Introduction

A massive change in land policy and tenure has provided the opportunity for private individuals to once again hold private land rights in the ex-socialist countries of Central and Eastern Europe. It is argued by many development specialists that a free land market is the engine of economic development (Brandão and Feder 1995, Feder and Nishio 1998). However, providing the infrastructure for such a land market to operate requires a significant effort in the area of land registration. This infrastructure facilitates the first registration of newly created rights as well as the subsequent transfer of these rights.

In Latin America and the Caribbean, where there has been a long history of a land market (IDB 1998), the need for modernization is emanating from the poorer sectors of these societies who have been largely overlooked in the design of land and cadastral systems. The challenge in this region is to make land registration more accessible to the large majority of people who need it most.

The literature (written in English) on this topic has typically been dominated by publications focusing on the British Commonwealth countries. The two classical references are Simpson (1976) and Dowson and Sheppard (1956). A treatise by Hogg (1920) also provides a geographically broad treatment of land registration, but focuses more on legal aspects. In his book, Simpson covers various aspects of registration including its historical development in England and France, Torrens versus registration of deeds, cadastral surveying, and systematic adjudication for first registration. Even though this book was written almost 25 years ago, it remains the principal reference for countries influenced by the former British Empire.

While there are some references with a broader focus, such as on the ex-Soviet Union or the Newly Independent States (MacNeill et al 1998), most of the literature on property registration in Central and Eastern Europe tends to be country-specific, covering countries such as Russia (Ouzonova and Hayes 1996, Anderson 1997), Belarus (Butler 1996) and Albania (Stamo and Singer 1997). An interesting general overview of registration systems in Europe is given in ECE/MOLA (1998).

In Latin America and the Caribbean, the relationship between land registration and rural development has been studied for several decades (Stanfield 1990, 1985, IDB 1998). However, literature on the modernization of land registration systems in Latin America (especially in English) is sparse. Initiatives in Peru have been widely publicized (McLaughlin and de Soto 1994) and the Inter-Summit Property Systems Initiative (IPSI) in Central America has led to a focus on land registration systems in Central America (Fisher 1999, USAID/OAS 1999, USAID/CNR 2000). A successful land titling project completed in St. Lucia in the mid-1980s generated some literature on this topic in the Caribbean (Syrett 1986, LTC 1988), but, once again, references tend to be country-specific (IDB 1997, Center for Property Studies 1998, Hunting Technical Services 1998).
Central and Eastern Europe

After World War II, many countries in Eastern and Central Europe became part of the Soviet Union sphere of influence. In 1946, the transition from a capitalist, market-oriented economy (based on private ownership as the means of production) to a socialist economy (based on public ownership of the means of production) began. This transition process moved forward more rapidly in some countries, but always involved the restriction or elimination of existing private property rights and the creation of state property rights over new investments in the land.

By the late 1980s, a new transition emerged involving the reverting from socialism back to capitalism. In the initial stages, the main feature has been the privatization of publicly owned land and physical assets attached to the land. These new rights include private ownership, which encompasses the right to hold and transfer land. It also includes leasehold or other subsidiary tenure forms, where the state continues to be the owner of the land. The institutional definition of property rights to land has been at the core of both transitions.

Eastern European countries have experienced problems with the privatization process and the development of institutional structures. These structures are needed to define what private rights actually exist in practice, to protect those rights, and to regulate those rights in order to develop properly functioning market-oriented economies. This section discusses these problems and argues for a different approach than that followed by market-oriented economies which have not experienced massive privatization of rights to land during the post-war period. Instead of modeling institutions on longtime market economies or developing these institutions without outside support, a more regional approach is being adopted. This approach promotes consultation among those countries that are experiencing similar transitions to privatization and facing similar institutional hurdles. This intragroup consultation is critical if there is to be some institutional homogeneity among these relatively small countries, as they attempt to attract foreign investment. Such investment can be facilitated by “similarity of context” so that the foreigners can quickly learn the rules of the capitalist game specific to each country.

Resolving the logistics of massive transfers of assets from the state to private holders has been a major challenge for all the transition countries. However, the political will to do this transfer has been strong enough to carry out the processes relatively quickly. Privatization has impacted agricultural and forest land, urban housing, commercial properties, and public rights of way and parks. Privatization mechanisms have included: the restitution of rights to owners prior to collectivization; the sale of land and physical assets to the possessors of these assets during socialist times; the sale of land by auction to private individuals and companies with the money or other resources; the gift of land to its holders at the moment of privatization; and the sale or gift of shares in corporate entities to the general public or to the employees of public enterprises. The privatization mechanisms have varied from one country to the next.

Two main problems have arisen during this privatization process: (i) the lack of clarity regarding who has what right to which property, and (ii) the lack of institutional capacity to clarify the situation and to guide land markets so that they play a positive role in the economic development of the country.

Lack of Clarity about Property Rights

The primary problems plaguing the post-privatization transition countries are:

(a) **Multiple claimants to land**: Privatization programs of different sorts have operated simultaneously, with one privatization program awarding private rights in specific properties to a set of private holders and another program awarding rights in the same properties to other holders.

Privatization programs have also awarded rights to groups of people without defining how those people would exercise those rights. The main example of this problem is the privatization of housing units in apartment buildings without having clarified how condominiums are created and should function.

Another example is when restitution opens doors to historic claimants from different political regimes (e.g., East Germany). An example of this is the case of landholders at the moment of collectivization who had acquired their rights from the Nazi occupation of WWII, who in turn had taken the land from Jews or other ethnic minorities. To whom should the properties be restituted? If restitution is based on documented claims, this can be problematic as much of the documentation has been lost, destroyed, or is easily forged.

(b) **Unidentified owners of rights**: Restitution programs (e.g., Albania) have often been forced by the compressed period of privatization to designate holders of rights as “the heirs of X”, which results in an unidentified set of rights holders, until some procedure is in place to determine who these heirs are.

In some privatization programs, land has been awarded to “the family of X” without specifying who constitutes the family. In other cases, it has been awarded to “X”, usually a male head of family, without any mechanisms for protecting the rights of the spouse and other members of the family (Lastarria-Cornhiel and Wheeler 1998).

(c) **Identified but missing holders of rights**: Privatization programs have awarded rights to specific people, but due to massive human migrations and dislocations over the past decade, many of these people have simply disappeared (e.g., Bosnia and Herzegovina).

(d) **Informal holders of rights**: Privatization has outpaced the institutional capacity of the state to record and display the rights awarded in a comprehensive and secure system of land registration. People simply transfer their rights to other people when they so desire. Alternatively, the transfer may be done involuntarily when the owner dies and the heirs simply assume their rights. In many cases, these transfers are not recorded by following legally defined and documented procedures (e.g., Hungary and Macedonia).
People also simply occupy public land and make it their own, daring public authorities with dramatically reduced resources and popular support to re-assert public control over the land (e.g., Albania, Romania, Croatia, and Czech Republic). Inaction is the typical response, leaving the occupants with effective but informal rights to the land.

(e) **Rights to non-existent parcels:** Privatization programs have at times awarded rights to parcels that may once have existed at one time, but which are now effectively incorporated into other parcels. This problem has arisen with restitution decisions that recognize private rights to public parks, roads, and streets, as well as land currently under public buildings.

(f) **Rights to land separate from rights to buildings on the land:** In many transition countries, particularly in urban areas, the state has retained the ownership of the land, while privatizing the ownership of the buildings on the land (e.g., Slovak Republic, Macedonia, and Hungary). This has been partly due to the difficulties in assessing the value of the land and partly to the well-entrenched notion that building spaces could be privately held in socialist times, while the land did not need to be privately owned.

(g) **Tenants versus owners:** Restitution programs have created rights of former owners to buildings where the present occupants have either made significant investments over the years or have in legal terms acquired ownership rights over their apartments or businesses (e.g., Bulgaria, Latvia, and Slovak Republic). Restitution in effect creates obligatory landlord-tenant relationships that were not negotiated or creates claims to properties that are in direct conflict.

With the exception of informal, undocumented rights to land, the problems with property rights in transition countries are not typically encountered in established, market-oriented economies.

**Institutional Weaknesses**

The major institutional weaknesses pertaining to property rights in transition countries are the absence of property adjudication and land market institutions. One of the main functions of privatization is to stimulate the buying, selling, leasing, mortgaging, and inheriting of land (the land market). Yet such markets require institutional support and guidance that does not exist, since market mechanisms were not supported in the previous regimes. The clarification of property rights and the resolution of conflicts also have no institutional home in the transition countries, as problems of this kind were not recognized in the socialist systems.

Additional details on the institutional challenges in this region can be found in Sherko (1997) and Stanfield (1996).

**Latin America**

Most countries in Latin America were once colonies of Spain or Portugal. Naturally, the legal system and registration practices have evolved from these colonial beginnings. However, as in North America, these European colonists were not the first inhabitants in the region. Many indigenous groups lived there prior to colonization. Today, there are still semi-isolated indigenous groups, but they are increasingly coming under pressure to integrate with the mainstream cultures. This cultural diversity creates a similar diversity in the land tenure system with a continuum varying from individual private to communal and to community tenure (a mix of both individual and communal).

Agriculture is still a major economic or subsistence activity in Latin America, although the urban sector is beginning to dominate in terms of population (Center for Latin America and Caribbean Studies 1997). Like many developing countries, there is a large gap between the rich and poor and this is perhaps most obvious when examining land distribution. Poor rural landholders (campesinos) occupy the majority of rural land parcels, but these parcels are generally very small and situated on marginal lands. In most cases, these poorer landholders have no formal documentation of the nature or extent of their land rights. Land reform programs, particularly in the 1960s and 1970s, attempted to expropriate large landholdings (latifundias) and transmit them to smaller farmers (see Thiesenhusen 1995). While experiencing some success, the problem of inequitable land distribution continues today. In addition, the number of undocumented parcels is growing, creating a massive informal sector.

The land registration literature in this region is scattered and largely unpublished. In Peru, a compelling case for modernizing urban land registration systems was made by the Peruvian economist Hernando de Soto in his widely read book, *The Other Path* (1989). De Soto argued that the informal sector played a vital economic role and that reforms were needed in the formal registration system to accommodate those living in informal settlements. A more socially oriented approach (as opposed to the technical approach used previously) toward land registration was subsequently presented by McLaughlin and de Soto (1994).

Beginning in the 1980s, a number of land registration, land titling, land administration, and cadastral projects attempted to address small-holder problems by making land formalization (including titling, registration and surveying) more accessible to the poorer sectors of Latin American societies (Barnes 1990). USAID (United States Agency for International Development), the World Bank, the Inter-American Development Bank (IDB) and various bilateral agencies have provided resources to facilitate this process. In executing these projects, they typically have to address certain fundamental problems related to land registration. The main problems are listed and discussed below.

**Overcentralization of Registry Institutions**

One problem that has plagued many Latin American countries is overcentralization of government institutions, including the property registry. In Guatemala, for example, there were until very
Property Regimes are Limited

Often, property is construed as either belonging to a private individual (such as in the U.S.) or communal (such as in traditional African communities). This conventional “binary” view of property is limited and problematic when the land tenure system is composed of an overlaying of individual and communal rights. In the Bolivian highlands, for example, some communities have a very strong communal ethic (as evidenced by maintenance of community boundary markers and the restriction of land rights to community members) but still work the land on an individual basis.

In some instances, the community is given a communal title in which all heads of households are allocated equal rights. The problem with this approach is that in reality individual holdings are not equal and therefore the share of land in the community is not equal for all families. This unequal allocation is rational given that families vary in size and, therefore, some have more labor resources than others. However, if tax obligations are based on the legal record, this would not be in tune with actual land distribution.

Legal Basis for Pilot Projects

Most land administration or land titling projects typically start with one or more pilot projects (e.g., Peru, El Salvador, and Bolivia) that are designed to test proposed procedures and to gain a better understanding of the problems presented in the field. These pilots also attempt to test the proposed adjudication approach for clarifying rights and boundaries to land.

In order for the results of pilot projects to be meaningful, the pilot activities must have the same end results as the main project-such as a clear record of all land rights maintained in a sustainable land registration system. To attain this, the teams working in the field must have the legal authority to conciliate differences and resolve land disputes. This authority is usually provided through a law, such as a land adjudication act or decree, that specifically grants this authority and lays out procedures to be followed. However, the act really requires the information from the pilot project in order to be most effective. This results in a classical “catch 22” situation in which the phasing of the activities (law before pilot project) conflicts with the order of the information needs (pilot project before law).

Multiple Land Claims

A problem that has occurred in countries such as Nicaragua and Bolivia is the titling of the same piece of land to separate parties. This can arise when more than one government agency has the authority to title land, but there is no clear distinction between their geographic jurisdictions nor is there any co-operation between the two agencies (e.g., Bolivia). It can also occur as a result of different government administrations issuing titles to different parties as part of their political campaigns. In many cases, these titles are not officially registered which further complicates the determination of legitimate claims. When the Chamorro administration took over in Nicaragua in 1990, Stanfield (1992) estimated that as many as 40% of the households were either directly or potentially affected by land conflicts.

No Linkage between Registry and Cadastre

The role of a legal cadastre is to maintain the current spatial dimensions (e.g., distances, area, coordinates, and direction) and topological relationships (e.g., parcel adjacency) of all land parcels within a community. In Latin America, legal cadastres (catastrs juridicos) are scarce. Instead, the deeds in the land registry include a written bounds description that lists the adjacent owners to the north, east, south, and west of the subject parcel. This approach does not work in areas where there is an active land market or where land is frequently subdivided.

The more rational approach is to have a graphic depiction of the parcel either in an index map or on a more accurate composite cadastral map. This information is typically maintained by the legal cadastre agency. Since the nonspatial dimensions of land rights are defined in the registry, it is essential to have an efficient linkage between this information and the spatial information maintained in the cadastre. Generally, when a cadastre agency does exist in Latin America, it either has a fiscal cadastre function or is only focused on rural areas. The registry office generally functions under the Ministry of Justice or the Supreme Court. With one exception (El Salvador), the cadastral agency is under another ministry (Trackman et al 1999). The institutional and technical linkages between the registry and cadastral offices are either non-existent or barely operational (Barnes 1994).

Complex Land Records

In many Latin American countries, property deeds (escrituras) are highly complex legal instruments that run to several pages. Most of the more recent deeds are typed, making them at least more legible than their predecessors. However, the key elements of the deed (identification of parties, rights being conveyed, covenants restricting land use, and parcel identification) are generally buried among a long legalistic account of the transaction and its legal basis. The end result is that: (i) a lawyer is needed to interpret the document; (ii) the cost of the transaction is raised unnecessarily; (iii) land records are bulkier occupying more space in an office where space is at a premium; and (iv) the landholders cannot easily understand the terms and conditions of the transaction.
Degradation and Insecurity of Paper Land Records

The large bulk of the information in registries in Latin America is submitted and maintained in a manual form. Since the registration process provides legal security to right holders through the publicity of transactions, the records in the registry are a key element for assuring tenure security. In countries such as the Dominican Republic, where this information and the survey information kept in the cadastre are frequently consulted by the public, property records are literally falling apart and the office is strewn with the remains of records that have already become unreadable. In many registry offices, insects are also slowly eating away the paper documents.

Most registry offices have no protection against fire, floods, and other natural disasters. In addition, they have no back-up copies. The result is that the legal security provided by the registration process is at risk. The famous Chicago fire, which burnt the registry as well as a large part of the city, is an example of how a single disaster can eliminate a jurisdiction’s land records. With the recent upswing in hurricane activity in Central America, this issue should be given a higher priority.

The Caribbean

The development of efficient land markets is crucial to the long-term growth and development of the economy of Caribbean nations. These countries share a past based on plantation agriculture which resulted in a land administration system that was more geared toward the control of real property rights and land use, as opposed to the allocation of land resources to the highest and best use. These policy inconsistencies between the economic need to develop efficient land markets and the government’s desire to maintain a controlling presence in land ownership and land use present a unique economic development challenge. At the core of this challenge is the development of an efficient land market that relies on a functional, accessible, and reliable land registration system.

This section focuses on several Caribbean countries (Trinidad and Tobago, Jamaica, Guyana, Barbados, Belize, and The Bahamas) that share similar historical and present-day characteristics that are currently reflected in their views toward real property rights, land tenure, and the use and management of land resources. These common characteristics are:
- British colonial history
- Slavery and/or East Indian indentured servitude on plantations
- Finite land area, mostly small island economies
- Impact of trade liberalization and loss of preferential export markets
- Need to diversify economy from over-reliance on sugar/oil/tourism/rice
- Antiquated property law developed to accommodate few transactions on large properties by wealthy owners
- Inaccessibility to land
- Widespread speculation and squatting
- Informal and unchecked property subdivision and development

To support the stimulation of the land market, the governments of these countries are embracing legal, institutional, and technical reforms that seek to make the land administration systems more market responsive and efficient. The ultimate purpose of the reforms is to build and diversify the economy while addressing social and environmental issues, primarily the need for low-income housing and to protect environmentally sensitive and reserved areas. The countries listed above has turned to the international donor community for assistance to complete projects that aim to improve land administration. An essential part of each of these projects is the modernization of the land registration system. A list of typical problems encountered in designing and implementing these projects is presented and discussed below.

Dual Private/Public Real Property Regimes

With historical roots in grants from the Crown at the time of independence, and in order to maintain control over the use and concentration of land, two distinct real property regimes are perpetuated: publicly owned and managed property, and private freehold property. In fact, in most countries the majority of land, in terms of percentage of total area, remains in the hands of the government. The existence and, more importantly, the unsustainable operational maintenance of these dual regimes have profound impacts on the land market. The impact is especially noticeable when the rents on leasehold property are artificially frozen at antiquated “peppercorn” rates (trifling amounts) by a combination of outdated legislation and political manipulation.

The debate over leasehold versus freehold continues without convincing evidence on either side. In most cases, governments have rejected outright market-based auction of public land and have elected to retain leasehold tenure, but liberalize leasehold policies, make allocation processes more transparent, and strengthen lease management systems. In turn, the conditions of the lease have changed—longer terms, easier transferability and mortgagability, land use conditions limited or abolished—in order for the lease instrument to “approximate” freehold. The outcome of this approximation of freehold on land markets and economic development has yet to be determined.

To further complicate effective land administration in these countries, the management of land records related to these two regimes tends to be the responsibility of two or more government agencies. Typically, private land records fall under the ministry of legal affairs or finance, with public land records being the responsibility of a commissioner of lands office, generally in the ministry of agriculture, natural resources, or housing. This separation of responsibility for land records management requires the management and maintenance of two or more registries of land information, neither of which has the resources to operate properly. In addition, the existence of various registries severely con-
strains the land market since landowners, providers of credit, and investors need make a property rights investigation and also determine in which registry the land records or conflicting claims may reside. This becomes a time-consuming and costly process with the costs being passed on to the client, or worse, restricting credit availability as transaction costs per loan become uneconomical and not profitable for the lenders.

**Multiple Real Property Rights Systems**
The existence of multiple real property rights systems in many of the countries is a compelling problem, not altogether unique to the presented group of countries but certainly of interest due to its negative impact on secure tenure, reliable registries, and the functioning of the land market. In many instances in our selected group of countries, governments are now involved in the process of a transition from a deed recording to a title registration system. During transition, these dual systems add to an already complicated mix of tenure statuses and real property rights systems that exist, including communal, generational, informal, and public land lease. The public land lease category adds an additional array of complicated formal lease instruments together with crop agreements, occupation agreements, location tickets, provisional leases, certificates of comfort, purchase agreements, etc.

**Generational (Family) Lands**
Generational or family lands pose a particularly difficult problem for tenure regularization and registration of property rights. Family land has been described as follows: “customary tenure principles applicable to such lands [where] rights are inherited jointly by all the children, the rights are not forfeited by absence, and the family land should not be sold or permanently divided” (Center for Property Studies 1998). Registration of these lands under land registry systems is difficult, as identifying individual ownership is not possible.

Family land is not easily accommodated into existing land registration systems and is said to reduce the economic benefit from the land resource as well as stifle land markets. However, family land is a recognized customary form of land tenure that provides specific benefits to both urban and rural families. One possible answer is to register these lands as some sort of family land trust or as tenants in common. However, in many instances the legal framework for establishing family trusts does not exist. Perhaps more difficult than the legal issue is the willingness of the “family,” especially as extended as they tend to become, to address and clarify this issue.

**Squatting on Public and Private Lands**
Where land is restricted either by physical limitation or by control from the government, scarcity and inaccessibility lead to squatting on both private and public lands. In many cases, the occurrence of squatting is more profound on public land as there is an absence of vigilance and limited political will to reverse invasions. While squatting may satisfy an immediate need for the individual, it causes insecurity of tenure for both the landowner and the squatter. In turn, this insecurity results in land market inefficiencies, poor government land administration, and lack of access by the squatter to the benefits associated with full land ownership or as a recognized tenant.

While some of our selected countries have prepared written policies to address this issue, none has taken the essential next step to develop operational strategies to either recognize and regularize squatter rights or to provide resources to outright prevent squatting. In many cases, it seems that a compromise position is warranted. For example, on private land, there could be direct monetary compensation to owners for relinquishing their rights or freely negotiated land rental agreements between the owner and squatter. On public land, if the possessor can show beneficial occupancy, as well as positive recognition by the community, the land should be delivered to the “squatter” through an official leasehold agreement.

**Complex and Outdated Registration Process**
While the land registration process in most of these countries requires reform to reduce transaction time and cost, as well as corruption, perhaps the most immediate need is computerization. All of the registration systems of the presented countries would benefit immediately from computerization of existing land records. Even without modernization of laws and streamlining of registration processes, physical restoration and computerization would stop the loss of essential land records which are disappearing due to simple neglect, continual lack of financial resources, purposeful destruction or removal, and the ravages of the tropical climate.

In general, land registration processes require either fundamental legal reform or financial resources to implement existing property rights laws. For those countries that have already put in place land adjudication, land tribunal, and land registration legislation, this fundamental legislative step is accomplished. Typically, what is essential and more important than financial resources is the consolidation of political, public, and professional services support to implement the legislation. Hopefully, an astute champion, well aware of the cross-disciplinary importance that land rights, land use, and land information has on economic development, stands up and leads the process. Most often, a champion needs to be found and developed. Often, fostering this personal development is where donor funds and communication with the private sector and universities are most useful.

**Lack of Financial Resources Directed to Registry Operations and Maintenance**
Registration fees are typically low and out of step with market prices. Furthermore, these fees and revenues are transferred directly to the central treasury, leaving the registry agencies to fight for budget from other nonrevenue-generating operations. Typically, the budget allocation from central treasury provides for sala-
ties and, on occasion, supplies, but does not provide for the upgrading of services or proper security of documentation.

Even with low fees, registry offices typically generate a significant cash flow for the government purse. For example, in Guyana, where all professional and anecdotal accounts the Deeds Registry is not functioning, the fees and revenues collected in 1993 amounted to the equivalent of more than 1 million dollars (U.S.), while the annual budget allocation to the Deeds Registry amounted to just over $46,000 (U.S.) (Hendrix and Rockcliffe 1998). There is no contradiction to this financial message. Obviously, without more cognizance of the significance of real property systems and the importance of the land registries as the backbone of these systems, land registry offices will continue to be understaffed, poorly managed, and unable to meet the needs of a modern society and to support a dynamic land market.

Institutionalized Obstacles to Maintaining the Land Registration System
(a) Collection of property tax through property transfer tax:
In the absence of a private property tax or an operational system, many jurisdictions attempt to capture portions of avoided property taxes at the time of sale. This is typically done through a property transfer tax. While the absence of a property tax itself results in land market distortions such as speculation and underutilization of land, the use of a transfer tax provides a direct disincentive to register a title and, in turn, has a direct impact on the maintenance of the land registration system. In many countries, where a properly registered title is not the norm, buyers and sellers use an informal route of property transfer to avoid the transfer tax. In other countries, such as Jamaica, where properly registered title is seen as desirable, buyers and sellers often collude to falsify the stated sales price and, in –turn, reduce the transfer tax due. Typically in these cases, the registration process is stopped for months or even years as the Title Referee, who is part of the Titles Office, requests an official government assessment of the property from the Valuations Department-who, of course have their own resource limitations and priorities. Certainly, we cannot fault the Title Referees from doing their job, but the message is to avoid institutionalizing incentives for property owners to either evade or subvert the registration process, as each unregistered transaction reduces the reliability of the registration system and, in the end, erodes the functioning of the land market.

(b) Subdivision Approval: In many jurisdictions, subdivision approval is necessary prior to land registration. Given the critical lack of technical and financial resources at the local level devoted to subdivision code enforcement, subdivisions typically take place that, often providing for the highest and best use of the land, are not made official and remain informal. In these cases, the owner of the parcel may improve and beneficially occupy the land but cannot secure a registered title. This results in the owner not being able to gain the financial, public services, and social benefits of registered land ownership because a government agency, peripheral to property rights administration, is unable to perform its mandate.

Discussion
Developing countries in the three regions discussed here (in fact globally) can be characterized by the prevalence of informal properties—that is, land parcels with no official documentation as to who “owns” or “occupies” the land and inadequate spatial information on the dimensions and extent of the parcel. In many cases, this predication has been caused by over-bureaucratic, expensive, and cumbersome titling and registration procedures. In the ex-socialist countries, the new systems put in place to facilitate a private land market have not kept pace with the volume of transactions and, in some cases, the system and its benefits are not understood. The message to designers of modern land registration systems is to focus on removing disincentives, such as high registration costs and inaccessibility, and to promote tangible incentives, such as access to credit. The modernized formal system must out-perform the informal system, otherwise landholders will return to the latter system.

In all three regions, simplified western property paradigms appear to be inadequate. The simplification of the property regime into private, individual, or communal properties cannot handle many of the land tenure situations found in developing economies. In particular, this is true in urban apartment communities in Central and Eastern Europe, in rural agricultural communities in Latin America, and in family land situations in the Caribbean. Related to this issue is the emergence of the “family” as the legal landholding entity. This raises questions as to who is included in this group? Should this include children who have reached a certain age? Should this include all descendants of an original titleholder or only living descendants still residing in the area or country? Property system designers should address the complexity that this introduces in maintaining a current record of right holders. Also, if only the head of household is formally registered as the “owner,” how are the rights of women and children protected?

Many conflicts and potential conflicts are arising because of multiple claims to the same piece of land. This may arise because “ownership” is restituted to the owner prior to the transition to a socialist economy or to an indigenous group with historical roots to the land. Fundamental changes in land policy inevitably result in such multiple claims. In the case of Latin America, this has also been caused by titling campaigns driven by political motives, such as rewarding individuals or members of a specific party who have provided support in national elections. The rapid turnover in political administrations can result in several competing parties claiming the same piece of land, with each party possessing a formal title sanctioned by the government of the day. Adjudication procedures should address the issues raised by multiple titles (all legally valid) to the same parcel of land.

In the Caribbean and ex-socialist countries, there is a concern about landholders who have a valid claim to a parcel of land.
but who cannot be found. In the Caribbean, this has resulted from the extensive migration from the islands to the U.S., Canada, and the United Kingdom for employment purposes. In the ex-socialist countries, this has been the result of population dislocation and migration caused primarily by political upheaval and economic hardship. What rights do individuals have if they are overseas at the time of adjudication? Can they reclaim land once they return to the country? What happens if their family has sold the land in the interim to another party or parties?

Institutions supporting land registration and other land administration functions have become paralyzed or extremely inefficient in countries where there is a history of private land markets. In the ex-socialist countries, there were no such institutions as they began their journey back to capitalism in the early 1990s. In one sense, this “clean slate” may be regarded as a designer’s heaven, as it seemingly allows for more creative solutions. In fact, creating these institutions from the foundations up is arguably more difficult and complex. Not only are new institutional structures being created but brand new concepts are also being introduced. This paradigm shift brings unanticipated challenges to system designers. A society composed of persons who have grown up without property of their own has a very different perspective on property boundaries and the concepts of private property than westerners.

In Latin America and to some extent in the Caribbean, one of the biggest challenges is to develop a linkage between the legal textual set of records and the cadastral spatial records. The breakdown in communication between these offices results in the registry developing its own spatial parcel descriptions, which in most instances follow the historical method of describing the names of adjoiners. Not only is this inadequate, but it means that the description is duplicated. This confuses landholders and raises questions as to which is legally valid. USAID and the World Bank recently sponsored a workshop on this topic in an effort to seek effective strategies to deal with this problem (USAID/OAS 1999).

“Modernization” to many professionals means computerizing or automating the system. Clearly, we have interpreted this much more broadly, but one of the key opportunities that computerization offers is the conversion from paper records to digital records. Land registration systems that have existed for some time (many have records going back to the previous century) are all facing the problem that the records are disappearing through excessive use, moisture, or from insects eating the paper. Ignoring the rash of computer viruses we have endured recently, digital records will improve the security in the system by creating a copy of the old paper record.

Conclusion
This report summarizes the key challenges to the modernization of land registration systems in three broad regions of the world. It has also drawn together some of the disparate literature on this topic. In writing this paper, we were motivated by the belief that a review of the major problems would assist those involved with modernization in asking the right questions. In addition, we hope to emphasize the futility of merely transferring models from the more developed market economies, which have very different environments-culturally, institutionally, economically, technically, and legally.

All three of the regions discussed here have undergone land policy shifts that have led to the need to modernize their land registration systems. Underlying most of these modernization initiatives is the assumption that a free land market will facilitate economic development and ultimately lead to increased standards of living and better land management. As countries emerge from socialist or post-colonial administration, there is a need to continually re-examine this assumption and ascertain whether or not it holds up under the conditions prevalent in such regions as Central and Eastern Europe, Latin America, and the Caribbean.

About the Authors

Grenville Barnes is an Associate Professor in the Geomatics Program at the University of Florida, Gainesville. He obtained his B.Sc and M.Sc degrees in Surveying and Mapping at the University of Natal, South Africa, and his PhD from the University of Wisconsin-Madison. His research, teaching and consulting focus on land tenure and land administration. He has extensive experience in Latin America and the Caribbean as well as in Africa and Eastern Europe. The author may be contacted at University of Florida, Geomatics Program, 345 Weil Hall, Gainesville, FL 32611. (352)392-4998. gbarn@ce.ufl.edu

Kevin Barthel is a Natural Resources Consultant with the inter-American Development Bank (IDB) in Washington, DC. He obtained his B.S. degree in Geography from Northern Illinois University and completed course work toward a M.S. degree in Land Resource Management at the University of Wisconsin-Madison. His focus at the IDB is in the analysis and design of economic development loan projects in the areas of rural land policy, land information management and modernization of cadastral and real property registration systems. He has extensive experience in Latin America and the Caribbean. Prior to the IDB he worked as a Supervisory Cartographer and Hydrographic Surveyor for the United States Coast and Geodetic Survey, NOAA. The author may be contacted at the Inter-American Development Bank, 1300 New York Ave NW #A1004, Washington, DC 20577. (202)623-1000. kevinba@iadb.org

J. David Stanfield is Senior Scientist at the Land Tenure Center, University of Wisconsin, Madison. His B.Sc. degree is in Mathematics from The Ohio State University, followed by a Masters Degree in International Relations and Organizations from American University in Washington D.C., and a Ph.D in Communication from Michigan State University in 1969. He has extensive research and technical assistance experience dealing with land tenure issues, including land reform, titling and registration, implications of tenure security and
insecurity, tenure and sustainable development, throughout Latin America and the Caribbean, the Middle East and North Africa, Eastern Europe and Central Asia. The author may be contacted at The Land Tenure Center, 1357 University Avenue, Madison, Wisconsin USA, 53715. 608-262-3657. jdstanfi@facstaff.wisc.edu. See the LTC Website: http://www.wisc.edu/ltc/.

**References**


1 The views expressed here do not necessarily reflect those of the institutions to which the authors belong
2 Land, labor and capital
3 Equivalent to “patenting” in American terms