certain pilot areas. This combination can be successful as it both resolves tenure issues in key locations, but also lets the real estate market operate unhindered nationwide.

#### Private Sector development

Land administration systems are also dependent on a wide range of private sector professions – lawyers, notaries, surveyors. Bank financed projects, as well as those of other donors, have often sought to help establish the private sector, particularly surveyors, through contracting and training. In some countries the establishment of a private surveying sector where none previously existed has been a highly beneficial output (Macedonia, Serbia, Estonia and Moldova are good examples). In other projects the strengthening of the private sector has been an additional outcome of the reform of the land administration system and the funds injected. In Armenia the banks developed new mortgage departments to deal with the increase in mortgage activity (47% rise between 2002 and 2003) and in Romania the private sector grew and expanded during the course of the project responding to the projects contracting needs, including cadastre surveying, appraisal, data entry, digitization of cadastre plans, and document scanning.

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<sup>56</sup> The exception may be Turkey, a large country with the funds and technical competence to undertake large-scale systematic registration. The process is going well there but it is taking many years (decades) to complete. Over the last three years Turkey has completed the systematic registration of 8.8 million parcels covering 8.5 million hectares. However, Turkey has never been under a Communist government and has a large, well functioning cadre of staff, with property records that go back for many generations.

Key lessons learned:

- a. Use of private sector surveyors has been positive. They are usually more effective than the public sector surveyors.
- b. Competition brings prices down. The tendering procedure has helped to improve quality and reduce costs.<sup>57</sup>
- c. Use of new technologies has resulted in less costly and more accurate survey work.
- d. Systematic registration may delay establishing a registration system if the survey methodology and procedures are unreasonable and overly technical.
- e. Encourage the use of sporadic registration.

### 3.7 Improving Service

Improving service delivery is at the heart of the new business of land administration agencies in ECA. The idea that the citizen or customer is central to the work of land administration agencies required a change in orientation. In Western Europe it is often the customers, particularly professional customers such as banks, that have driven technical innovation and improved data access. Some of these same professional customers (particularly the banks and notaries) are also now beginning to require more sophisticated services from the cadastre and registration agencies in ECA countries.

In the Czech Republic, Bulgaria, Croatia, Estonia and Lithuania on-line access to registration information is already available. In the new Bank financed project in Azerbaijan, the notaries want online access to registration information; in other new projects in Bosnia-Herzegovina and Montenegro internet access is an expected output. In Moldova, commercial banks requested, and pay for, on-line access to data. Access to notaries has also been provided, initially in the capital only. In Romania, notaries were one of the first customers to request improved information access and the banks are now interested.

The 'Doing Business' Methodology measures all steps required by a business to register property including use of a notary, tax certification and other steps that are outside of the control of land administration agencies. The figures provided by Doing Business are an indication of the overall efficiency of the system and are comparable across countries. More work to improve the procedures outside the land administration agencies themselves is still needed. The figures for registration once the application reaches the local office varies considerably from 2 hours in Turkey, to one day (although 4 days is 'standard') in Armenia and Kyrgyz Republic, 47 days average in Russia, and 174 days in Croatia.

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<sup>57</sup> In Slovenia international companies originally provided lower prices than their Slovenian counterparts. Later Slovenian companies reduced their prices to match and generally won tenders. In Moldova costs from international companies were much higher, but the management expertise they brought and the quality control procedures improved the standards of local companies.

**Table 3-2. Efficiency of Registering Property by Region**

Region or Economy	Procedures (number)	Time (days)	Cost (% of property value)
East Asia & Pacific	5.0	99.0	4.1
Europe & Central Asia	6.0	72.1	1.9
Latin America & Caribbean	6.8	71.4	6.0
Middle East & North Africa	6.4	37.4	5.9
OECD	4.7	30.3	4.5
South Asia	6.4	106.0	5.9
Sub-Saharan Africa	6.8	95.6	10.5

Source: Doing Business Database (<http://www.doingbusiness.org/>)

In many countries in the region, cadastre agencies continued to function throughout the socialist period – maintaining cadastre records and topographic maps. The focus was on technical work, which included the land use and production capacity of the land, and was required for central planning. Today as these organizations modernize, often taking on the registration function as well, they have to turn themselves into service-oriented organizations that look outward in terms of products and services needed by citizens and the property market. These cadastre-based agencies may have strong technical skills but they often have limited capacity in information technology, customer service and business planning – essential skills for today’s market economies. For the cadastre agencies the future is less about precise maps and control of information for state uses, and more about integrated real property information packaged and readily available (via the web) to the property market. Services need to be provided quickly and cost effectively. In Bulgaria in 2008 the Cadastre Agency won an award from the Ministry of Public Administration after a “secret customer” check. This approach is also quite common in England, for example, where performance of clerks working with the public is checked by people pretending to be customers.<sup>58</sup>

For the registration services, especially those in the municipal courts, the changes ahead are also difficult. Courts are not naturally suited to registration, which is essentially an administrative function providing services to customers. There are no ‘plaintiffs and defendants’ for registration and courts are normally more concerned with judgments made by applicants than customer service. However, the delegation of registration from judges to trained and authorized clerks is helping to improve customer service and efficiency in several countries. The challenges are immense because transaction numbers are increasing exponentially. Shortly after the system was established in Kazakhstan, the number of transactions doubled for three consecutive years. In Macedonia the numbers of transactions increased by 27% from 2005 to 2006 and the number of mortgages increased by 40% over the same period. This trend is reflected in most countries of the region and most will still see great expansion in the numbers of transactions they will have to deal with over the coming years. The table below provides indicative data on growth in property transactions registered including sales, inheritance, and first registration (sporadic) over the first three project years. This growth can be attributed to: increased awareness citizens of the importance of protecting

<sup>58</sup> In the UK, and several other countries, a performance charter has been established and this provides the public with information about the performance objectives, quality of service, complaints procedures, etc. The government service has to report annually on their success with meeting their ‘charter’.

their property rights; improvements in data quality and completeness of records; increases in trust in the system; and improvements in service.

**Table 3-3. Increasing Property Transactions throughout the Region**

Country	PY1	PY2	PY3
Bulgaria <sup>59</sup>	400,000	699,158	802,562
Croatia <sup>60</sup>	357,914	416,228	457,075
Kosovo <sup>61</sup>	n/a	19,054	23,040
Kyrgyz	177,192	204,512	243,533
Macedonia	42,115	53,682	67,922
Moldova	23,649	53,266	104,784
Serbia	298,309	330,503	401,905

Part of the work of improving service delivery is reducing opportunities for corruption. Redesign of cadastre and registration offices to separate back office functions from front office counters where customers are served has an immediate impact on the opportunities for side payments and petty corruption. Posting information on service standards and fees on the office door or other prominent place in the office keeps everyone informed. In Macedonia where these measures were applied under the Real Estate Cadastre and Registration Project (2005-2009), customer surveys investigated the readiness of citizens to offer a bribe and it had decreased from 24% in 2006 to 17% in 2008.

Key lessons learned:

- a. Institutions need to move from being an organization that receives ‘applications’ and delivers products for the purpose of control to an organization providing a service to customers.
- b. Services must be maintained and even accelerated in the face of ever increasing numbers of transactions. (Often without increases in staff, but using better procedures and greater automation.)
- c. Simple changes in office design and work flows can have a big impact on reducing corruption.
- d. Professional customers can be drivers of change and better service.

### 3.8 Business Orientation

In many countries with advanced land administration systems registration is a self-funding, revenue generating activity and there is an international trend to ensure that services are

<sup>59</sup> PY1 is taken as 2004 and the figure is an estimate from data that was available. Figures for 2005 and 2006 are taken from actual data provided.

<sup>60</sup> The numbers of transactions in the land registry continues to increase from 450,000 in 2004 to 593,000 in 2006.

<sup>61</sup> Kosovo is currently under the administration of the United Nations Interim Administration Mission in Kosovo (UNMIK) under terms of UN Security Council Resolution 1244 (1999).

provided in a business-like and cost effective manner. But achieving this requires strategic planning and analysis that is often a foreign concept to traditionally state funded, output based organizations such as land administration agencies.

Several ECA land administration projects include strategic and business planning components or activities that seek to develop the modern business models for land administration. In both Serbia and Macedonia, the land administration agencies planned to become autonomous and self-financing and this has been partly achieved in Macedonia.<sup>62</sup> Bank funded projects support this through strategic and business plan development, including human resource requirements, client communication approaches, projected revenue, service standards, and market analysis for future products and services. Business plans are also planned for the new projects in Albania and Azerbaijan; and have been done in Bulgaria<sup>63</sup> and Armenia, but without the commitment to become self-funding. In Kyrgyz Republic, the agency has almost reached total self-financing status and in Moldova (where a business plan was developed with SIDA support) and Kazakhstan they had to be self-funding from the day the registration agency was established. At a time when Ministries of Finance are often trying to cut the level of staff in the public service and to reduce the burden on the treasury, it is a good opportunity to establish self-funding, business oriented agencies.

To reach a level of revenue sufficient for self-financing, many agencies in the region have to improve the service provided to citizens. Regular awareness and publicity campaigns are utilized to explain the purpose and importance of registration and regular customer surveys are providing annual feedback on the quality of service provided. Linking these activities so that customer surveys inform the upcoming public information campaigns as well as the annual business planning is also necessary.

Key lessons learned:

- a. Registration can be a self-funding, revenue generating activity and there is an international trend to ensure that services are provided in a business-like and cost effective manner.
- b. Agencies providing registration and cadastre services need a business orientation and substantial analysis and planning to ensure self-funding.
- c. Self-funding links in with a better customer orientation – to be self-financing the agency needs to understand its customers and respond to their needs.

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<sup>62</sup> The Agency for Real Estate Cadastre in Macedonia is self-financing all staff salaries, however capital expenditures are still budget funded. The Agency hopes to move to complete self-financing over the next five years.

<sup>63</sup> In Bulgaria, the idea that the Cadastre Agency should have a business plan was met with strong opposition from the Ministry of Finance. The management of the Cadastre Agency was also not enthusiastic about the notion in the beginning, but having prepared a good first business plan with the help of an international consultant, they have come to value business planning as a useful tool for formulating the vision for the future and securing the necessary funding to implement their activities.

### 3.9 Monitoring and Evaluation

LAMPs have important objectives – to improve coverage and completeness of data, improve the quality and efficiency of services delivered, and to contribute to the development of property markets. How the implementation progress is monitored and how the outcomes are measured is equally important. Monitoring during project implementation allows both the client and the Bank team to assess progress against a baseline and future targets and to make adjustments as needed in the project plan, to re-focus attention on activities that are lagging, and to respond in a timely manner to issues and problems. Practice shows that it is best to involve the client from the outset in the design of the monitoring and evaluation indicators in order to ensure they are understandable and feasible

For monitoring to be successful it is necessary to begin during the preparation phase with a well defined development objective and to identify key performance indicators that are specific, measurable, attributable, realistic and targeted. It is also necessary to have baseline data and clear targets to be achieved during implementation. Successful project monitoring often involves setting up a monitoring function with the project implementation or management unit. The key measures for monitoring include: levels of customer satisfaction (assessed from surveys); the speed with which applications are processed; numbers of registered transactions, including mortgages; amount of funds used for providing credit based on property as collateral; land values; amount of information accessed (often measured as ‘hits’ through the portal). A list of the indicators for each project and further commentary on Monitoring and Evaluation is included in Annex 3.

An even more important goal of monitoring and evaluation is to build a monitoring culture within the land administration agencies themselves. This is supported by the move towards more and better customer service (which requires good data on transaction processing times and customer satisfaction) and towards self-financing (again requires good data on numbers of transactions, revenue earned, human resources, etc.). This has been done successfully in Kyrgyz Republic where the agency – Gosregister – now has an M&E unit and will be producing regular monitoring reports. In Armenia there has been a unit providing information about land reform, property markets and associated information since the turn of the decade and this information is all on-line on the cadastre agency web site. The three Baltic countries, Estonia, Latvia and Lithuania, started even earlier with a joint magazine produced on a quarterly basis to describe their land reform achievements and provide property market information. In Croatia the Ministry of Justice, which is responsible for registration, now monitors all Land Registry Offices around the country on a weekly and monthly basis in terms of transactions processed and other data. Officials of the Ministry regularly use the data and monitoring reports to check on backlogs of work, assess staff performance, report to government, etc.

Key lessons learned:

- a. M&E serves an important project function but should also be built into the agencies themselves as an ongoing standard practice.
- b. M&E is essential for building a better service culture and for self-financing.

- c. Project M&E should be specific, measurable, attributable, realistic and targeted, with baselines established during preparation or within year one of the project.

### **3.10 Transparency and Public Awareness**

Most ECA LAMPs include financing for public awareness and education campaigns. In the ECA countries the public perception and knowledge of land administration systems and their services was limited, out-dated and negative. This was confirmed in focus groups and wider customer surveys performed during project preparation. Improving the image of these agencies, as well as the services provided, is important to build confidence in the land administration system. Citizens need to become informed consumers and understand the land administration system, the services provided, and the roles and responsibilities, including of citizens themselves.

Public information and awareness campaigns present many challenges to land administration agencies, however, they can be successful and have been in countries such as Croatia and Kyrgyz Republic. In Kyrgyz Republic the public awareness campaign included TV and radio spots and the use of bill-boards, advertisements on buses and mass production of leaflets and brochures. The new agency “Gosregister” is now well known throughout the country with 68% of respondents having heard of Gosregister and ‘know what it is doing.’ In Moldova a public information department was established at the agency which issued a ‘cadastre’ magazine, provided information to local offices, and undertook advertisements in newspapers, radio and television. In Armenia, the cadastral agency included the legal reduction of the time for registration (from 15 days to 7) and halving the cost as part of their successful campaign that led to much greater public acceptance and use of the registration system. In Croatia, the public awareness campaign (PAC) included posters and brochures and TV and radio advertisements to educate and ‘illuminate’ the importance of registration and how to access the system. In the most recent customer survey 60% of citizens reported knowledge of the PAC, and 80% of those recognize more or less the main campaign message.

Access to land administration services is not restricted in law; however in practice many poorer citizens lack the knowledge to access the complete range of services. In many countries the original privatization of land and property was not always fair or without problems and it is the less influential members of society that suffered most. The cost of notaries and other private sector professionals may also be prohibitive. Bilateral donors (for example, USAID in Moldova and Switzerland in Kyrgyz Republic) have been especially effective in providing legal aid to citizens that could not otherwise have their complaints resolved. LAMPs funded by the Bank have often included this requirement on a more limited basis. It is common to include these legal advisory services through providing lawyers at the registry offices to provide advice to customers.

Part of improving access and service delivery also requires increasing transparency of the land administration system. Citizens should know where to get the information they need and it should be easily accessible. Several countries are experimenting with putting this information on the web. Croatia has both the land registry data and the textual cadastre data online for free since mid-2005. Part of the reason for this was to publicize the records following automation so that the public could inform the agencies if records were inaccurate or outdated. So far they have received more than 50 million queries. Most ECA countries now post information about their land administration services and functions on government web sites.

Key lessons learned:

- a. Public awareness and education campaigns add real value to the modernization of land administration systems – helping to restore trust and increase understanding.
- b. Improving access also includes supporting those with low incomes to access the full range of services. Legal aid can help.
- c. New tools – such as the internet – can be used to easily improve access to information and transparency of information.

DRAFT

## THE FUTURE AGENDA

### 4.1 Introduction<sup>64</sup>

From 2000, as land administration systems have started to function with higher levels of land and property market activity, it is noticeable that a third phase of development is emerging. While the traditional drivers have been the need to secure property rights, support land and property transfers and to do this in a cost effective way, a new set of drivers is emerging which are concerned with the need for:

- Supporting economic development and fostering economic growth
- Developing a more integrated approach to land management through land policies that reflect environmental and sustainable development objectives
- Developing infrastructure and support mechanisms for land policy, land regulation and sustainable development
- Improving the quality and efficiency of services, value for money
- Adopting new technology and electronic services to create new products and services based on an upgraded geo-information infrastructure
- Maintenance and upkeep of data sets in a cost effective manner
- Greater understanding of risk in financial institutions for land and property backed securities.
- Developing appropriate institutional structures, financial models and distribution channels, income and cost recovery.

The aim is to develop a more enhanced infrastructure, embracing both public and private sector interests that will take advantage of new technology developments while delivering real benefits to the consumer at the local level, and reducing financial risk. The benefits of this are seen as:

- Direct support for economic growth and investment
- Effective regional development and informing local decision making
- Direct savings in terms of efficiencies, reduced delays, fewer processes and more use and re-use of data.
- Greater transparency, information flows and more efficient markets both encourage investment and reduce risk.
- Integrating environmental management and protection into land administration policy.
- Support for wider issues of social development, social inclusion and wider participation

The overarching key element is to extend land administration structures to include geo-spatial information<sup>65</sup> that will support enhanced administrative, regulatory functions in support of environmental and land policies

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<sup>64</sup> This chapter has been prepared from much larger papers prepared by Richard Baldwin and Suha Satana. The full text is available on request.

## 4.2 Key Issues for the Future

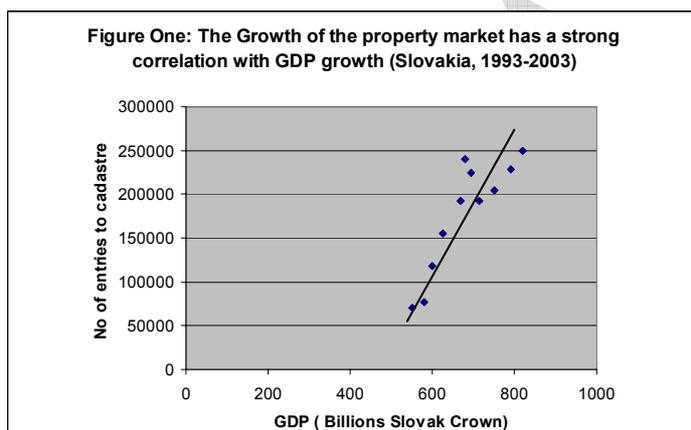
In terms of the transition process, ECA countries fall into the three basic groups outlined in Chapter 1.

- i. countries where basic property rights are still being assigned
- ii. countries still building cadastres and still have incomplete coverage
- iii. countries where basic land administration functions in place, now entering more mature phase

Group One countries will continue to need bank support for large institution building and land titling / data conversion projects for some time.

Group Two contains a range of countries which are still mid way through their reforms. Bank programs are in place, or are planned, for each of these countries which typically address titling, basic cadastral mapping, Information systems and the development of a private sector real estate industry (valuers, lawyers, surveyors, estate agents). These countries are mostly still at the EU applicant or associate member applicant stage.

The Group 3 countries are all now EU member states exhibiting significant growth rates in



their land and property markets which have a strong correlation with their GDP (see Figure 1). In terms of the traditional land administration functions, these countries have either now completed their basic land registers and cadastres or have a very significant level of completion. Real Estate investments are regarded as relatively safe and these countries are now appearing within international property indexes and investment portfolios. In administration terms,

the focus has shifted to the implementation of administrative and environmental directives such as LPIS, IACS, wine and vine cadastres, and INSPIRE.

These countries are also looking to obtain further efficiency gains with automation which may allow a reduction in the number of staff and physical offices through increased electronic application processing and direct links with key stakeholders such as banks, notaries, lawyers and surveyors. Several countries are also exploring cost recovery approaches and have begun to look at their institutional structures. The Netherlands and UK are financially autonomous and work on a business model that is monitored and reported on annually. They do not receive any State funding and are at the forefront of new developments in electronic conveyancing. A greater level of private sector involvement in all aspects of LAM seems to be a trend in Europe, from surveying to IT support and the provision of value-added products from basic

<sup>65</sup> The term 'geo-spatial' refers to any location based information. As virtually all LAM functions and local government activities involve 'location' parameters, geo-spatial information is a fundamental requirement.

cadastre information. There are many good European models for the new EU member states to follow.

#### 4.2.1. The major objectives for the future agenda

The major objectives for the future agenda would most likely involve five broad categories:

- **Objective 1:** Completion of property registers and cadastres to provide safe and secure property rights, and facilitate privatization and land reform.
- **Objective 2:** Development of a more integrated approach to land management through land policies that reflect environmental and sustainable development concerns.
- **Objective 3:** Encouraging innovation and the use of SDI or spatial information underpinning new products and services.<sup>66</sup>
- **Objective 4:** Improving the management of the organization and use of space.
- **Objective 5:** Supporting governance and quality and method of service delivery.

Following the setting of **objectives**, relevant **intervention models** will be adopted. After this step, where appropriate, certain **instruments** will be introduced. The **benefits** of the planned intervention effort in the land administration system are also referred. Finally, where evidence exists, there will be some discussion of the **quantifiable impacts** based upon similar interventions and observed results from the experience of enterprising countries. Therefore, the flow of analysis could be captured in the following sequence of discrete steps.

Objectives set → Basic intervention model adopted →  
Instruments used → Benefits generated → Impacts manifested

#### **Objective 1: Completion of Property Registers and Cadastres to Provide Safe and Secure Property Rights, and Facilitate Privatization and Land Reform**

This objective is applicable to Group I and II countries, with an emphasis on Group I. The need for completion of privatization and land reform applies particularly to Group I Countries. From initial reforms of titling to complex spatial data infrastructures, cadastral systems remain an important component shaping land administration. Mature cadastral systems in Central Europe<sup>67</sup> tend to contain some basic information:

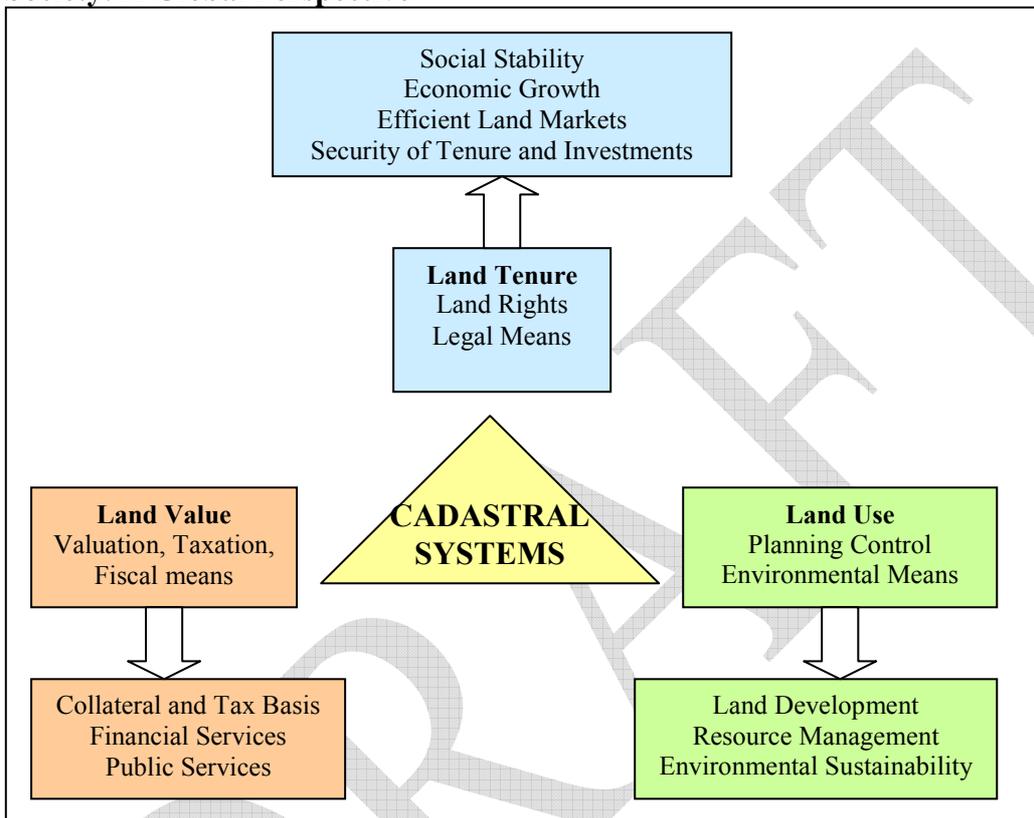
<sup>66</sup> Many of the changes in the new agenda in Europe and North America have been driven by the private sector, especially with regard to readily available digital maps, position fixing using GPS for leisure purposes or in car navigation, etc. However, the basic infrastructure that supports these activities by the private sector needs to be in place and they are provided by government. SDI and CORS are examples of the basic infrastructure needed.

<sup>67</sup> This tends to be a European phenomenon. The US, UK, Australia and countries without a central European tradition do not have cadastres of this form, but countries in the ECA region often look to Europe for their examples.

- Land Value: For valuation and taxation
- Land Use: For planning and control, and
- Land Tenure: For assuring land rights

These features render the cadastral system versatile and cater to several needs, as illustrated in the following diagram:

**Figure 4-1: Cadastral Systems. Source: Enemark, Integrated Land Management for the Society: A Global Perspective**



Source: Presentation for FIG Seminar on Land Management, Riyadh, Saudi Arabia, 5-6 April 2008.

#### Intervention models

- Basic privatization and land reform for Group 1 countries,
- Clarification of property rights, responsibilities and restrictions,
- Institution and/or strengthening of the single agency model,
- Promotion of open access to information for transparency and better services to the public, and,
- Promotion of real estate agencies as part of the land market development.<sup>68</sup>

<sup>68</sup> Valuation (also known as appraisal in the US) is a further discipline necessary for the property market to operate efficiently or to apply for calculating real estate taxes. Valuation should be conducted by the private sector if private transactions are involved. Valuation is sometimes part of a cadastral service, but it is preferably carried out by the private sector unless some form of mass appraisal for property taxes is involved. In that instance it could be either a public or private sector activity.

## Instruments

The instruments used may vary by country, mostly guided by a judicious application of the basic principles of civil law, geodesy and technology. There are few trademark products to be mentioned. Cadastre 2014 is one of those instruments which could be introduced here for countries in Group III.

### Cadastre 2014:

One good example for an intervention instrument is the Cadastre 2014 vision.<sup>69</sup> Cadastre 2014 provides the future vision for cadastres in the modern age. It is a methodologically arranged public inventory of data concerning all legal land objects in a certain country or district, based on a survey of their boundaries. Such legal land objects are systematically identified by means of some separate designation. They are defined either by private or by public law. The outlines of the property, the identifier together with descriptive data, may show for each separate land object the nature, size, value and legal rights or restrictions associated with the land object. In addition to this descriptive information on land objects, Cadastre 2014 contains the official records of rights on the legal land objects. Cadastre 2014 can give the answers to the questions of **where and how much and who and how**. In connection with Cadastre 2014 an investigation was conducted by asking for responses from the authorities in 31 different cadastral systems. A majority of respondents (27 out of 31) rated customer service as the top issue to be addressed by the Cadastre 2014 system.

### Benefits

- Security of property rights and better transparency for Group 1 countries.
- Reduced risk and more investment in Group 2 countries.<sup>70</sup>
- Ability to institute fiscal cadastre and increase tax recovery rate,<sup>71</sup>
- Introduction of versatile cadastre systems, where feasible, particularly in Group 3 countries.

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<sup>69</sup> Kaufmann and Steudler, Cadastre 2014: A vision for the Future of Cadastral System, FIG, July 1998  
[www.fig.net/cadastre2014/translation/c2014-english.pdf](http://www.fig.net/cadastre2014/translation/c2014-english.pdf)

<sup>70</sup> Greater transparency and information flows are important to minimize investor's risk and investor ambiguities; and to increase the volume of transactions in land and property markets. From affordable housing to implementation of large infrastructure projects, secured property rights create room for utilizing private sector capital and expertise. FIAS report<sup>70</sup> states that land policy, removal of land administrative barriers and clear land registration are important requirements in policy field for improving business environment.

<sup>71</sup> Fiscal cadastre has three aspects: property valuation, certification of experts and property tax administration. Clear definition of land ownership enables efficient valuation of land and property and generates massive tax recovery as the question of "who owns what at what value" is now clearly answered. Such systems generate public income to provide essential public services for the benefit of the community.

## Impacts

The impact of Objective 1 is primarily addressed in Chapter 2. It is interesting to note that a Price Waterhouse investigation in N. Ireland relating to their Mosaic Geographic Information strategy discovered that for every £ invested by government in spatial data, £4 of benefit was generated to the economy.

### **Objective 2: Develop a More Integrated Approach to Land Management through Land Policies Reflecting Environmental and Sustainable Development Concerns**

This objective offers a promising area of future cooperation between the Bank and its partners, mainly host country Governments and their institutions. The objective has natural overlaps with the previously discussed objective as the information about real estate is the fundamental building block for improving land management in various sectors. It integrates a more diverse set of features with the basic cadastral and land registration functions, and embodies a greater degree of participation. There is a basic need for cadastral agencies to work in close coordination with other government agencies responsible for land management. A National Spatial Data Infrastructure<sup>72</sup> should be agreed between the various agencies to enable electronic information to be shared seamlessly.

#### Intervention Models

Possible intervention models are discussed below, where the **bolded** terms carry the key messages. Due to host country preferences, the most likely scenario would involve selecting a group of these intervention models together.

- The adverse effects of **climate change** need to be monitored and adverse impacts mitigated. Monitoring the impact of climate change is essentially a ‘spatial’ issue and the spatial information is required when planning mitigation measures.
- In ECA, there is considerable concern over **over-fragmentation of land**, especially following the restitution programs or the farm restructuring which were funded by the Bank. Countries are asking for **land consolidation**<sup>73</sup> and there have been some small parts of projects (Moldova, Albania, Estonia and Bulgaria) where some form of voluntary land consolidation has already been attempted. Due to lack of a proper legal basis these efforts are not particularly successful and they cannot easily be replicated elsewhere. However, in Turkey there is a good legal basis for land consolidation and the program is integrated

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<sup>72</sup> A set of rules and standards that enable the sharing of digital spatial (geographic) data or information between organizations.

<sup>73</sup> One of the successful applications of land consolidation was carried out in Turkey in the Harran Plains within the framework of land reform program during the late 19980s and 1990s. The objective was parcel reallocation among owners to attain equity within family members (favoring girls and restoring their rights to land), as well as consolidating fragmented parcels into suitable geometrical forms bordering both the road and irrigation canals, hence avoiding huge social conflicts associated with rights of way. The Harran Irrigation Scheme, measuring some 160,000 ha could hence be completed at lower cost of construction and with higher speed. This scheme is one of the recent developments that has practically eliminated wide-spread poverty in the project area. The Agricultural Reform Implementation Project in Turkey include land consolidation (with local roads and irrigation included) for about 65,000 ha, at a cost of US\$17 million.

with irrigation works and local roads. In the ECA region there is great demand for land consolidation as a part of wider regional or rural development project.<sup>74</sup>

- **Planning (especially urban planning)** is a key area where many countries need assistance. Urban planning has already been made a part of LAMPs in Albania and Montenegro. In Azerbaijan and Bosnia preliminary studies are being conducted to investigate the scope of problems relating to informal and uncontrolled developments. Serbia also faces huge problems in this critical area of urban planning.
- The **Management of State or Municipal Property** is also an area for future consideration. These assets are poorly managed in most countries of the region where administrations may not even be aware what assets they are responsible for. In some countries of the former Yugoslavia urban land (as opposed to buildings) can still not be privately owned. Sometimes the State and local government levels may be vying with each other over control. In certain ECA countries where the State has retained ownership over all properties,<sup>75</sup> this is less of a problem, but it remains to be seen whether this practice is a good model.
- **Valuation and the promotion of real estate agency** (or control of practitioners) are important. The real estate market requires professional valuers capable of giving good advice and being responsible for that advice. As their real estate is usually a persons most valuable asset the public should be able to trust advice they are given on the value and the best way if using or disposing of the property.
- **Municipal financing related to property tax systems** is also important as a future area.
- **Reinforcing environmental assessment** in land use, construction projects and resource extraction is a new constraint on activities on land to maintain ecological and environmental sustainability. Spatial data infrastructures and resource mapping technologies enable both public and private sector to minimize environmental impacts on land. This data is important to develop standards for social and environmental concerns and to improve assessment of future impacts of any contested project. Use of standardized assessment methods in land use is an important aspect of land management.

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<sup>74</sup> There is also a need to monitor a recent trend of large scale acquisition of land in developing countries by China, India and some countries in the Middle East. The objective is to grow food for export back to the home country. This can be mutually beneficial to both the host country and the investing countries if implemented with due regard for the impact on local people. It has not yet affected ECA countries.

<sup>75</sup> Both Moscow and St. Petersburg in Russia have retained most of the ownership of property and lease it out. It has proven to be highly lucrative for the City Administrations.

## Instruments

Some instruments such as IACS and INSPIRE deserve some attention. INSPIRE has a high degree of relevance for some of the Balkan states and Turkey that aspire to EU membership in the future. The Directive creating INSPIRE took effect in 2007. It obliges all member states to develop their geo-information infrastructure to exchange, access and provide interoperability of their spatial data. These data sets include thematic data relating to use, environment, planning, and resources, together with land registry and cadastral data. It is designed to work together with other programs such as Global Monitoring for Environment and Security (GMES). Infrastructure for spatial information is defined as metadata (i.e., data about data), spatial data sets and spatial data services; network services and technologies; agreements on sharing, access and use; and coordination and monitoring mechanisms, processes and procedures, established, operated or made available in accordance with the INSPIRE Directive.<sup>76</sup>

Other European Union initiatives that support EU directives requiring geospatial information are:

- **EULIS.** European land Information Service. Tested ideas of how to develop pan-European land information service with web access
- **EUROSTAT.** Compiles EU wide statistics on behalf of the Commission and also collates statistical data by region (NUTS) spatial unit
- **Water Framework Directive.** To provide water information by GIS
- **CORINE** (Coordination of information on the Environment). EU program for land cover structure, and environmental monitoring at a scale of 1:100,000
- **GINIE.** Geographic Information Network in Europe. Research into wider use of GI in Europe.
- **NATURE-GIS.** Specific program for GIS in nature protected areas selected as a demonstrator for INSPIRE.
- **FOREST Focus.** Monitoring of Forests.
- **TEN.** Trans European Networks (roads, rail, water, port, airports, pipelines etc.)
- **SABE.** Seamless Administrative Boundaries of Europe, vector database of administrative boundaries

## Benefits

- Once the basic cadastre is established and the maps and ownership information are put in digital form, this information is then used by planners, valuers, local government agencies, ministries of agriculture, etc. This arrangement offers huge savings in terms of duplication of resources, duplication of data, speed of service, and avoided litigation costs. The recent Turkey Cadastre Modernization Project is

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<sup>76</sup> INSPIRE Directive; [http://www.ec-gis.org/inspire/directive/l\\_10820070425en00010014.pdf](http://www.ec-gis.org/inspire/directive/l_10820070425en00010014.pdf)

partly justified by virtue of the savings from eliminated duplication of effort between municipalities and the central cadastre agency (TKGM).

- Effective regional development and informing local decision making, whereby decentralization of governance increases participation in decision-making processes and easier access to data encourages decentralization.
- Integrating environmental management and protection into land administration policy, including information on land use and the attributes of land for all individual land parcels leading to better resource use in agriculture and better environmental management, and
- Support for wider issues of social development, social inclusion and wider participation.

### Impacts

Each of the EU directives have social, environmental or economic benefits – sometimes all three. It is estimated that the INSPIRE directive will cost EU countries €138 million per year, but that it would generate from €770-1150 million per year.<sup>77</sup>

### **Objective 3: Encourage Innovation and the Use of (SDI) Spatial Information Underpinning New Products and Services**

#### Intervention models

The intervention models would target national cadastral and land registration agencies with an emphasis on the establishment of clear linkages with the other spatial information systems within the country. Involvement of the private sector would be a key and indispensable feature. The common theme in such projects would be standardization and harmonization, usually in alignment with a well defined external reference, especially in the potential accession countries to the EU in the Balkans, or in other ECA countries – such as Ukraine and Russia – which may aspire to adopt EU practices simply because they are good practices. One of the bedrocks for mapping and surveying is the Continuously Operating Reference Network (CORN), which some ECA countries are adopting. Croatia, Montenegro and Serbia have already installed these and they are planned for Bosnia and Herzegovina, Kosovo,<sup>78</sup> Macedonia and Azerbaijan.

Different sectors such as energy (electricity distribution), mining (resource mapping), agriculture (fisheries and irrigation), property (route and site selection), government (service improvement), health (asthma control) and others all utilize spatial information for their own purposes for improved efficiency. Standardization of information infrastructures enables increased exchange and interoperability among sectors and institutions.

New advances in mobile phone technology, GPS and geodata processing have resulted in an emergent technology – Location Based Services (LBS). LBS are typically based on geodata

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<sup>77</sup> Dufourmont, H., (Ed). 2004. Results task Force XiA, Eurostat, Luxembourg.

<sup>78</sup> Kosovo is currently under the administration of the United nations Interim Administration Mission in Kosovo (UNMIK) under terms of UN Security Council Resolution 1244 (1999).

digital map datasets which are enhanced with contextual information for navigation, and information purposes. The technology is being adapted for purposes such as location and navigation guidance for vehicles, recreation and identifying location using cell phones.

### Instruments

Many of the existing standard instruments, or their more advanced versions, would be pertinent for listing here. In fact, SDI really comprises everything in the domain.<sup>79</sup>

### Benefits

- Private sector involvement enhances competition and fair pricing of information: Where public sector does not have a monopoly over generation and exchange of certain information, its methodologies and costing could be challenged by private parties, which in return can introduce more advanced technologies and better operative systems. Although spatial data is largely produced by the public sector at its initial phase, reproduction of information from this information (**creating “refined information” from “unrefined information”**<sup>80</sup>) could be open to private sector participation. Private sector involvement is important for upgrading the available technology and share of expertise. Competitiveness increases the efficiency in information commercialization. Private parties also stimulate the creation and development of information markets.
- Standardized systems of data: When national spatial information is harmonized and standardized, both public institutions and private sector benefit from efficiency returns related to increased interoperability of data, systematic metadata and accessing all related information from one single body. Standardization is important for harmonization of public information in the hands of different institutions. Technological standardization for information generation and methodological standardization in metadata require infrastructure investment, technological availability and expertise.
- EU accession benefits: These are the short-term and long term accession benefits to the prospective member countries in the ECA region. Access to EU's structural funds and a clear motivation for enhanced national development should be cited among the benefits.

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<sup>79</sup> United Kingdom Office of Fair Trading made a study on the impacts of commercial use of public sector information (PSI). (July 2005). The principal findings of the study were:

- The net value of the PSI sector in the UK was estimated to be approximately £590 million per annum.
- An analysis of impediments (or detriments) was also conducted. It was concluded that the monetary value of the detriments amounted to approx £520 million per annum, namely: £20 million p.a. from unduly high pricing; £140 million p.a. from restrictions of downstream competition, £360 million p.a. from failures to exploit PSI.

Hence, it was concluded that if all the problems identified above were resolved, the net value of the PSI sector in the UK could be approx £1.1 billion per annum (590 million plus 520 million GBP). 00

An Australian study on the value of spatial information show that the emerging spatial industry is worth \$1.4 billion and is contributing up to \$12.6 billion to the Australian GDP.

<sup>80</sup> *Commercial Use of Public Information (CUPI), Office of Fair Trading UK, Dec 2006*

- Removal of barriers that hinder the ‘joining up’ of spatial data and implementation of other instruments, where applicable.
- Joint Use of Preferred Instruments: Use of products as base applications to which can be bolted other applications for particular purpose and also the currency and accuracy of the data itself (UK- OS benefits).
- Connectivity to land administration agencies and local organizations holding property related information,
- Creation of services for visualization of geo-information for local authorities and for public bodies, and
- Increased efficiency resulting in economic returns to various sectors.

#### **Objective 4: Improving the Management of the Organization and Use of Space through Technology<sup>81</sup>**

Appropriate land information is vital for land management, whether for developing sustainable agriculture, managing the rapid growth of cities, or protecting the environment, to mention only a few examples. Geographic information systems (GIS) are very useful tools for handling information on land use. Information systems should combine data from different sources, including topographic maps and satellite images. Data about ownership and parcel boundaries are always of fundamental importance in land information systems.

##### 1. Intervention Models

- Urban Planning: Rapid urbanization is one of the core issues for developing countries. Not only rural-to-urban migration but also expansion of cities creates drastic demographic changes in the cities, which require special planning. Scarcity of land (or the inability of local authorities to allocate land because there are insufficient spatial plans) under population pressure may cause problems regarding illegal housing. Access to utilities, sewerage and rubbish collection may be seriously constrained, and catastrophes such as floods and earthquakes can cause devastation because of a lack of building and infrastructure control. Additionally, unregistered land causes problems in taxing, which generally puts pressure on budgets of local administration units which would have otherwise been allocated for improving living standards of slum dwellers. Land administration reforms allow for affordable housing in less risky conditions.
- Rural Planning: Better land administration systems allow for clear definition of agricultural land, forests and housing areas in rural planning. Once use of

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<sup>81</sup> Some of the interventions models overlap with those in Objective 2. In objective 2 we are looking at the needs to develop policies, laws and procedures. In objective 4 we are considering the geographic information systems (GIS) and internet based information systems or e-government systems that are required for these interventions.

space is properly managed, investment in rural areas for creation of off-farm activities may increase due to increased security in business environment.

- Management of State and Municipal Property: For the wider benefit of society, government keeps public rights which can affect privately owned land. Land registers and other public land records will ensure that this information can be accessible quickly and widely. In its ownership of land, public authorities stand in no different position from other private owners and they should ensure the highest and best use of these assets as guardians of the public interest. Best practice in recording and clarification of public restrictions on use of land and buildings are important for the implementation and sustainability of land-use plans.
- Introduction of Online Services: Access to land information by public institutions, the private sector and citizens through online services are becoming standard. Technological devices such as Google Earth proved the high demand for land information by individuals. In many European and North American jurisdictions it is possible to view fees and procedures, make applications, trace the process of applications, review decisions, etc. This transparency and access to information can have a great impact on good governance.

### Instruments

IACS (The Integrated Agricultural Control System) and LPIS (Land Parcel Identification System) are launched under European Common Agricultural Policy. These two systems are examples of instruments in connection with the stated objective. Parcel identification and cadastral information are utilized for the management of agricultural land.

### Benefits

In the EU, a major part of the support devoted to agriculture is directed to area-based subsidies which are paid to farmers, amounting to approximately €16 billion annually. In order to protect the Community's financial interests, IACS was established. Farmers in all Member States submit a standardized annual declaration of land parcels (and their use) and animals. This effective control mechanism provides massive savings to the EU.

## **Objective 5: Support Governance and Quality and Method of Service Delivery**

### Intervention models

The basic intervention model here involves the development of e-government. Willingness of governments to modernize the administrative systems and increase cooperation among different public bodies with the support of technological improvements culminated in the development of emergence of the so-called 'e-government' applications. E-government is a step forward for the creation of information society, where both public and private stakeholders, as well as ordinary citizens, have easy and efficient access to information. Staff training and infrastructure are among the most important requirement of e-government.

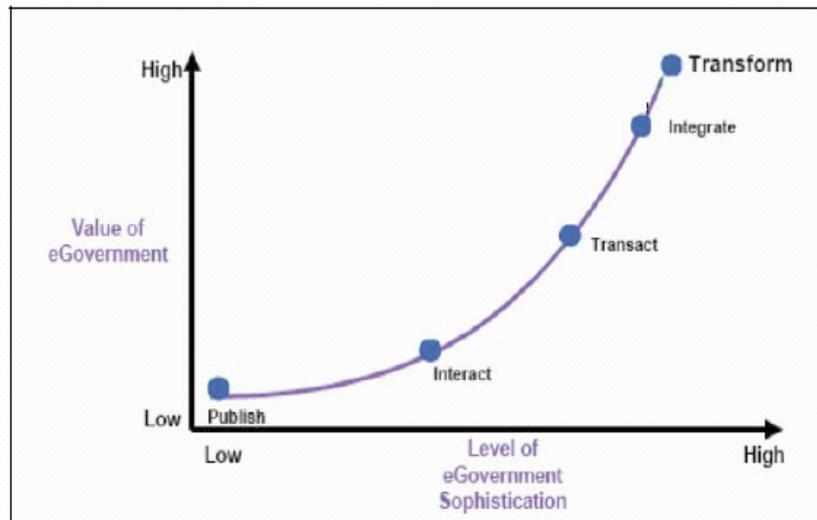


Figure 4-2: Stages of e-government. Source: Value Creation in eGovernment projects. Danish Government, Page 7.

[http://e.gov.dk/uploads/media/Value\\_Creation\\_in\\_eGovernment\\_projects\\_01.pdf](http://e.gov.dk/uploads/media/Value_Creation_in_eGovernment_projects_01.pdf)

Stages of e-government are presented in the above chart. Levels of e-government sophistication are directly proportional to the value of e-government. The stepwise progression goes in stages from 'information publishing' to 'transformation.' Transformation comes from moving services online and integrating work processes across agencies to put the citizen at the center and simplify interaction, reduce cost and improve service.

#### Instruments

Catalan SDI (IDEC) is a part of the larger European INSPIRE system, which has multiple purposes varying from public administration to environmental management. IDEC could also be viewed as an example of an instrument for the use of SDI with a special focus on e-government and public administration purposes.

#### Benefits

- **Direct savings in terms of efficiencies:** Public institutions derive fiscal benefits from reduced delays in processes, reduced number of processes, better matching of customer and data, increased quality of service by use of metadata and reduced land disputes by the use of available cadastral technologies. E-conveyancing and e-signatures are also important to increase efficiency.
- **Provision of title and plan information online:** E-government projects can enable different revenue-generating activities for public institutions such as provision of information online in response to a request for which a small fee is paid. Online access to data diminishes time loss and narrows down the room for corruption, which is vital for good governance.

### 4.3 Conclusions

The future agenda for land administration projects in the ECA region involve both basic topics (for group I and II countries), as well as advanced ones (Group III countries). As interventions and objectives become more sophisticated, there is a need for instruments to follow suit. The key methodological requirement for the assessment of the benefits of LAMPs

is an effective collection of tools to understand the real value of information, with a focus on macroeconomic returns, such as contribution to the national income.

The economic value-added created by spatial data infrastructures (SDI) is significant for the overall economy, together with the value of SDI systems itself, and it also stimulates efficiency savings in various sectors. Spatial data infrastructures benefit public administration by eliminating inefficiencies by introducing e-government practices.

Economy-wide applications of SDI require (at least) the completion of basic cadastre and land entitlement. Some of ECA countries are still at the initial level of land administration reform, which creates gaps among the countries in the region and diminishes the chance for regional programmes. As the sophistication of land administration and spatial data increases, regional programmes and projects prove to be more efficient and beneficial, as in the case of EU countries. The principal aim of land administration reforms in the ECA region should be the harmonization of the current level of reform among member countries. To minimize the costs of catching-up, group 1 countries could benefit from the experiences of other member countries, utilize lessons-learned during their reform processes, such as investing in technology and expertise. Cadastre 2014 is promising as a tool that could suggest ways to link the developed-country cadastre experiences to the reform-in-process countries.

Considering the world experience, countries which benefit the most from LAMPs seem to be the ones in Group III of land administration reforms; focusing on the improvement of SDI and the establishment of e-government programs. Sample cases for the assessment of economic benefits of future LAMPs are largely based on the experience of developed countries such as Australia and EU member states. From the perspective of ECA countries, depicting developed country experience can only answer the question of ‘what could be achieved’ after completion of the reform process, but not necessarily the question of “how to get there”. The real question confronting the analysts and practitioners is defining a road map concerning the nature of reforms which would elevate ECA countries toward the *current* level of developed countries.

A summary of land administration reform objectives, related intervention models and instruments, their benefits and impacts are listed in the table below.

Objectives	Intervention models	Examples of Instruments	Benefits	Impacts
<b>Group I and II Countries</b>				
<ul style="list-style-type: none"> <li>• <b>Completion of property registers and cadastres to provide safe and secure property rights, and facilitate privatization and land reform</b></li> </ul>	<ul style="list-style-type: none"> <li>• Basic privatization and land reform for Group I countries,</li> <li>• Clarification of property rights, responsibilities and restrictions,</li> <li>• Transparency and access to information,</li> <li>• Institution and/or strengthening of the single agency model,</li> <li>• Valuation as an integral part of cadastral services</li> <li>• Promotion of real estate agencies as part of the land market development.</li> </ul>	Cadastre 2014	<ul style="list-style-type: none"> <li>• Security of property rights and tenure for Group I countries.</li> <li>• Reduced risk and more investment in Group II countries</li> <li>• Ability to institute fiscal cadastre and increase tax recovery rate,</li> <li>• Introduction of multipurpose cadastre systems, particularly in Group III countries.</li> </ul>	Largely discussed in Chapter 2 and 4.
<ul style="list-style-type: none"> <li>• <b>Development of a more integrated approach to <u>management through land policies</u> that reflect <u>environmental and sustainable development concerns</u></b></li> </ul>	<ul style="list-style-type: none"> <li>• Land consolidation</li> <li>• Urban planning</li> <li>• Management of state or municipal property</li> <li>• Valuation and the promotion of real estate agency</li> <li>• Municipal financing related to property tax systems</li> </ul>	INSPIRE	<ul style="list-style-type: none"> <li>• Effective regional development and informing local decision making,</li> <li>• decentralization of governance increases participation in decision-making processes and easier access to data improves transparency and services.</li> </ul>	ECA experience will build up as current projects under implementation generate interim M&E results and reveal experience.
<b>Group III countries</b>				
<ul style="list-style-type: none"> <li>• <b>Development of a more integrated approach to land management through land policies that reflect <u>environmental and sustainable development concerns</u></b></li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring the adverse effects of climate change</li> <li>• Urban planning</li> <li>• Management of state or municipal Property</li> <li>• Reinforcing environmental assessment in land use</li> </ul>	INSPIRE	<ul style="list-style-type: none"> <li>• Integrating environmental management and protection with land administration policy to become a more complete LAM policy,</li> <li>• information on land use and the attributes of land for all individual land parcels leading to better resource use in agriculture and</li> </ul>	<b>The case of INSPIRE</b> suggests that annual savings to the member states would be in excess of € 1 billion per year. In the Dutch experience with INSPIRE, two largest direct benefit items are: increased property tax recovery (252 million euros) and efficiency gains to users (149 million

			<ul style="list-style-type: none"> <li>• better environmental management,</li> <li>• Support for wider issues of social development</li> </ul>	euros)
<ul style="list-style-type: none"> <li>• <b>Encouraging innovation and the Use of (SDI) Spatial Information Underpinning New Products and Services</b></li> </ul>	<ul style="list-style-type: none"> <li>• establishment of clear linkages with the other spatial information systems within the country</li> <li>• private sector participation</li> <li>• standardization and harmonization with EU (in accessing or new member states)</li> </ul>	<p>Many of the existing standard instruments, or their more advanced versions, would be pertinent for listing here</p>	<ul style="list-style-type: none"> <li>• Private sector involvement enhances competition and fair pricing of information</li> <li>• Standardized systems of data</li> <li>• EU accession benefits</li> <li>• Removal of barriers that hinder the “joining up” of spatial data</li> <li>• Joint use of preferred instruments</li> <li>• Connectivity to land administration agencies and local organisations holding property related information</li> <li>• Creation of services for visualization of geo-information for local authorities and for public bodies</li> <li>• Increased efficiency in economic returns to various sectors</li> </ul>	<p><b>CUPI (United Kingdom):</b> the net value of the public sector information in the UK could be approx £1.1 billion per annum.</p> <p><b>ANZLIC (Australia):</b> The results show that the emerging spatial industry worth AU\$1.4 billion, is actually contributing up to AU\$12.6 billion to the Australian GDP. In particular, spatial industry contributed to the economy in the following manner:</p> <ul style="list-style-type: none"> <li>• increased household consumption by between AU\$3.6 and AU\$6.9 billion</li> <li>• increased investment by between AU\$1.8 and AU\$3.7 billion</li> <li>• had a positive impact on the balance of trade with exports increasing by up to AU\$2.3 billion, and</li> <li>• increased real wages by between 0.6% and 1.2%.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Improving the Management of the Organization and Use of Space</b></li> </ul>	<ul style="list-style-type: none"> <li>• Urban planning</li> <li>• Rural Planning</li> <li>• Management of state and municipal Property</li> <li>• Introduction of online services</li> </ul>	IACS and LPIS	<ul style="list-style-type: none"> <li>• Parcel identification efforts helped increase the use of cadastral information for management of agricultural land</li> <li>• a control system was established to protect the Communities financial interests</li> <li>• Standardized annual declaration by farmers, computerized database, identification of land</li> </ul>	<p>The clear impact of <b>IACS and LPIS</b> is a fiscal impact, whereby the authorities save scarce public funds and help enhance the efficiency and accountability of public resources</p>

	E-government development	IDEC-- Study on Catalan Spatial Data Infrastructure	<p>parcels declared and animals, integrated control procedures are established</p> <ul style="list-style-type: none"> <li>• Direct savings in terms of efficiencies: Public institutions derive fiscal benefits from reduced delays in processes, reduced number of processes, better matching of customer and data, increased quality of service by use of metadata and reduced land disputes by the use of available cadastral technologies. E-conveyancing and e-signatures are also important to increase efficiency.</li> <li>• Provision of title and plan information online</li> <li>• Revenue-generating activities for public institutions such as provision of information online</li> <li>• Online access to data diminishes time loss and narrows down the room for corruption, which is vital for good governance.</li> </ul>	<ul style="list-style-type: none"> <li>• Value of real estate and the importance of real estate markets: It has been estimated that the Real Estate Markets may contribute as much as 15-25% of GDP in a developed country while the share of global capital stock represented by real estate is estimated at two thirds</li> </ul> <p><b>IDEC- Catalonia Case:</b></p> <ul style="list-style-type: none"> <li>• GI sector of Catalonia underwent a 17% increase in economic volume and a 110% increase in billing for services in 2006.</li> <li>• Net benefits for 2006 were € 2.4 million, which means total investment in 2002-05 is recovered in just over 6 months.</li> <li>• Internal efficiency benefits and external savings exceed €6.0 million.</li> <li>• the use of the Geo-services led to a reduction in data updating time estimated at 70% on average</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Supporting Governance and Quality and Method of Service Delivery</b></li> </ul>				

Table 4-1: Land Administration System Reforms