

TOWARDS BEST PRACTICE FROM WORLD BANK EXPERIENCE IN LAND TITLING AND REGISTRATION

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Abstract and Background

a. Currently the World Bank is supporting at least 13 implemented land titling and registration projects with a total loan value of about US\$550 million. This represents about 1% of total World Bank lending on an annual basis, which is significant. This compares with the decade of the 1980s when about US\$150 million was lent for just three projects. The current projects are in Algeria, Argentina, Bolivia, El Salvador, Indonesia, Lao PDR, Lebanon, Nicaragua, Papua New Guinea, Paraguay, Russia, Venezuela, and Thailand. Furthermore, at least ten more projects are under preparation including those in Armenia, Georgia, Guatemala, Honduras, Kazakhstan, Moldova, Peru, Romania, Ukraine, and Viet Nam.

b. This World Bank experience is presented as representative of some of the current world wide activity in land titling and registration, in a search for lessons and best practice. Also it is considered somewhat representative of similar support by other multi-laterals and certain bi-laterals agencies. The Asian Development Bank is currently supporting studies or projects in Viet Nam, Bangladesh, and in one province in China. The European Union is supplying technical assistance in at least Romania, Ukraine, Bulgaria, Poland, and Russia. The Inter-American Development Bank is active in many Central and South American countries, while bi-laterals such as USAID are providing technical assistance including to Russia, Ukraine, Albania, Armenia, and Kazakhstan. Also AusAID is currently supporting projects or providing TA including in Thailand, Indonesia, Laos PDR, Viet Nam, and Huinan, China.

c. From such projects come diverse worldwide experience and lessons, several of which this paper will analyze including: major objectives and scope; institutional considerations; legal and selected technical issues; training and education; the information technology dimension; selected topics including traditional and community land rights; and transparency and ethics in land registration operations.

¹ This paper is presented informally by a consultant to the World Bank. The views and interpretations herein are those of the author and should not be attributed to the World Bank, to its affiliated organizations, or to any individual action on their behalf.

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Extent of World Bank involvement

1. Land registration and cadastre projects are a small but growing part of the World Bank's loan portfolio of lending throughout the world. In its 1994/95 financial year, just 3 out of its 252 operations were directly for projects named land titling or administration projects with lending totalling about US\$219 million out of the Bank's total US\$22 billion for the year (amounting to 1%). There are about 10 other projects, however, which involve registration and cadastre though these were just sub-components of projects with broader objectives (e.g., the Mexico low-income housing loan). The three direct 1994/95 projects (in Bolivia, Indonesia, and Thailand III) join seven other projects implemented in the last six years in Algeria, Lebanon, Nicaragua, Papua New Guinea, Paraguay, Russia, Venezuela, and another Thailand project (No. II). A brief summary of the status of the Thailand projects is included in Annex I.
2. In 1995/96 financial year, new land titling (or administration) projects in El Salvador and Lao PDR were approved by the World Bank Board. Also in 1995/96 there were housing projects in Russia and Ukraine both involving property rights: with the latter involving apartment building privatization; condominium association formation; and loans to those associations. Also the Jordan Housing Financing and Urban Sector reform Project which addresses mortgages. Two legal reform projects were also passed: the Russian Legal Reform Project, and the Ecuador Judicial Reform Project. The latter project includes a modernization of the property registration system focusing on improving records management.
3. This current land administration activity contrasts with the decade of the 1980s when just three projects were supported for a total loan amount of about US\$150 million. Moreover, the project pipeline appears steady with projects in preparation in Armenia, Georgia, Guatemala, Honduras, Kazakhstan, Moldova, Peru, Romania, Ukraine, and in Viet Nam.
4. The reasons for the current international land titling and registration activity are several including: (i) the break-up of the former Soviet Union (FSU) and the resulting new countries urgently seeking to create private land rights and markets; (ii) greater democracy among governments and open markets in Central and South America, and in Eastern Europe; (iii) the demand by respective countries for more open markets in East and South East Asia and for more equity; and (iv) land reform in South Africa.
5. This review draws upon the lessons available from the experience of these 13 projects which have been implemented plus lessons available from operational trials from proposed projects under preparation or under review (e.g., Lao PDR, Viet Nam). It

introduces the following topics: typical bank support, the institutional dimension, legal framework considerations, rent-seeking, traditional lands and people, tenure and gender considerations, economic benefits studies, training and education, environmental impacts, cadastral survey and mapping techniques, information technology, and draws some conclusions. First though, what does a World Bank supported land titling and registration project consist of?

Typical Bank support, Scope, Objectives

6. Typical Bank support. The emerging components of a typical World Bank supported land registration and titling project are: improvement of the related legal framework and statutes; base mapping for property rights purposes; regularization of possessory holdings involving adjudication, title issuance, and registration; limited land settlement components; cadastral surveying and mapping; information technology support; institutional development and project management support; human resource development; and the provision of international and national skilled advisers. Few of the projects to-date have tackled land policy issues directly. Most projects have focused on the issuance of registered titles rather than taking the passive cadastre inventory approach without new titles being issued. About half of the projects have also involved the introduction of improvements to land valuation systems (e.g., Thailand, Lao PDR).

7. The Scope of Projects. The projects usually extend for periods of between 5 and 7 years, and often form the start of longer term government land titling and cadastre programs. For example, the three Thailand projects are in support of a 20 year government program to issue a secure and registered title to every eligible rural land parcel holder of non-forest land in the country. Many of the projects have focused on rural land titling (i.e., Thailand I, II, III, Brazil's NE Land Administration Project, Bolivia), however, El Salvador, Indonesia and Lao PDR are rural/ urban: in the latter two, by ratios of about 60/40% respectively. Romania also plans to address both urban and rural lands, in response to the need to address areas where growth and investment are taking place, trying to mobilize urban funds for investment in rural areas.

8. In most projects an issue is in what areas in the country to start; especially in situations where the majority of land holders have no registered rights yet have occupied the land for many years. The criteria used reflect the broad requirements of client countries including: political dictates, regional economic growth, poverty, rural productivity and agricultural support, major cities, linkages with rural credit programs, and urban land market support. Often the criteria can be seen in the objectives of the projects.

9. Objectives of the Projects. Most of the projects state their objectives in terms of land market improvements or land administration system improvements. In Indonesia, the objective is to foster efficient and equitable land markets; in Bolivia "... to achieve a more efficient and transparent land administration system." It means the

clarification of the land tenure situation especially through the acceleration of the pace of land registration and institutional development and land policy development. Also the improvement of land administration service delivery; plus in some cases the development of an effective national property valuation function (e.g., Thailand and Lao PDR). The third Thailand project also wanted to continue to help address poverty in rural areas "... by opening access to institutional credit and thus increasing farm productivity and income."

10. However, the above objectives are the high and lofty reasons for the projects. At the land holder level, the reasons are that the majority of land holders in many countries hold no secure documentary evidence, certainly with few titles or documents registered in public land offices. In Indonesia, the estimate is that 80% of land holders are not registered; though in some provinces it ranges to nearly 90%. As population pressure increases and with related increases in title insecurity, conflicts in the use of land escalate as well. In Bolivia, in some districts there are overlapping claims to land in over 40% of the land area, and the agencies have problems in awarding titles in less than 7 years. In many urban areas there are two major problems: lack of registration of on-going transactions (in some mega cities in Asia it may be higher than 70%); and lack of secure title for the majority of land holders, e.g., in Karachi approaching half of the land holders have no documentary evidence of rights, let alone a title (also see de Soto, 1989 for Lema, Peru, figures). And disputes in many countries take years to resolve, e.g., in South Asia, 10 years is the common period required to gain even a hearing in a land dispute, though often with no decision resulting.

11. These and other issues inhibit land transactions and discourage investment in industry, farming, housing, and the physical infrastructure necessary to support growth. As stated in the Indonesian project document "efficient and equitable land markets are important for modern economic development since (they would) quickly and flexibly accommodate changes in the land use, allow fair land transactions, and mobilize financial resources through collateral arrangements."

12. Costs associated with the Projects. The total project costs of the 13 projects range from US\$30 million to US\$210 million, with the World Bank loan amounts ranging from about US\$20 million to US\$120 million. In the projects, the funds were spent on the following activities: civil works, range from 1 to 15% of loan amount; service contracts, e.g., aerial photography, mapping, surveying & titling, range from 4 to 40%; local costs for land titling from 20 to 45%; equipment, vehicles, furniture, materials from 5 to 25%²; technical advisers, from 3 to 10%; training and education, 5%; studies, 2%; other, 5%. The "local costs of land titling" were justified in some projects as an investment for the establishment of a national cadastre which in economic terms is "social capital" and a one time cost (if maintained): they were not re-current costs.

² The Russian LARIS project is 85% equipment, vehicles, furniture.

Selected topics

The Institutional Dimension

13. Institutional issues are at the heart of most projects and include: what parts of the project will the public sector undertake? Which parts can be contracted out? Which agency or unit should undertake the adjudication and land registration process and should the functions be organized from central or local government, or from the villages, or at all levels? What is the relationship of the traditional land administration system with that of modern government? How to involve the minimum number of agencies in the project, as each function in land administration is usually undertaken by separate agencies. Within agencies, how can the processes be re-engineered in the interests of rapid service, security, all resulting in a lowering of transaction costs in dealings in the land market? What is the role of the support professionals in private sector, and how to ensure quality produces from them, and have self regulation prevail? How to work with the stakeholders from both inside and outside of government, who typically do not want change? These are all demanding questions.

Complexity of Institutional arrangements

14. In a review of World Bank supported land titling projects in 1980s (World Bank, 1992), it was reported that out of 12 operations, most performed poorly because of: lack of political support; conflicting bureaucratic priorities; lack of institutional capacity or support; and complex multiple project objectives with land titling only as a minor component. This report confirmed what most project implementors know: that the institutional dimension is a most or the most demanding aspect of titling projects. They recommended single focus objectives, single agency where possible, strong government commitment, graduated cost recovery, and community focused methods.

15. These recommendations have been followed especially by the Thailand, Indonesian, Lao PDR, and the El Salvador projects which have simple institutional settings. They are focused on one agency, typically a department of lands, which has the mandate to undertake the base mapping for cadastral purposes, and to lead the adjudication, cadastral surveying, and registration functions. This single agency focus has clear advantages compared with a multi-agency approach, with the most important being - the focus on the main objective, the goal of issuing titles to land holders and registering copies of the titles in public registration offices.

16. In contrast, some projects (especially in transition economy countries) have three or more agencies involved in the project, plus a committee of ministries. At least one agency is mostly focused on geodesy and general purpose mapping, which that agency sees as an important end in itself, above all else. As a result such projects have overly large geodetic and mapping sub-components. Furthermore, one of the agencies

could have military connections which may result in the project coming into conflict with national security regulations or similar, sometimes for reasons which are hard to justify. More difficult is one agency undertaking the cadastral survey function, while another does the land adjudication and registration functions with no coordination.

17. It should be noted that two potential projects (in Cameroon and Tunisia) being considered for World Bank support in the 1980s, failed to eventuate because of complex institutional arrangements (as above). This happened after several years of preparation, studies, and technical assistance, with re-structuring proving impossible.

18. Product Focus - not Functional . Another institutional problem is that many agencies are organized along functional lines (e.g., survey division, legal division). This means divisions within agencies which are focused on separate professional tasks, not on the achievement of the total task or the product of concern: e.g., the issuance of registered titles to land holders. In Thailand, in 1995 the agency started to re-engineer its land offices and has already streamlined its transaction deed review process: re-thinking which division does what, has announced time-based performance standards, and empowered its' staff. In the Romania project preparation, the new cadastral agency draft design used the "product" group principle rather than a functional structure. However, these efforts need training, flexibility, and in the mid-term, information technology (IT) support.

19. Multiple Offices. Several agencies have highly de-centralized sometimes de-concentrated operations often with up to 500 offices country-wide, e.g., Thailand has over 500 offices with 13,000 staff, and Indonesia, about 300 offices with 26,000 staff. Clearly these great numbers of offices and staff have consequences for the re-engineering of processes, training, management of change, especially for the introduction of new technologies.

20. Staff Incentives. In many of the land titling and registration projects the importance of getting the incentives right has formed a critical part of successful implementation. With most Bank supported projects comes the demand for staff to undertake long hours, to accept greater responsibility, and for the project by implication to compete for the best staff in the agency. Incentives are needed. As with any reward system, not only are incentives in monetary terms important, but also considered should be field allowances, achievable targets, well designed projects, efficient management, new technologies, appropriate methods, devolved responsibility, and opportunities for study tours and scholarships. In reality though, allowances linked to the achievement of targets have proven important in Indonesia and Lao PDR. Also in Thailand field allowances are important in keeping the 5,000 member "army" undertaking adjudication, plus regulated and monitored monthly targets. Other incentives are: staff promotion systems for field teams, structured positions for the project management office, and honorariums for most of those involved with the project.

Rentseeking in Land Office Operations

21. Land dealings operations in many countries are often associated with the provision of services which come at the cost of high informal charges (incentive payments) by the service providers. This sometimes happens in an environment of low public sector salaries and distorted land prices (some very high especially in mega cities) and opportunities for rent seeking behavior (informal payments) are many. Often it is the least informed who suffer, especially poor land holders. The improvement of the situation is complex and may rely on changing the staff incentives in the land offices including salary structures and operations, thus a thorough knowledge of the agency is necessary by project designers.

22. But a start can be made in projects by adopting the principles of transparency of operations and the wide publicity of procedures, targets and fees through a funded long term information and disclosure campaign, and strong leadership. For example, the use of field based adjudication teams operating on a systematic basis parcel by parcel, within the villages with land holders encouraged to be present to help in the achievement of transparency. Furthermore, village representatives are structured to be members of the adjudication teams, a step toward more transparency.

23. A fundamental land market principle and one aimed to limit rent seeking, ensures that there are laws, regulations and procedures which guarantee interested parties access to the information in the records in the land office - the "principle of publicity" of the register. Still another is to use appropriate technology to ensure that copies of documents and records are held away from the office - particularly important for fraud, apart from achieving a disaster copy of the register in case of fire. The issue of long waiting periods for dealings registration (often measured in a timeframe of months and years) can be partially addressed by setting time-based targets for all types of transactions, coupled with wide publicity of these targets and the associated formal fees, plus document tracking systems within agencies to isolate bottlenecks: leading to the re-engineering of the whole process.

24. Other methods which maybe useful to reduce rent-seeking are to reduce the monopoly power of key public officials by granting overlapping powers within agencies and perhaps giving them to other decentralized agencies to create competition. New technologies and multi-skilled staff have allowed this in OECD countries. Also where there are queuing systems resulting in long waiting periods, introduce official expedited services for a fee in place of, or at least to match the unofficial payment systems. And finally strong leadership, information and strong law enforcement by the agency or government is necessary (World Bank, 1996a). It is clear that project designers should be at least mindful that these informal practices are not being supported even indirectly under their projects. Having introduced this topic it must be stated that most project officials in agencies are bold, clear sighted, and dedicated to improvements in their agencies mostly for the benefit of the people.

The Roles of the Private Sector

25. The private sector can undertake all roles in land registration except that of regulation and policy setting; the limits are set by country traditions and policy, regulations, and capacity. Even in Thailand where the public sector dominance in land titling is almost complete, aerial photography is undertaken by the private sector.

26. In the Bank projects reviewed, the majority have used the private sector for at least one function of the project. Most have used aerial mapping as an instrument for identification of the parcels and for cadastral mapping, and most have used the private sector for this task. These include: Thailand which used aerial photography by international competitive bidding (ICB) amounting to US\$1.5 million per year during 1985 through 1994; Brazil including the Mato Grosso project used or propose to use aerial mapping and aerial photography by the private sector, some parts bid internationally others nationally. In the North East Brazil Land Tenure Project, over \$20 million was spent in the project's last two years on mapping by international companies; and the Paraguay project's aerial mapping including the photography was bid internationally in 1996.

27. Less use is made of the private sector in adjudication and registration in Bank projects. However, in the North East Brazil Land Tenure project the private sector undertook much of this work in association with the state agencies, including the adjudication, drawing up the title documents, undertaking the cadastral survey and mapping, leaving the state agencies to register the documents, and to monitor the private sector. It should be noted that in Brazil, the land registration offices (*cartorios*), numbering over 2,000 nationwide, are operated by the private sector on a concession basis. The proposed Georgia land titling and registration component, in the Agricultural Development Project, plans to contract out all the functions to achieve title issuance (joined by a local government official with allowances and incentive payments); monitored by the district land office; all planned for 1997 through 2001.

28. In the Paraguay project, the plan is to contract out the adjudication to the private sector. The same appears to be the case in Mato Grosso project. In Thailand in 1992, the Department of Lands went ahead with the licensing of private surveyors for cadastral surveys: a move calculated to give better service to private land owners, to reduce the six to eight month waiting time by the provincial land offices when requested by the land holders to provide cadastral survey services.

29. The BOT (build- operate- and transfer) approach was used in the mid 1980s by USAID for the whole of a US\$9 million land titling project in the small country of St. Lucia (40,000 parcels total covers the whole country) including adjudication and immediate dispute settlement: it was successful. This same technique was proposed for a possible Inter-American Development Bank supported project in Trinidad in 1992; but

this project is still pending.

30. The Indonesian project is using the private sector for all aspects of base mapping under local competitive bidding, plus the cadastral surveying; to-date the skill is to match the incentives of each of the sectors - the public sector adjudicators and the private sector surveyors.

Legal Aspects of Projects

31. In about half of the projects considerable legal framework development has been supported including the improvement of land titling, registration, and cadastre laws (e.g., Lao PDR, Indonesia, Romania, Georgia). Countries with economies under transition are at the same time developing more substantive law such as new civil codes (e.g., Viet Nam, and Russia) and land laws (e.g., Lao PDR).

32. The development method has been to start this legal support process and advice early through the provision of specialized technical assistance often fostered and funded by bi-lateral agencies. Clearly the policy aspects and drafting process are a demanding process in any country with review followed by further review. Mostly when a government decides to completely revise its land titling and registration law, it takes between 2 to 3 years even with full government commitment. USAID has supported considerable legal framework development in Former Soviet Union including in Kazakhstan, Armenia and Russia. This legal framework development, however, needs more project support from development agencies, and because of the long timeframe involved in legal development, should form part of the main project as well. It takes many years to achieve and advice is necessary to bring to "new countries" the wisdom of what other countries have learnt from hard won experience. Managers in some countries state that their country is unique and their land laws will be also; yes but modern land administration principles are common to most countries.

33. In many projects the Bank has supported, the approach has been at the conceptual and policy level rather than at the legal drafting stage. Furthermore it has been with principles and not with model legislation or systems. That is, advisers have not recommended the wholesale adoption of a registration of title system, say the Torrens or the Austrian-Hungarian version of the grund-buch system or similar. They have studied the current systems and recommended improvements.

34. The Lao PDR project preparation has included putting in place a "land adjudication regulation," which has been trialed under a pilot project, and in early 1996 a draft land law was released for discussion, which apparently will be reviewed widely over the next two years. The Romania preparation supported the review of a cadastre and land registration law which became law in June 1996. However the legislation is one dimension and the supporting regulations another, which again need support.

35. The Bolivian project has an extensive legal component including a possible revision of the Agrarian Reform law which may lead to a new law by 1998. It also includes the drafting of a new law for the cadastral registry. This is all being undertaken within the framework of a land policy which was issued by government in 1995.

36. In the Paraguay project, a condition of loan or project start-up was the submission to parliament of the legal instruments regulating the operation of the National Cadastre Service.

37. Also the Indonesian Land Administration project included a legal compilation and documentation sub-project for all land related laws and regulations, including court decisions with a view to clarify, simplify, and if necessary, complete the land laws. To-date, some 2,000 separate pieces of statutes, regulations and rules have been compiled that impact on land, without even including provincial regulations. Under the project a full text data base is under development and on completion will be made generally available to all interested parties.

38. The Algerian project financed the establishment of a land law library and a study to design a land law data-base. It also included a related legal training program. Financed by counterpart funds, 30 new court houses were built in support of helping to address court backlogs; as most of the pending cases concern land.

39. Evidence and Old Documents. In several countries there has been a trend in draft legislation to maintain strict requirements for written evidence of land rights. This has been the case even in rural areas with non-literate communities, and in urban areas with land holders living in un-documented circumstances. In many countries considering their history, timeframe, demographic conditions, and society, land holders do not have documents. Land holders in these circumstances occupy their lands with security of tenure (and title) depending on community acceptance and not on documentary rights. There are several ways forward for governments including: to accept written testimony from neighbors, community or religious leaders; certain kinds of tax receipts or even utility receipts; and to adopt the concept of a provisional or qualified title. Such titles graduate automatically to full title subject to the condition of no successful court challenge within a set period of years.

40. Interim Regulations. In both Indonesia and Lao PDR interim ministerial regulations for adjudication and registration were put in place to allow pilot projects or operational trials to go ahead to issue titles, in advance of the final legislation. This technique has to-date created the possibility of adding the lessons from the pilot projects into the later, more substantive law. This transitional approach has been recommended as well from the El Salvador experience.

41. Prescriptive Rights not recognized in Several Countries. Several countries have not embraced legally the land policy instrument of land acquisition by long

possession - or prescriptive rights. And often those countries have circumstances where most land holders hold their lands solely on the basis of possession. This powerful instrument which is useful for clarifying land tenure uncertainty was even recognized and promoted in the constitutions of Brazil and Philippines in the late 1980s. Former centrally planned economies however, frequently have a problem with prescriptive rights: the principle is often that the state will allocate land and it is not for the individual to decide; yet the state also wants the land to be fully utilized by being in productive use every year, with the legal sanction for non use of the land being the loss of land. Again ironically, how does the state know when the land becomes non productively used or even un-occupied: the answer is that the local land holders do and hence the need for prescriptive rights.

42. Condominium Legislation. In countries in transition there is the need for condominium legislation in support of the privatization of apartment blocks. This has had to be done carefully because of the need to achieve a balance between individual unit ownership, maintenance provisions, and the ability of the new unit holders (acting as a body corporate) to raise funds for considerable building improvements in common areas not now being funded by the state. In some cases provisional arrangements such as cooperative or company title system may be a more suitable option in the interim, than strata title or condominium with dominium (near freehold) individual units, as then the apartments can be mortgaged as a whole (for maintenance purposes).

43. It should be noted that throughout the 1950s, 60s and 1970s both the UK and the US actually introduced complete land titling and registration legal packages into several countries: Kenya, Antigua, St. Lucia, etc. These usually consisted of a "land adjudication act," a "land registration act," and a "surveyor's act." These laws include condominium provisions. While not recommended as a model for direct adoption, they serve as a useful guide for scope and principles which can be adapted. The basis for these laws can be found in Simpson, S.R., 1976, Vol II.

44. The demarcation of protected areas including forests. The demarcation of private lands from state and or traditional land is a difficult issue to deal with. There are many interests and issues in protected areas including institutional, economic, legal, resettlement, conservation, traditional people and their traditional rights in the protected areas, recent settlers in or near the protected area, and others. These interests all come into play when a decision is made to mark the boundaries of such an area. The Brazil (e.g., Mato Grosso) projects appear to using a most comprehensive approach. In the Thailand project, the problem is still being addressed with the latest approach being the provision of funds for the forestry department to allow its' staff to participate in necessary adjudication and survey. These issues are also present in Indonesia, Lao PDR, Vietnam, and in the Philippines. As the Indonesian and Lao PDR projects have a focus on urban areas, these projects have not as yet had to face these issues: however they will be the subject of studies and trials between 1997 and 1999.

Traditional Lands and People

45. In the last decade most Bank projects have better attempted to address or consider traditional lands and peoples in projects. Projects in South America are mostly guided by policies and guidelines and have achieved quite positive outcomes, especially in Brazil: often they have focused on the demarcation and the subsequent protection of traditional lands. Those in Asia appear to be studying the situation as most of the first stages of the projects are not involved with traditional lands. Studies are planned in Indonesia and Lao PDR to prepare strategies for follow-up projects. The project in Papua New Guinea (PNG) has had a focus on traditional systems but it has had a difficult implementation: in some provinces the traditional systems appear to be functioning and modern systems are premature. The basic land law in Indonesia, 1960, tried to incorporate traditional law systems and tenures into modern law, fitting them into modern equivalent concepts. Unfortunately the approach adopted for community lands has had difficulties. Also as population pressure and new development projects impact on still unregistered traditional lands and peoples, they are frequently disadvantaged, including not being clearly distinguished "legally" from squatters or from recent new settlers.

Tenure and Gender Considerations

46. In its support for land registration projects, most projects look at the covenants of tenure of the land rights that are being registered. Since the mid-1980s the Bank has looked at the substance of the rights and not the name (e.g., freehold or leasehold). Full private ownership rights are not expected with in many cases long term leases accepted. In general the rights should include the right to: transfer, sale or assignment; gift; exchange; mortgage; usufruct; lease; inherit; and to license. Also checks are made for easements; for physical access if land locked; compensation and re-settlement provisions on public sector expropriation; and de-facto use rights; though subject to approval by other laws. The lease or land use right term is investigated to ensure that it is viable, e.g., is a term of 30 years long enough for agriculture? is 50 years in order for forestry purposes? and 99 years for residential use.

47. In most of the projects reviewed gender considerations are reviewed in terms of, the extent to which gender equity considerations are present in the law and achieved in practice. Some projects have proposed re-enforcement actions even though the legal provisions appear very good, (e.g., Laos PDR land titling project: here the women's union is to be a member of provincial steering committees, gender training for the adjudication teams; woman members of the adjudication teams (now nearly 40% in Thailand); if necessary separate women's meetings during adjudication; and monitoring results. These aspects are often topics in constitutions and civil codes, but the practice is less successful. Most projects now include performance indicators which plan to include statistics on the gender of the person(s) granted the rights.

Justification and Economic Benefits Studies

48. An efficient trusted land registration system is part of the infrastructure of land markets and part of the national investment system of a nation. As reported by Stocker³: "The legal basis for a mortgage granted for the long term and securely is a functioning land registration system. Without such a land registration system, construction of a market economy-based investment system is scarcely possible." He added that in Germany in 1992, there were 25 private banks which had issued mortgages (Pfandbriefe) for a total of 460 billion DEM (about US\$310 billion) and with the public banks means that there are mortgage bonds in circulation of about 800 billion DEM or US\$ 540 billion (representing over 25% of GDP (1992)). In the USA, the real estate industry, services and construction related to all parts of the real property, and totals about 16.5% of the Gross Domestic Product⁴. And loan collateral is important in USA, with 70% of all loans made using some form of collateral as security for the loan. Primary and secondary mortgage markets depend critically on efficient land recordation systems, quite apart from title and mortgage insurance industry. These same scenarios can be built for UK, Australia, and other OECD countries.

49. In World Bank supported work, land titling and registration projects to-date have not been required to calculate an "economic rate of return" before submission for approval to the World Bank Board. This is because there have been few economic studies of the benefits of land titling, especially in urban areas. The norm has been to state the economic benefits expected from the project and introduce them at least but adequate costs.

50. Several projects have clearly differentiated between economic benefits and fiscal impacts of the project, as well as social and environmental impacts. However, several socio-economic studies are now available or have started to be undertaken in the World Bank supported projects, including a second in Thailand; and new studies planned or underway in Indonesia and Lao PDR. Two studies were recently completed (in 1996) in Paraguay and Honduras funded by the World Bank. Other agencies have supported studies e.g., M. Seligson (USA) in Honduras. (see paper in this conference by Feder and Nishio, 1996).

51. Fiscal impacts are those associated with revenues from land including property taxes, transfer taxes, capital gains taxes, stamp duties and registration fees. Some projects with valuation components have been associated with large gains in

³ Otmar Stocker, Legal Adviser, Federation of German Mortgage Banks, in report Herbert Hofmeister and Helmut Auer, 1992

⁴ figures from the U.S. National Association of Realtors, 1988 - 16.5% of GDP amounts to US\$749 billion (10 to the ninth) in 1987/88.

revenues for government, e.g., the Thailand project. The Lao PDR used the potential fiscal impact of its proposed project as an important part of its justification to top government officials. On the other-hand, the Indonesian project was justified on land market and dispute settlement grounds, with no fiscal impact presented or involved in the project.

52. For countries in transition, the recent World Bank (1996a) study "From Plan to Market" concluded that the "...the reorganization of farmholdings should concentrate on establishing and documenting individual ownership of land and non-land assets and on creating markets which owners can adjust farm size and capital intensity." And continued when discussing privatization "What ever mechanism of initial privatization is adopted, the critical need is for freely functioning land markets": as they provide "...flexible mechanisms for reorganization, preventing resources from being locked into forms created in the early stages of reform."

53. However, land registration is not always neutral in a political sense and that even the regularization of property rights is frequently difficult. In some cases (e.g., recognition of informal or undocumented or community rights), the formal government may regard such rights holders as squatters or temporary occupants even after two generations of occupation. By recognition some groups may be disadvantaged and may oppose the project. Regularization demands courage especially in extensive and potentially high land value urban areas, (e.g., in many Asian cities over 40 percent of the population holds land without formal documents) and some governments may prefer to doubt possessory rights holders, in favor of higher bidders who they perceived will put the land to more "productive" land uses.

SOME TECHNICAL CONSIDERATIONS

Systematic Adjudication and Registration

54. Many of the projects have adopted the methodology of systematic title adjudication and registration to increase the speed and fidelity of the land rights adjudication process. This method has the greatest potential for transparency, of mobilizing community pressure on those acting in bad faith, and the potential to gain a land rights decision for all parcels in the area under consideration.⁵ Systematic

⁵ Typically systematic adjudication and registration is at the initiative of the government and addresses all of the parcels in a jurisdiction block by block, village by village, parcel by parcel basis. The goal is to issue titles to all eligible land holders, and to more importantly, to register those titles in a public land registration office; to start and finish a set area, e.g., a village in a time-frame of say six months. Typically systematic adjudication and registration is about the determination of existing rights of occupied parcels, whether under the existing deeds registration systems, or under the private conveyancing

adjudication and registration has been used to issue over 5 million title deeds under the Thailand land titling projects in about half of the provinces in the country; and has had an impact on about 20 million or 33 percent of the population of Thailand. Also it was used in the late 1980s Brazil NE Land Tenure Improvement Project in 10 states, and has started to be used in projects in Indonesia, El Salvador, Lao PDR, and those planned in Paraguay, and Georgia.⁶

55. Mechanics of Systematic Registration. Because the method is field based, it allows economies of scale to be achieved in most operations in the land titling and registration processes including: wide publicity, maximum community participation, adjudication of rights, survey and mapping, documentation production, declaration and appeals process, and filing in land offices. To be successful the method demands that every landholder or their representative is interviewed at least once to present evidence, and with neighboring land holders to delimit their common boundaries.

56. The down-side of the systematic method is the requirement for a government to be pro-active. Thus the timing of the project is at the convenience of government, when some land holders may not be ready, e.g., for resolving their land rights questions, say at the time of inheritance. Plus the costs involved accrue to government because it is taking the initiative and brings the service to the people. The overall operation results in a large capital outlay. Land holders if charged the full cost may well elect not to pay, or to worse not to participate, in which all parties lose.

57. Cost Recovery and Sustainability in Systematic Method. Countries have mostly elected not to charge the full cost of systematic registration electing to recover some of the cost at the time of the next transaction. The Thailand project, for example, makes a charge of about US\$4 per parcel but the actual project cost is about \$40 per parcel. Similar costs are being experienced in Indonesia. Cost recovery, however, is down stream on these two projects, generated from fees on subsequent transactions (every 10 years on average). Systematic methods therefore bring about the demand for large capital injections of funds to cover the about \$40 per parcel over 10 years. Studies are necessary to determine the level of fees to be set to enable the conduct of the land registration office as a whole, for all of its functions.

58. Sporadic Adjudication and Registration. An alternative method is sporadic system, or under the village or community systems. It may also involve some re-allocation of remaining state land.

⁶ Systematic adjudication and registration methods were used extensively by the United Kingdom in Africa and in the Caribbean from the early 20th century until the 1970s. They crafted the technique and it is described in Simpson, S.R., 1976.

or demand driven adjudication and registration. It though is associated with isolated and expensive surveys, long conversion periods measured in decades, minimum community participation, typically office based process, poor publicity, and affordability problems for low-income earners. However, it uses the user pays principle and therefore in the short-term, allows the land office to operate on minimum budgets. In effect the Philippines system operates with sporadic conversion, with an estimated 25% of total parcels converted by 1992. Another example is in England and Wales, where the land registry offices have now converted 16 million parcels out of the total estimated 22 million after starting in 1926.

59. Overall, in most projects both systematic and sporadic methods must be built, as sporadic methods cater for on-going transaction registration processes in the operation of the land market. That is sporadic first time adjudication and registration and on-going transaction registration, must be built into the design of projects, apart from just systematic methods.

60. Experience with Systematic adjudication and registration. Much of the Bank's systematic adjudication and registration experience has been with rural areas and in the most successful projects a rate of issuance of 70 to 80% has been achieved (e.g., Thailand I and II projects) with similar rates in the Indonesian and Lao pilot projects. The problems to be addressed to advance toward the 100% target are: the achievement of better estimates of the total number of legal parcels in a district or village (many assumptions are made); parcels not addressed because of their proximity to un-demarcated forest or state land areas; absentee owners; village/community lands wrongly claimed and allocated to individuals; lack of written evidence; mortgagee reluctance to release existing evidence or to accept new parcel descriptions especially changed parcel areas; deceased land holders and inheritance issues; family land systems (multiple owners of undivided land parcels, and un-economic parcel sizes); incentive systems which may encourage systematic teams to leave the "too hard" parcels; reluctance to pay fees; all contributing to parcels with land holders with the titling process unable to be completed.

61. As a result of the above demands, the local land office or team may not be able to issue the land holder's copy of the title to the beneficiaries. It may mean un-issued documents in piles of thousands, cluttering land office filing rooms for long periods of time. Ways to over come the issues mentioned above, depend on the policies/laws and creativity of the policy and technical managers in the various projects and their advisers. Effective wide publicity is most necessary to achieve success. Also unified and well funded publicity campaigns are needed ranging from radio ads at critical times of the day for the land holders, door-step meetings with land holders, and many village-wide meetings. This must also include briefing sessions with local and community governments at all levels.

62. In urban areas the systematic process is more difficult. It must overcome town planning, building permit, and minimum area requirements, tax payments, and the

many other stakeholders who all demand that their interests be dealt with before title can issue. Also in practice, land holders are not at home during the day, therefore teams often work in the late afternoons and early evenings and weekends. Also there is a trend toward land holders having an informed person to represent their interests; often as a result of the complex urban issues. But in most projects the policy has been that the teams do not attempt to deal with non-land rights matters, e.g., taxes, building permits. The logic is that the issuing of a title deed, does not bar the mandated agency from pursuing its interests in the future such as property tax arrears, and building or zoning infringements.

63. The land titling process should not be frustrated by the mandates of other agencies; they should not act as a policeman for multiple non-real property matters before a title deed is issued. In one country, the land agency was instructed to check the land holder's income tax payments before proceeding with land rights matters, and in another, strict requirements were made for the existence of physical infrastructure for the parcel before title issuance. Clearly this is a liability for the titling process, which would cause the process to fail. Land ownership and land use matters can and should be treated independent of taxes: one is regarded as a benefit or incentive, the other not so. And because of this the land holder may elect not to participate in the project, which means then all parties lose.

64. Undocumented Land Holders in Urban Areas. A most demanding issue particularly in urban areas is the case of undocumented land holders who are sometimes called, inaccurately, squatters. These groups are often from old rural villages enveloped by growing cities, or perhaps occupied by traditional peoples, or have been settled by informal subdivision or organized invasions by a group of settlers (e.g, Karachi; Lima), or those living in informal settlements perhaps sanctioned and supported by former city governments. These undocumented land holders are often part of the informal sector. In some countries such communities have been the target of infrastructure improvement projects supported by central or local government but the land status is mostly left uncertain. As many of the Bank supported titling projects are rural based, these issues have not been directly addressed by projects - but some urban development projects often have small scale land registration components.

65. Addressing Urban Issues Urban areas have been the focus of the Lima land registration pilot projects (de Soto, 1989; also McLaughlin and De Soto 1994), and in Indonesia and Lao PDR projects the systematic process has also started in such areas. The instruments available to address the urban situations should include: favorable policies, prescriptive rights, written testimony from neighbors, provisional titles, and if needed: leasehold rights and opportunities to purchase state land at affordable prices. A risk is that the untitled land holders may in the mid-term be forced off the land because the land use or ownership rights are awarded to others; retained by the state; or as a result of increased rents. These situations demand most careful equitable and informed treatment by decision makers.

66. Logistical and Management Issues in Systematic Adjudication and Titling. At the management level the systematic process is demanding. Great numbers of staff or contractors are necessary to do the tasks (e.g., currently over 5,000 in Thailand), which if undertaken by the public sector takes many years of planning and much training to achieve. There are technical, institutional, and logistical issues of all types involved. Incentives are needed for the field staff to perform satisfactorily, preferably output based. A fundamental decision is whether the operation is undertaken by public or private sector teams or both. If public sector based, what will be the structural positions within the teams relative to the main agency functions? What is to be done with such large numbers of staff at the time of completion of all areas in the country? These are questions which the projects under review are attempting to deal.

67. High Transfer Taxes. Another impediment has been the burden of high levels of transfer taxes on the sale of the land, often attached to a transfer from all levels of government. Such taxes serve as a large disincentive to the registration of transactions and drives land market transactions under ground. A balance is required.

68. Further Improvements Needed for the Systematic Method. It is apparent from experience that the method could improve with more publicity of all types, more community involvement and participation. Furthermore, independent legal advice (legal aid) should be available to land holders from non-government specialists, and independent customer sample surveys conducted before and after the process. These improvements are not without their costs, but they are necessary as in urban areas especially land holders may be absent, communities less homogeneous, and the stakeholders greater in number and influence.

Cadastral Survey and Mapping Techniques

69. Photomapping Techniques Used Extensively. Systematic adjudication and registration lends itself to the use of aerial mapping techniques as a tool to aid the identification of the parcels and boundaries, en masse. It allows economies of scale to be achieved in survey and mapping. In many of the South American projects this has meant the use of ortho-photomapping and ground based identification of parcels. In Asia, the approach has been analog rectified photomaps scale 1:4,000 for rural areas and 1:1,000 for urban areas. In Thailand, a 65% usage rate of these maps for parcel surveys has been achieved in rural areas with the balance of parcels surveyed by simple ground based methods, (i.e., in villages, and as a consequence of delays in the supply of photomaps). Huge amounts of mapping have been undertaken in association with Bank supported projects to-date, in aggregate estimated at over one million square kilometers in Brazil, Thailand, and now in Indonesia. For example most non-mountain areas of Thailand have now been flown under the three land titling projects in the last ten years, at scales of 1:25,000, and 1:15,000 amounting to nearly 300,000 sq km, plus all Thai cities at scale 1:6,000.

70. New Methods Needed. However, investigations are underway at present to find improved methods to undertake survey and mapping for land titling purposes, for reasons of speed and costs. Aerial mapping has a significant lead time amounting to about 18 months in most countries, which results in a need for very careful planning and a loss of flexibility in project planning and an in-ability to respond to political requests for area change. Also the resulting photomaps are relatively expensive, and the bottom line is that they are a means to an end, not the end.

71. There are issues in the acquisition of aerial mapping including the capacity of the country to undertake the tasks (e.g., limited in Asia), the limited suitable flying season (e.g., in some countries it is less than three months), and the bidding process. These all contribute to considerable delays in its acquisition, even with good planning and excellent staff. In the Thailand and Brazil projects in the late 1980s problems were experienced resulting in one to two year delays.

72. In most projects the maps are costed only for the titling purpose with no other use expected of them in the short run: this amounts to about 15% of the costs of producing a title. Added to this are the ground survey costs, another 20% and this percentage is growing as a result of the rising costs of staff and field deployment (noting that many of country economies are growing at up to 9% per annum). The aggregate 35% of costs spent on survey and mapping means there is always a great potential to improve the methodologies to reduce costs. Methods currently under investigation are hand-held global positioning satellites systems (GPS) and digital softcopy photogrammetry.

73. Hand held GPS holds great Promise for Cadastral Surveys. Global positioning satellites systems (GPS) have been used for most survey purposes to-date (survey control, air borne flight line positioning and photo-control), but in the last year in Indonesia and elsewhere, trials are being conducted in its use for cadastral surveys: in both systematic and sporadic work modes. The first results are very promising in terms of cost reductions, more timely and rapid surveys, accuracy, and improved flexibility in terms of being able to respond to demands to switch areas when needed. GPS demands less cooperation between units of the one organization and fewer people. On the downside, hand-held GPS in the Asia context will put high cost capital equipment into the hands of low paid staff working at present with simple low cost survey equipment - often just a tape and a photomap.

74. Any change here must be carefully planned with large numbers of teams involved (e.g., Thailand at present has over 500 adjudication teams consisting of a surveyor, a law clerk, and village representative, in operation every day, plus support staff, and control surveyors). For papers see Barnes and Eckl -- this conference, and Andrew Jones, forthcoming). Here it can be observed that the techniques for GPS cadastral survey are still being developed, with the GPS tools themselves still being

improved, e.g., better software for low cost models; better data sampling and selection techniques.

75. Softcopy photogrammetry. Appears to be able to reduce the costs and to speed up the production rate of maps to-day. It is going to be used in the Lao PDR project. However, this needs careful introduction into developing countries which typically have poor infrastructure, very limited skill bases, and they lack of maintenance facilities in-country.

76. Technology Experience. The experience in projects is varied. In the late 1980s the NE Land administration project in Brazil, information technology (IT) was used by private sector companies to produce the certificates including the title diagrams and the production of the required written and graphical descriptions. On the other hand, the Thailand project has just started to use such methods on a limited scale to produce its titles, however it has for the last eight years used computer graphics to perform the transformation of existing cadastral maps into terms of the new basemaps. Global positioning satellite (GPS) systems and total stations are in use in most projects, for control surveys though. Between 1994 and 1996, computerized land registration transaction support systems were put in place in 28 out of Thailand's 500 land offices. However, between 1996 and 1999 a large IT team will develop and implement a multi-million dollar agency wide IT strategy for most land office functions. In Indonesia an agency wide strategy has been devised with pilot projects starting in 2 of its 300 offices, focusing on an automated land registration and imaging system development combined with training.

Information Technology

77. Information technology (IT) is playing an increasing role in all land administration projects in most stages: in acquisition, analysis, storage, and in the dissemination of all associated data. However it is not easy.

78. Information Technology (IT) Dilemma. The pressure is often great from senior management to use IT to achieve land registration system improvements, though without proper attention given to the root causes of problems: faulty manual systems, poor infrastructure, and lack of skilled staff. This pressure, however, sometimes means middle management start uncoordinated IT efforts funded from various sources. While valuable learning experiences, those efforts often fail because of unclear objectives and methodologies, scarcity of skilled staff to undertake the work, and lack of strategy and support from headquarters. Demand also comes from outside, often from high-level agencies and customers, for improved service along with suggestions that they can be achieved simply by the large-scale adoption of IT. Some agencies have been driven to start land information system (LIS) efforts prematurely, without conducting a proper needs analysis, with unclear objectives, lack of IT management support, all in an environment of very incomplete data sets, e.g., most land registration agencies in

developing countries have less than 25% of the total parcels in any jurisdictions registered, and cadastral maps are mostly 20 years out-of-date if in existence at all. In Asia with GDP growth rates at six to ten percent the demand for cadastral system maintenance is enormous.

79. IT Strategy Development. The emerging IT approach in large agencies is one of incremental improvements in an environment of an agency-wide IT strategy which may include: the network and node concept; data standards, data structure concepts, and data management strategy; an agency-wide technology architecture; a mandated structural IT management unit with direction powers to coordinate, implement and monitor the strategy; an agency-wide IT user interface; and a supporting human resource development action plan. Within this framework, individual efforts can be supported such as land registration office computerization, as a tool to deal with the registration of new parcels and subsequent transactions, perhaps starting with alphanumeric data and graduating to graphical data later. None-the-less there is also a need for pilot projects which can have great demonstration and training impacts as well as to operate as change mechanisms in conservative agencies.

80. Land Information System (LIS) Approach. Multi-purpose LIS efforts in Bank projects have rarely been successful for many reasons. Most project and agencies have found it difficult enough to plan and implement LIS for just one agency and its information requirements let alone for several, considering the different priorities and incentives, varied mandates of each, and data scarcity and its lack of fidelity. In land titling projects one successful strategy has been to focus efforts on the systematic titling and registration which produces new maps and near complete coverage of all parcels in an area with up-to-date parcel information for whole villages, districts, and ultimately whole provinces. This can be considered as a basis for LIS as it serves, on a de-facto basis, many other uses apart from the property rights security improvement use. In short, the agency focuses on its customers' requirements, its' own informational needs to satisfy those requirements, and once achieved the agency will be in a better position to satisfy demand for land information from other agencies. This has been the strategy adopted by Thailand, Indonesia, Lao PDR, and in Bolivia. And indeed in the land registration agency in England and Wales, plus that in New South Wales, Australia.

Training and Education

81. Staff development including training and education accounts for about 5% of the cost the projects included in this survey. Often the training includes management workshops, on-the-job training, overseas study tours each with a focus or theme, and work experience in overseas companies and agencies. Such training is a critical element of a land titling and registration project enabling technology transfer, an awareness that improved systems can work, apart from the incentive value for staff involved with the project. Education in some projects has included local cadetships in national universities, say for 20 students per year for 5 years, the establishment of a valuation

diploma in a college, support for the introduction cadastre topics into overly technical university courses, and scholarships for staff to overseas universities. Recently most projects have adopted a train the trainers approach.

82. Sometimes these activities are supported by bi-lateral grants from OECD countries rather than by loan monies. Countries who have supported this topic area are: Australia, Canada, Denmark, Germany, Sweden, Netherlands, Norway, Spain, Switzerland, and the United States. As an example, in 1996 for the proposed Ukraine project, even before project start-up, there are four support activities underway funded by: Canada, United Kingdom, United States, and Sweden. Australia through AusAID has made a significant input in the Asia and Pacific region in the land titling and registration arena estimated to be US\$60 million over the last decade, with US\$35 million of that granted to countries as parallel project funding along with World Bank supported projects (notably in Thailand, Indonesia, and in 1996, in Lao PDR).

Environmental Concerns and Land titling

83. Since 1988, all World Bank projects during preparation are rated as to their potential environmental impacts. All titling projects under review have been rated in the categories of "no significant impact" or "no impact." The project documents mostly indicate that they will be at least be "neutral" or will have a positive impacts. The positive impacts cited are claims for improvements in security of tenure which will foster: improved soil conservation because of more tree crops; less intensive use of land resulting from better farming practices; and in urban areas, benefits related to health and well being, from more potential private investment in environmental infrastructure in housing, and the resulting investment by the public sector for improved drainage and sewerage.

Land Titling Costs

84. There is still only sketchy information available on the costs of land titling in World Bank supported projects. These figures come from Holstein (1993): The Thailand projects achieved US\$33 to \$47 per hectare (average rural parcel size 0.9 hectares), that is about \$40 per parcel; Brazil North East Land Tenure project - US\$6.5 per hectare (average parcel size 47 hectares); and from Staff Appraisal Reports (SAR), Algeria US\$5.5 per hectare; Costa Rica US\$ 14 per hectare. It is clear that Indonesian costs will be similar to Thailand's - \$40 to \$50 per parcel. In the breakdown of costs between the various parts of the process mapping takes about 24% of total budget, adjudication about 18%, survey 22 %; registration 23%; and institution building about 13%. These figures are +/- 5% based on Thailand, Brazil, and the Algeria projects as calculated in 1993. Certainly more work and studies should be conducted into land titling and registration costings.

Conclusions

85. Similar to Main Stream World Bank Projects. A land titling project is similar to most other World Bank projects: it supports investments in civil works, service contracts, goods, consultancies, institutional development, training and technical assistance. Such projects can be regarded as building the infrastructure of the land market and administration and like physical infrastructure projects, (e.g., roads and bridges building) project designers must include considerations concerning sustainability, and maintenance. Therefore, issues such as fees, cost recovery, management, and staff development must be addressed.

86. Institutional Issues. The institutional issues are critical for success in land titling and registration projects, and should be made part of the project, though a start can be made before the project starts. Some project designers believe, however, that institutional and legal issues must invariably be addressed before the start of the project; this is a demanding requirement as governments react to stakeholders with clout and not to those who are mere observers especially at the start of a project. Also it assumes that these issues can be addressed quickly, that the issues and the way forward are clear, and that the skills exist in-country to do the task, which is rarely the case. An alternative approach is working with government during the project period, with position papers produced, building awareness and consensus, leading toward institutional and policy change.

87. Technical Issues. Although technical issues tend to be less dramatic than institutional ones they have an impact on the majority of the budget therefore we must get them right. This paper highlights systematic adjudication and registration, plus survey and mapping processes which account for about 75% of the Thailand and Indonesian budgets.

88. Land Registration and Land Administration is Not Sufficient . By itself land registration is not a panacea for efficient land management policy operation. It is not substantive and needs to be set in an effective land policy and institutional framework. While such projects play a role in the achievement of improved productivity, shelter, equity, and environmental objectives, other instruments are necessary in concert and support. These include: land use tools and incentives, credit mechanisms and instruments, agricultural extension services, minimal or balanced transfer taxes, and minimal fees and duties on the sale of land (minimal so as not to discourage transaction registration and to drive land transactions underground or into informality), possessory titles, and market rate pricing and compensation for land sales especially government purchases and expropriation.

89. A Growing and important World Bank Activity. Land registration and titling is a growing Bank activity. However, it is still small considering that in the last 15 years there have been about 14 direct projects in an estimated total Bank portfolio of over

2,500 projects in that period. But as decided by the Governments of Thailand, Indonesia, El Salvador, Lao PDR, and the state governments in Brazil, and others: at a certain stage in a country's development, formal property rights and efficient land registration systems become an imperative for the working of modern sector land markets and to help achieve equity in them. The state puts into law a uniform system of provable property rights, plus contract law and practice, supported by a transparent and enforced justice system, and moves away from the alternative of multiple non-uniform community supported systems, often with secret land holders, transactions and arrangements. This real estate property rights imperative has been the experience in the past in all OECD countries^{7/}. Clearly without it, the capital stock and resources of a country lie dormant unable to be mobilized to support economic activities. A land registration system is an important instrument of the land market, and a basic instrument of a national investment system and economic development.

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e.g., see Douglass North, 1981; and Hernando De Soto, 1989

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ANNEX I

Brief Report on the Thailand Land Titling Project (TLTP)

1. The third TLTP commenced at the beginning of 1995, following TLTP I which started in 1985, and TLTP II which commenced in 1990. The three projects are part of a 20 year program to issue titles and register documents for all eligible land holders for non-forest parcels. By mid 1996 more than 5 million title deeds had been produced for land holders, impacting on an estimated 20 million people (33% of the national population). The third project is due to finish in about 2001 with the issuing of a further 2.5 million titles. A fourth and final project is due to start at that time to complete the total program. The projects also include land valuation system establishment and actual valuation.
2. The first project covered nine provinces, the second, a further 16 provinces, the third about 20 provinces, the fourth, the balance (now 75 provinces in all). The order of execution was selected by government, with the first project using the poverty criteria, the second, included using regional economic growth criteria, and therefore it included the nationally supported Eastern Seaboard project provinces.
3. The Thai project, mostly concerned with rural parcels, has used new photomaps at scale 1:4,000 for identification and survey of parcels for about 60 to 70% of rural parcels. The village parcels have been surveyed using simple ground survey techniques linked to photomaps by traverse surveys. Extensive cadastral mapping (scale 1:1,000) from existing information, has been undertaken in city areas, including over the whole of Bangkok with its total of 1.2 million parcels already with registered titles (but with un-maintained cadastral mapping).
4. The project has trained an estimated 2,000 staff over the ten years, sponsored about 200 degree students in survey and valuation; produced 50,000 base maps at scales 1:4000 and 1:1000.
5. Thailand's third project is financed by the Government with US\$80 million; Australia with US\$6 million (3%); and US\$118 million (57%) from the World Bank (57%).
6. There are several remaining issues in the project including: forest boundaries; information technology; incentives for adjudication teams - at present there are 5,000 people in the field working on this activity.