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**LAND
TENURE
CENTER**

An Institute for Research and Education
on Social Structure, Rural Institutions,
Resource Use and Development

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**LAND TENURE IN GUYANA:
A RAPID APPRAISAL REPORT WITH
RECOMMENDATIONS ON POLICY
FORMULATION AND REGISTRY MODERNIZATION
FOR THE A.I.D. P.L. 480 PROGRAM.**

by
Steven E. Hendrix

Submitted to:

**U.S. Agency for International Development
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Office of Development Resources
Rural Development Division
(LAC/DR/RD); and the USAID Trade Development Office,
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EXECUTIVE SUMMARY

Land policy in Guyana is relevant to several policies very important in the international community. Reports from the World Bank, the Inter-American Development Bank, the AID P.L. 480 Program, the Food and Agriculture Organization of the United Nations, and other groups, name tenure problems as a major constraint to broadly-based, sustainable economic development in Guyana. Without normalizing the access to and administration of land and resources, environmental regulation and management of fragile lands will be difficult at best. Tenure insecurity and governmental red tape discourage investment. Land markets suffer from barriers to trade, while large estates benefit from subsidies for holding onto under-utilized property. This property underutilization lowers productivity, reduces food security, and decreases Guyana's potential to participate in nontraditional agricultural exports. Finally, the poor suffer the most by the lack of tenure access and security. Development of a multipurpose land information system (MPLIS) would be a logical first step toward the rationalization of landholdings in Guyana.

Today, little or no information exists for environmental regulation, land taxation, zoning, and other purposes. As a result, various agencies of federal, state, and local government have created data systems that are duplicative and incompatible, at great cost to Guyanese taxpayers and international donors, and at the expense of efficiency.

The property registry system in Guyana is in need of major reform. This status report presents recommendations for reform, which includes the development of an MPLIS to serve a variety of users of land information. The MPLIS design would establish a long-term, automated system that is integrated and coordinated for all agencies of government that need access to such important data. The MPLIS would also provide data to the private sector to use in investment and land-use decision-making.

An MPLIS design would be a positive step toward a concrete, visible improvement in land and resource management. This in turn would set the stage for longer-term, sustainable growth in the agricultural sector.

The Ministry of Agriculture has agreed under the P.L. 480 program to initiate plans to extend leases or grant freehold interests to occupants of land. State land may be privatized at market rates. The government is also committed to raising lease payments. However, government policy makers lack the data and technical assistance to carry out such recommendations. Consequently, the Ministry should consider obtaining technical assistance and promotion of policy exchange on these and other key tenure issues.

Guyana has been making significant progress since 1988 in opening its economy. Few countries have made greater strides toward structural adjustment and democratization. In the area of property rights, however, issues of market rates and divestiture have not been addressed. In large part, this is due to the lack of institutional capacity within the country.

Financial constraints and limited staff make it difficult for the Commissioner of Lands and Survey to address the issues in hand. Nevertheless, the problems remain urgent.

A program of policy development and applied research is proposed to clarify these problems and devise more effective strategies for dealing with them, along with addressing issues of institutional capacity.

SECTION I

INTRODUCTION TO GUYANA AND GUYANESE LAND ISSUES

Guyana is located on the northern, Caribbean coast of South America. It borders Suriname, Brazil, Venezuela and the Caribbean Sea. In terms of area, Guyana covers about 83,000 square miles. The country has a multiracial population of about 750,000 of which about 180,000 live in Georgetown, the capital city. Guyana is the only English-speaking country on the continent. Culturally and historically, the nation has maintained very close relations with other English speaking countries in the Caribbean and is a member of the Caribbean Community. Descendants of East Indians compose 51% of the Guyanese population. Afro-Guyanese account for 38%, while Chinese, Portuguese, Europeans and indigenous Amerindians make up the remaining 11%.

There are four main subclassifications of indigenous Amerindian groups. These include the Arawaks, Warraus, Wapisianas and the Caribs. The Caribs are often subdivided into tribes, which include the Arecunas, Akawaios, Macusis, Patamonas and the Wai-Wais.

Guyana achieved its independence from Great Britain in 1966. In 1970, Guyana established itself as a "Co-operative Republic." The Constitution of October 6, 1980 is the supreme law for the nation. The Constitution calls for a President and a National Assembly, which together comprise Parliament. The National Assembly holds sixty-five members who are elected on a proportional representation basis. The President heads the Executive branch of government. The branch also includes a Prime Minister, Cabinet and other Ministers who are appointed by the President.

While English is the official language, Creolese is often used. Amerindians have several local dialects.

Guyana is one of the poorest countries in the Western Hemisphere. In 1990, the per capita income level was USA\$360. In that same year, agriculture accounted for about 24% of Gross Domestic Product (GDP) and about 35 to 40% of total employment. The nation's economy is built mainly on agriculture. Main crops produced are rice and sugar cane.¹ Other crops include vegetables, mangoes, citrus fruits, pineapples, cherries, guavas and bananas.

The mineral resource sector is underdeveloped. Potential of commercial extraction exists for bauxite, gold, diamonds, kaolin, glass sand and manganese. Other deposits include shell resources, copper, molybdenum, tungsten, quartz crystals, talc, oil, gas, iron, nickel and radioactive minerals.

Guyana's exports consist in large part of rice, sugar and the bauxite industries. Future expansion of trade in gold and diamonds, fishing, textiles and agro-forestry are being studied. Imports are chiefly agricultural and other machinery, spare parts and fuel.

Lack of reliable information makes resolving complex legal problems, such as those in the tenure area, very difficult. It is quite possible there is no complete, comprehensive and up-to-date collection of the Laws of Guyana anywhere in the world. Simply knowing what all the law is on any given subject is not an easy matter.

A. THE POLITICAL SETTING

From 1981 to 1990, the real GDP in agriculture declined at a rate of nearly 3% per year. The decline of agriculture contributed to the general economic decline of the entire economy. The sugar industry itself accounted for about 60% of the total fall in real GDP during the period 1983 to 1990. Government interventions, price controls, an overvalued exchange rate and other factors prompted 20,000 small farmers to abandon agriculture during the 1980's.

Guyana is broken down into three counties (Demerara, Essequibo and Berbice--each named for a major river) and 10 Regional Administrations, each with locally elected administrations on a proportional representation basis. The chief executive of each region is called the Chairman. Regional governments control most or all of agriculture, education, health, drainage and irrigation, and water. Central government is regaining control now of sea defenses. Education and health are also, in part, being centralized again.

In 1988, a new, comprehensive Economic Recovery Program (ERP) was initiated. It called for a dismantling of state controls and a return to market forces.

Since independence in 1966, Guyana has had elected governments at five year intervals. Elections are under a proportional representation system, which elects a President and a unicameral National Assembly, consisting of sixty-five members. Until recently, allegations of election fraud were common. However, on October 5, 1992, Guyana held general elections. Former U.S. President Jimmy Carter participated in the supervision of the process, which most believed to be free and fair. The current President is Mr. Cheddi Jagan, a former Marxist.

The Government has promised local municipal elections in the future. International leaders have been supportive of the democratization process, and hope these additional elections will further the cause of democracy in Guyana. The nation has not had municipal elections for twenty years, although regional elections have taken place (amid allegations of voter fraud until last year).

Issues of poverty and food security top the agenda of donor agencies active in Guyana. Most poverty is found in the rural sector. Consequently, the role of agriculture in poverty alleviation and food security is evident.

For a variety of reasons, Guyana has a much better potential for agricultural development than many its neighbors. First, it has excellent climatic conditions and adequate rain to support agriculture. Major agricultural development programs began during World War II, as the country initiated a program to achieve self-sufficiency. Most post-independence development projects have been in the agricultural sector.²

Three separate entities are responsible for land management in Guyana. The Commissioner of Lands and Survey in the Ministry of Agriculture is responsible for agricultural lands. Separate institutional arrangements exist for mining and forest concessions. This report concentrates on agricultural land.

The Guyana Forestry Commission is a semi-autonomous entity with responsibility for the administration of the permanent forest resources. The Commission grants leases and timber sales agreements with operators. These operators are granted exclusive rights for fifteen to twenty-five years. The Commission also undertakes to manage the forests sustainably and efficiently. The Guyana Geology and Mines Commission is an autonomous entity responsible for the granting of licenses to operators to engage in mining operations (except bauxite).

The new Administration in Guyana has promised not to nationalize foreign businesses or properties. But it has been criticized for not stating affirmatively its investment or privatization policies.³

Land management policy is a very controversial subject in Guyana.⁴ There is no broad consensus for privatization of all state lands, or even for extending lease terms. As Guyana strengthens democracy, it will become increasingly necessary to seek consensus on land management issues. Making the approach to decision-making based on technical data, rather than politics, should go a long way toward de-politicizing land management. Unfortunately, such technical data is nearly nonexistent. Consequently, this report will recommend improvement of the registry system into a broader land information management system, which will allow the government to manage its extensive resource base scientifically and transparently. Technical assistance based on experience from other countries will also enable Guyana to formulate land policy less subjectively.

B. THE PURPOSE OF THIS REPORT

This report was requested by the U.S. Agency for International Development (USAID) Mission in Barbados with regional responsibility for Guyana. The USAID/Barbados statement of work was to review briefly the status of land policy in Guyana and the current land registries in particular, with previous reports that had been prepared by others on the topic. This report includes recommendations for further action by the Government of Guyana. The document is based on my visit to Georgetown, Anna Regina and New Amsterdam, June 1-10, 1993.

USAID has limited resources available to devote to tenure policy and registry reform. Therefore, the Government of Guyana should seek funding from a variety of donors. Combining efforts with other funding agencies is critical if such reform is to take place.

SECTION II POLICIES RELATED TO LAND ISSUES

Few issues are more relevant to the goals and objectives of international donor agencies than land policy. In Guyana, relevant objectives involve food security, the historically disadvantaged (indigenous peoples, the poor, and women), environment, constraints on investment, inoperable markets, administration of justice (including the rule of law, and participation in the benefits of democratic society), and government administration.

Despite being a land-abundant country, Guyana's least-fortunate population often suffers from lack of land access. This population is characterized by a high degree of informality (for example, untitled property, unlicensed businesses, and so on) and little access to wealth. Women in particular traditionally may have been excluded from property ownership among even the disadvantaged. The problems for the disadvantaged have been accentuated with the recent return of refugees from Venezuela.

A successful environmental policy requires policy makers to have control of the access to land and water resources. Until Guyana can supervise its land resources, it will be crippled at any attempt to develop a natural resource policy that is sustainable and achievable. In this era of concern over deforestation, Guyana must not fail to address this underlying cause.

An ineffective dysfunctional property registry system continues to be a restraint toward long-term investment. An efficient registry system is a prerequisite to promote foreign and domestic investment. Guyana needs to promote foreign investment and avoid capital flight to encourage broadly-based and sustainable economic growth.

The Enterprise for the Americas Initiative, the North American Free Trade Agreement, and the General Agreements on Tariffs and Trade all point toward the freeing of markets. Despite these policies, markets in land are constrained by institutional barriers (such as lack of adequate registries and lack of a "cadastre" or property maps) and market barriers (such as lack of access to credit and ability to assume risk). This report provides an analysis of the current situation. It offers suggestions for a plan of action that could lead to greater understanding of land markets in Guyana, while helping access to land through a modernized land information system.

Democratization and administration of justice concerning land issues are problematic in Guyana. Without an adequate legal and registry infrastructure, opportunities for fraud and abuse exist. Landholders, especially those without title, have no official recognition or support. Formal titleholders, however, are exposed to the risk of land invasions as the poor lack access to alternate resources.⁵ Perhaps most important, Government policy-makers lack information for prioritizing and evaluating policy options. This is leading to less than optimal utilization of national and donor funding.

SECTION III

LAND PROBLEMS AND ISSUES IN GUYANA

A. NATURAL RESOURCE CONSERVATION

Natural resource conservation is intrinsically related to land-tenure patterns. In a predominantly agrarian society such as Guyana, the lack of accurate land use records and maps has been a major constraint to sustainable use of the natural resource base. As sea wall defenses deteriorate and population density along the coast rises, it will become increasingly necessary to relocate the population inland. Yet the Government lacks data on soil quality, irrigation potential and other factors that would insure an environmentally-friendly land use pattern.

Guyanese forestry has great potential for expansion and employment generation. The country maintains about fourteen million hectares of commercially-viable forests which to date have been largely untouched. As the country approaches a strategy for the sustainable use of these lands, a great deal will hinge on who has actual ownership and access to the forest reserves, and on what basis. These fundamental tenure questions, along with scientific issues of forest management, are crucial to the design of a sustainable agro-forestry system.⁶

B. INVESTMENT CONSTRAINTS AND LAND MARKETS

Guyana has two basic land markets. One market consists of "freehold" estates. The other market involves the leasing of state-owned lands. The Guyanese Government owns about 90% of the national territory. However, with the population concentrated on the coast, this figure is very misleading. In the populated areas, roughly a half of farms are freehold estates. The remaining half is located on government-held property.

In the freehold market, a purchaser buys land outright from a seller. The transaction, called a "transport of property," is recorded at the Registry of Deeds. Transactions in the freehold market are very much like real estate transactions in developed countries for fee simple properties. The tenure structure is a result of the colonial period. Then, both the size and number of plots that could be owned by former indentured workers and former slaves was limited by law. More recently, government policy has been to promote smaller plots in the allocation of government lands. Therefore, there are many smaller farms in Guyana.

The Lands and Survey Office oversees transactions involving state lands. The office is under the direction of the Agriculture Ministry and was created in 1903. Under the State Lands Act, the executive is authorized to make absolute or provisional grants of any state lands. Alternatively, the president may authorize the lease of land. In either case, the executive can establish the terms and conditions of any such authorization, provided only that the terms do not contradict the Forest Act or other legislation. Similarly, the president may

grant licenses to use land for agricultural or agro-forestry purposes.⁷ Special legislation, the Mining Act, regulates mining.

Provisions exist for competitive bidding for state land at auction.⁸ Still, the president is never under an obligation to grant, sell or dispose of any State land.⁹ Further, existing land grants can be taken "and used for public purposes, on payment of such compensation as, having regard to all the circumstances of the case (the president) deems reasonable."¹⁰

Applications for state land should contain a description of the land requested. If a survey is not on file, the applicant may be responsible for paying for a survey.¹¹ Since commonly the surveys are not on file, the government has been issuing "temporary" lease contracts.¹² At the option of the Commissioner, there may be a requirement to publish notice of the application in the state Gazette. This would allow anyone who wanted to oppose the grant an opportunity to be heard.¹³

Under the past government, state-held property was leased to individuals on a one-year term basis. Many felt this policy discouraged long term investment in property. Consequently, the government changed the policy to extend lease terms up to twenty-five years. Nearly everyone interviewed stated leases are automatically renewed provided lessors make lease payments and use the land for agricultural production. If the lessor does not use leased land for production, the government can take it away. However, the State Lands Regulations note that an application for a renewal of a lease is dealt with as if it were an original application. The Commissioner of Lands may renew or extend leases, but does not appear obligated to do so.¹⁴

Contrary to many recent reports, lessors can use leased land legally for mortgage lending. An active sublease market thrives in Guyana. This has the benefit of providing access to the land for those without property while avoiding the risk of losing the property for non-use. The lease interest may also be inherited legally. Here, the lease descends to the heirs and assigns of the holder for the unexpired term.¹⁵

The President can set the rate of any lease at the executive's discretion. This can be done in individual agreements, on a case-by-case basis. It can also be done via publication of a new rate in the Gazette. In any case, however, the regulations suggest the fee be "For each acre up to one hundred acres at twenty cents per acre per annum with a minimum charge of one dollar per annum."¹⁶ Higher fees are involved for larger leasehold estates. The current annual lease fees average less than 5 US cents per hectare and are usually not collected, as collection costs outweigh the income. In any case, however, clearly the lease payments in no way reflect the actual value of the land leased. In 1990, the total revenue collected nationally from all lease arrangements was about USA\$17,000.¹⁷

The law provides special benefits to Amerindians in some cases. For example, Amerindians have special use and access rights to certain properties, even if given out to others through a lease or concession. Landholders are responsible for any damage done by their cattle to Amerindian cultivation, housing or villages. Leases can revert to the state if future legislation creates a new Amerindian reserve.¹⁸

Still, the law contains discriminatory measures that cut against indigenous groups. Indigenous women who marry anyone other than an Amerindian forfeit all rights. Persons only of one-half Amerindian descent qualify as Amerindians, but their descendants do not, even if the other parent is full Amerindian. Amerindians must carry the burden of persuasion of their ancestry to receive any benefit under the law. And the use rights of even unallocated government land are restricted.¹⁹ Other laws make it unlawful to sell alcohol to Amerindians and impose racially-based restrictions on sexual relations with the wife (but not with the husband) of an Amerindian.²⁰

Market failures, barriers to trade and transparency deficiencies in the land market in Guyana can be attributed to a variety of factors:

- The property registration process is excessively bureaucratic, costly and time consuming. It effectively discourages most smallholders from even attempting to get title to their land. It also deters largeholders from selling their land in smaller plots, more affordable to smallholders. The market is characterized by high levels of informality. Legal infrastructure cannot accommodate sale, mortgage or sublease of leased state or government land not yet surveyed. Similarly, legal constraints often prevent the mortgage, sale or lease of informal (untitled) freehold properties.
- Land-taxation and lease collection are ineffective. Freehold owners are simply able to avoid payment. Leaseholders fail to make lease payments. There has accordingly been little incentive for largeholders to put their land into more productive use or sell it.
- There has been virtually no enforcement of legislation permitting the taxation or expropriation of idle lands. This too has provided largeholders with little incentive to increase productivity or sell their lands.
- Leased land is often valued far beyond the official lease value. Several factors make this true: the land's location, immediate economic productive capacity, value as a source of prestige and—in the absence of the threat of expropriation—a hedge against inflation.
- The land resource poor have been unable to translate their desire for land into effective demand, due to their lack of access to long-term financing for land purchases, especially in the freehold market.

C. MACROECONOMIC AND PRODUCTION FACTORS

Historically, the Government has played a dominant role in agriculture. In 1976, the Government nationalized sugar plantations. These are now run by the state enterprise GUYUSCO. The government has recently sought private industry to run GUYUSCO's management.²¹ The other main export crop, rice, has in the past been the subject of

government intervention. The Guyana Rice Board distributed, marketed, stored, milled and harvested rice.²²

More recent government policy has moved away such controls on private enterprise. It appears the government will continue this policy and expand it. Today, state rice mills have been sold and prices freed. The government has eliminated its monopoly on rice exports.

Jameson divided his analysis of Guyanese agriculture into five components:

1. Coastal sugar plantations.
2. Rice cultivation from Essequibo to the Corentyne.
3. The Northwest area.
4. The Rupununi savanna.
5. The Ebini savanna.

Jameson notes the coastal sugar plantations historically were dominated by the Booker McConnell Corporation until their nationalization in 1976. Booker lands were the result of the earlier plantation system that once dominated the country. Sugar production is often large-scale and industrialized. Its work force is unionized and usually associated with the People's Progressive Party. Wages reflect a collective bargaining agreement with GUYSUCO. Workers supplement their wages with private, individual smallholdings. Sugar areas are generally the wealthiest areas in agriculture. Most sugar farmers are of East Indian heritage, with some Afro-Guyanese involved.

In contrast, the rice cultivation areas are dominated by smallholders. Most rice producers are also of East Indian heritage, with some Afro-Guyanese involved. Farms often developed either from land grants (to buy out indentures around the turn of the century), or as the result of settlement plans. Next to the sugar plantation areas, on average rice producers are the next most profitable in the country. However, large, individual rice farmers sometimes have higher incomes than sugar farmers.

The Northwest area, the Rupununi savanna and the Ebini area are all underdeveloped. The savanna areas are generally dry. Savannas are generally used for cattle production. The savanna areas yield a very low rate of production, even for cattle. All three areas of a very low population density and lack infrastructure. These are the poorest areas of Guyana. Cattle ranching in the Rupununi savanna most often involves persons of Portuguese descent, although there are many Amerindians. Amerindians are usually found in near subsistence, small-scale agriculture or in the hunting areas of the interior.

Urban areas have the highest level of incomes in Guyana. Given the ethnic breakdown in agricultural production, crop-specific policies and conclusions can be expected to influence specific ethnic groups in a substantially direct fashion.

Among the main problems facing rural sector growth in Guyana are the following:

- a. Inadequate water control systems: Both drainage and irrigation systems and the sea defense systems are in need of immediate repair.²³ Over the past years, little or no maintenance or investment has been placed into these basic infrastructural needs.
- b. Land Tenure and Titling.
- c. Research and Extension: Transfer of technology and very basic research and extension services are nearly nonexistent.
- d. Forestry: Guyana must begin a strategy for the sustainable use of forest stocks. This strategy should include scientific data and modernization of the tenure rules of ownership, access and use of forested areas.

SECTION IV THE LAND REGISTRY SYSTEM IN GUYANA

A. USAID's INTEREST IN LAND TENURE AND REGISTRY REFORM

USAID, through its P.L. 480 Program, is interested in the promotion of food security in Guyana. Other relevant policy interests include democratization, trade and market liberalization, support for historically disadvantaged groups and a sound policy for the sustainable use of the natural resource base.

The Agency recognizes tenure issues can often be constraints toward achieving these goals. As noted in this report, tenure constraints are implicit in each of the mentioned policy objectives. In Guyana, policy-makers lack basic information on land and property resources to set priorities and make correct decisions. In this regard, an initiative to address the property registries appears logical, since this effort is a prerequisite for other activities in the agriculture sector. This should be combined with a technical assistance and policy exchange program to promote informed tenure policy within the agricultural sector. These initiatives coheres well with other U.S. efforts to promote democracy and transparency in the political process in Guyana.

Given the interest in registry reform by other donors, it is hoped an initial registry modernization design could be implemented and financed by other donors, possibly the Inter-American Development Bank, if such a design were acceptable.

With technical assistance and policy dialogue on many tenure issues, especially those of establishing market rates for the sale or leasing of property and the extension of lease terms or privatization, the Government of Guyana will be better informed in its decision making process.

With the U.S. Government, Guyana has agreed to review

"a time-phased policy and action plan for granting long-term leases or selling state-owned lands at market determined prices, in which planned activities are supported with financial commitments, proposals and effective administration and implementation arrangements . . . Insecure property rights to the land represents an important impediment to the growth of sector output. Without tenure security, farmers are hesitant to make investments, engage in land transactions that would result in more efficient farming operations, and lack the incentive to participate in sustainable infrastructural maintenance schemes. Lack of security in land also limits farmers' collateral borrowing possibilities."

"While the Government recognizes the value in the sale or long-term lease of this land, it is hampered by the lack of a clear tenure policy, a cadastre, and efficient land

transactions procedures. A clear Government policy with respect to land leasing and titling needs to be developed and announced. In addition, priority land titling/leasing targets need to be established, and pursued under a sustainable administrative process which has the full confidence of farmers, credit institutions and the legal system."

B. PREVIOUS STUDIES AND PROJECTS RELATED TO LAND TITLE REGISTRY REFORM

The need for land title registry reform has not gone unnoticed in the past. Several studies have been undertaken over the past several years, sponsored by development agencies outside Guyana and by interested groups within the country. These earlier studies are briefly reviewed here to put current activities in a context.

1. The Guyana Bar Association

Over the years, several times, the Guyana Bar Association has recommended to the President and the Attorney General that the registries be modernized as a matter of high urgency in the administration of justice. Some recommendations called for computerization of the process. While the Association recommendations have been warmly received, they have never been accepted, due to lack of funding.

2. The FAO

The Food and Agriculture Organization sponsored a consultant to review tenure structures in Guyana. In his report, he found the "nature, scope and complexity of the problems identified . . . in respect of surveying, mapping, land administration, development distribution and settlement, require the adoption of a phased approach in the introduction of the changes needed in the administrative machinery and working rules in order to achieve the objectives of public policy for agricultural development, i.e. social justice, increased agricultural output and incomes and higher productive efficiency."

The consultant recommended that, in the short term, the following activities should be undertaken:

1. A national land policy statement.
2. Quantification by the Lands and Survey Commission of state lands, the status of each parcel, utilization and other factors.
3. Revaluation of rentals based on the income earning capacity.
4. Review of rentals every three years, at most.
5. Reversion of abandoned lands to form a new land distribution.
6. Recovery of outstanding rents.

7. Reports and management of arrears.
8. Creation of a new entity, semi-autonomous and self-financing, to replace the present Lands and Surveys Department, with increased centralization of administration and control. Professionalization of staff should be addressed.

3. The World Bank

A World Bank team of agricultural experts reviewed the agricultural sector in 1992. That team identified several constraints to broadly-based, sustainable economic growth in the agricultural sector. Among the constraints listed in the Bank's Agricultural Policy Matrix, the first activities refer to the land tenure system.

The Bank concluded the Lands and Survey Commission had many administrative problems. Decentralization dispersed scarce funding and talent throughout the country. Management has thus become increasingly more difficult. Consequently, the process of issuing leases has slowed to a crawl. Without adequate funds to carry out surveys, the Commission has begun to issue leases on a temporary basis.

Over at the Registrar of Deeds (for private lands), budgetary constraints have meant an accumulation of about 5,000 titles yet to be processed, due to changes in ownership, sales, inheritance, and so forth. This in turn discourages investment in land, and authorization of mortgages or credit to purchase land.

The World Bank notes the Government intends to grant freehold estates to leaseholders of property of less than 10 acres. This may include as much as 80% of all outstanding leases. Once the results of this action are evaluated, the remaining larger estates could be considered for conversion to freehold property.

The Bank suggests the government correct administrative and legal problems with the property registries. It also suggests creation of a national cadastre to complement the titling initiative. Once these are in place, the Bank suggests land taxation be considered. And the Bank hopes the government will follow through on its divestment of state-owned land now being leased to farmers. It is hope this measure will promote tenure security and allow farms to be consolidated into more efficient economic units. In the mean time, lease terms should be extended and fees increased.

4. The Inter-American Development Bank (IDB)

The IDB has noted Guyana has roughly 25,000 agricultural properties. Due to bureaucratic procedures and lack of access to land by the rural resource poor, the government has a backlog of requests for land that have not been processed. Clearly, there is sufficient land to meet just about any need. If these individuals are to achieve access to land, corrective measures will be needed.²⁴

The two main upcoming projects for the IDB in the rural sector are a shore zone project (to include break wall maintenance) and a cadastral survey of certain agricultural lands.²⁵ To take full advantage of this funding opportunity, the Government of Guyana should incorporate these activities into a broader land information management system. This would ensure that data produced would be compatible with other projects and for future use.

As part of its agreements with the Inter-American Development Bank, the Government of Guyana has undertaken to grant, "at market determined prices, long-term leases or the sale of state-owned lands within the context of beneficial occupation of land."

C. STATUS OF THE LAND REGISTRY IN GUYANA

Property in Guyana is a social good, not an economic good. The Constitution states "Land is for social use and must go to the tiller."²⁶ Thus, attempts to transfer land into an economic good by requiring market lease rates or prices may prove difficult.

1. The Property Registry

The Registrar of Deeds Office is under the direction of the Attorney General. It records many transactions. Of course it records the buying and selling of property, creation and cancellation of mortgages, encumbrances, use rights and so on. Property leased from an individual would be recorded in this registry. It also records intellectual property and functions as a commercial registry. Birth, marriage, divorce, death and address information is kept at the Post Office.

Records at the registry are hand written and go back to the 16th Century. For historic reasons, there are two systems of land law and property recordings. Some parts of the country operative under a system of recording called the "transport index," primarily a Roman/Dutch legal practice. The other system, the "index of land transfer of title," is a Torrens system, introduced by the British.

Until about ten years ago, the Deeds Registry has a reputation within government and with the Guyana Bar Association as the most efficient, least corrupt office in the country. Until then, it would have been unthinkable for the Registry not to be able to locate a document in its files, although the system was manual. Unfortunately today, the Deeds offices (one in Georgetown and a "Sub-Registry" in New Amsterdam) are in poor condition. Often parcel maps are in disrepair. Records are sometimes bundled with string and left on the floor. Documents have been lost or stolen. Fraud and mistakes make the process one that would result in legal uncertainty of ownership.

Both the Georgetown registry and the subregistry in New Amsterdam have vaults that in theory safeguard documents. In Georgetown, however, documents in the vault are sometimes crumbling due to humidity and improper maintenance. In New Amsterdam, conditions are worse. The vault is subject to flooding (the vault was built in the time of the Dutch). Neither office has any measure of climate control.

How did the registries come to such a state? Three plausible causes exist. First, low wages make it difficult to retain experienced personnel (registry employees are career civil service and are subject to the government pay-scale). As a result, employees lack the ordinary competence to carry out the functions of the office. Further, most employees are forced to learn "on the job" since training funds are limited. No training at all is carried out in New Amsterdam. At the New Amsterdam registry, all employees are women. Most in Georgetown are women. The New Amsterdam Supervisor at that office hypothesized that low wages prevent men from remaining in the positions. Employees can fetch seven times the salary working for an attorney, for example. Anyhow, there is a tremendous turn over of employees, most staying on the job for just over one year.

Second, poverty concerns have led the registries to accept documents not printed on quality paper ("Saunders" brand). Until ten years ago, all documents had to be presented on title paper. Today any type of paper will do. Consequently, documents filed in the last ten years are in tatters.

Third, there are allegations of corruption.

Among the books maintained by the Registrar of Deeds are the following:

1. Registry of Powers of Attorney.
2. Registry for Miscellaneous Deed (these include name changes--called Deed Pols, agreements, short term leases of freehold lands, and so on. In short, any "deed" to be registered).
3. Business Names Registry.
4. Matters Filed (a control book for transports, to office safekeeping)
5. Matters Advertised (recording publication of notices).
6. The Opposition Book (for transports or mortgages).
7. Mortgage Register
8. Transport Register
9. Transport Plans Books (for surveys)
10. Land Registry Register, with a Presentation Book (index, assignment of number, etc.), Index Books, the Property Register, and a Registry Plan Book (for surveys).

2. The Registration Process

The registry system is responsible for three basic functions: record documents, make annotations on documents already recorded, and cancel documents (such as mortgage satisfactions in the U.S. system). All documents registered **must be processed by a licensed attorney, not by members of the public**. The registry system in Guyana is entirely manual, using no automation, photocopy, or microphotography technology. Thus, no backup copies of records exist in the event they are lost, damaged or stolen.

The survey maps generated for the Registry of Deeds often come from the Commission of Lands and Survey. Although the condition of maps at the Registry of Deeds is often quite poor, occasionally backup copies exist with the Commission of Lands and Surveys.

a. "Informality"

Many peasants lack ownership documentation. No one in academia, the government or the private sector has any idea what percent lack title or other supporting documents. Yet all agree the number is "substantial."

Undocumented owners can get title through the Roman concept of prescription. If an owner has notoriously and openly occupied the land for twelve or more years, the owner can request a title by virtue of prescription. The application must include an up-to-date survey, a legal petition, notice to all neighbors, notice to the state if the land borders on Crown Land, and other requirements. An advertisement is placed in a newspaper of general circulation. Another notice is published in the official Gazette. This provides other citizens an opportunity to oppose the titling of the land. If no timely oppositions are made, the title is issued.

The proscriptive process is slow and inefficient. It may be the costs involved for smallholders exceed the market value of the land. Further, scarce government resources and staff time are consumed in this lengthy process.

b. The "Transport" System:

An owner of "transport" property owns the land, from the center of the earth to the sky above, subject to government interests (ex. airplanes flying overhead, minerals, etc.). To effect a transport (sale) of property, proposed sales must be published in the official Gazette for two weeks before the transaction. If no objections are filed, the transaction is allowed to go on. If timely objections are made, the matter is settled in court. This process is analogous to an action to quiet title in the U.S. system. Such a requirement for all transactions is burdensome, expensive and time-consuming. It does, however, generate legal certainty of ownership.

Transport property is found mainly in the cities. Nearly all of Georgetown and New Amsterdam are transport properties, for example. If all goes smoothly in a transport of property, the process can be completed in about three months. This period is needed because of the publishing requirement and the necessary file review. One source informed me that the process can speed along within six weeks, "if the palms are greased." However, transactions can take a year or more, even for parties represented by sophisticated legal counsel. Land for peasants may take much longer!

Legal documentation to transport property requires a long, physical description of the land. The description must verbalize all boundaries and geographically locate the lot. The New Amsterdam registry estimated that it processes about 100 transports per week. With the New Amsterdam subregistry, delays occur since documents must be signed by the Registrar or Assistant Registrar who is in Georgetown. Every Friday, a "Transport Court" is held in New Amsterdam for the signing of documents. Making the Supervisor an "Assistant Registrar" might relieve the system of this need to wait until the end of the week for the signing of documents.

c. The "Land Registry" Torrens System in Guyana:

Roughly twenty years ago, the British introduced this system to Guyana. In essence, it is a registry of the land itself. Transactions are much easier. The buyer and seller simply appear at the registry and the transaction takes place. There is no publication requirement. All that is really needed in terms of legal documentation is the block number, the zone and the parcel number. To protect interested third parties, a "caveat" can be entered in the registry. This is the functional equivalent of an "objection" to the sale of transport land. Caveats must be renewed every six weeks.

Unfortunately, this Torrens system relies heavily on surveyors to demarcate the land into plots. Over the last ten years, the surveying has become very problematic. The survey process has greatly slowed. There is little money in the system to pay surveyors and few are willing to work at the rates the government wishes to pay.

Sales of property in the land registry system are processed quickly. The New Amsterdam Supervisor estimates these transactions are processed in two weeks. If there was no need to have the Georgetown Registrar's signature (for example, if the Supervisor was reclassified as an "Assistant Registrar"), the Supervisor estimates the transaction could be processed in a single day. Of course if time is a major constraint, transactions can be taken directly to Georgetown by the applicant. **There is no requirement to file local transactions at the nearest registry.**

d. Taxes on Land:

Property is subject to taxation in Guyana. Each year, property owners must pay municipal property taxes and national property taxes. Revenue from municipal property taxes remains in the municipality. Revenue from the national property tax is paid to Inland Revenue and is handed over to the national treasury. "Property" is defined to include real estate holdings plus all other forms of property, including cars, jewelry, books, art, etc. Statutory de minimis levels exist for some sorts of property (like books, for example). However, property valued more than the de minimis level would be taxed. In short, property is taxed annually by both the municipal and national governments.

Inland Revenue collects the national property tax on freehold land based on the value of the property. This is based on valuation in a certificate of value given by the chief valuation officer. The tax code uses a schedule of values to compute the tax. The first G\$5MM is not taxed. The next G\$5MM is taxed.

Before the recording of a sale, the seller must present certificates from Inland Revenue and the municipal authorities stating all annual property taxes have been paid for all past years. Capital gains taxes must also be paid. The code computes capital gains strangely, however. The general rule is that tax is paid on the difference between the basis (or stepped-up or new basis, in the case of capital improvements) and the selling price. However, where the property has been held for some years, the law fixes a presumed percent of the selling

price as the capital gain, whether the gain was in fact more or less than that amount. Property held over twenty-four years is exempt from capital gains tax.

For the transport of property, a registry tax (one half of 1% of the sale value of the land) and a 2% conveyance tax also must be paid. In transfers of title, the seller pays only the conveyance tax. Money collected in this process is paid over to the national treasury. This leaves no funds for maintenance of the registry itself, other than general purpose funds allocated in the national budget to it.

It is possible for parties to lie about the true transaction price to evade taxation. And there are no institutional safeguards to prevent this type of abuse.

3. Lands and Survey Commission (for Public Lands)

Although not part of the property registry in Guyana, the Lands and Survey Office is in a position to be a potential key player in any long-term efforts to improve titling and access to land.

State land can be given out in three forms: a license, a permit or a lease. The lands can also be sold, at which point they lose their character as state lands. Generally, leased land is found in the "first depth," that is the land closest to the sea defenses. The "second depth" lands, those located further inland, are generally given out as "licenses." The "third depth" land, further inland, is given out using a "permit." Although these three forms of tenure have historic differences, they are today equivalent. All function as leases.

To obtain land, every applicant must complete an application. This application includes name, address, acreage, a complete physical description of the land (survey) and the intended purpose of the land, plus a \$10 filing fee. The basic application includes personal data: salary history, work history, experience, and so on. Applications can be filed in Georgetown or in field offices. Field offices exist in Anna Regina (Region 2), Region 3, District of Mararuma (along the border with Venezuela, along the coast), within Region 4 (Georgetown and other offices), Region 6, Region 7, Region 9 and Region 11.

Once the application is presented, the office creates a file on the request. A plan is attached to the file, and the file is assigned a unique, file application number. The office then studies the file to figure out if land is available. If land is available, there is a follow up inspection to insure no squatters are illegally occupying the land.

Every region has a "Land Selection Committee" which reviews applicants to insure that the applicant qualifies for land. The Committee will review the file and interview the candidate. Its judgment will be based in part on the applicant's ability to work the land, the needs of the individual and his family, and so on. From these facts, the Committee makes a recommendation to the Commissioner of Lands to grant or not grant a lease. This is a decentralized decision-making process.

Next, the main office in Georgetown reviews the application to insure the land has no other encumbrances upon it and is otherwise available to be distributed. This review is carried out by a member of the staff of the Commissioner of Lands. If all is in order, the Commission of Lands recommends to the Ministry of Agriculture to grant the lease. Assuming the Ministry of Agriculture approves the lease, the file returns to the Commissioner of Lands.

At this point, if there is no survey of the land, the Commission of Lands will issue a "temporary" lease. This will, in theory, allow the applicant additional time to have the survey work done. It is expected that once the survey is complete, the lease will become a final determination. During the "temporary" lease period, the applicant can pay the survey costs to the government, or the government can pay for the work immediately. In this case the applicant must repay the government.

In practice, however, many leases remain "temporary." The applicants do not have funds to pay for surveys. The government does not have funds either. This causes definite delays in the system. This means that applicants receive property without a physical description of the land. Consequently, the land is non-transferable, non-mortgageable and unable to be subleased. This causes many problems!

Perhaps even more grave is the problem of uncertain boundaries. Many disputes arise over time in the settlement of disputes because formal boundaries were never originally established. Conflict resolution consumes a great deal of staff time at the Lands and Survey Office.

Within "land development schemes," land is surveyed before issuing leases. Areas of settlement not previously surveyed are those that present problems of boundaries and surveys. These are mainly in river areas. These river areas are very expensive to survey, as they entail expenses for boats, gasoline, engines, etc. And the heavy forest complicates the survey.

The "land development schemes" are found where the government owns the land by way of a grant or by a "transport" (purchase). Since the government owns the land, the Commissioner of Lands and Surveys holds the land on behalf of the government. And these lands are called "Government Lands." All other lands that were formerly called "Crown Lands" are now called "State Lands." This distinguishes "Government Land" from "State Land" at least from the legal perspective.

Lease terms are slightly different for "Government Lands" versus "State Lands." Government lands for agricultural purpose are governed by the Deeds Registry Act. One clause in that Act states the Commissioner of Lands can only lease property up to twenty years. But the applicant can always renew the title. "State Lands" can be rented without this limitation. The current practice is to lease state lands for twenty-five years.

The legislation authorizes the President to set lease terms and rates according to the executive's discretion. Order No. 60 of 1979 authorized the Minister of Agriculture to

approve and fix rent for all state and government land. The term can be one year, or up to twenty or twenty-five years, as the case may be. Since then, rates have remained unchanged. Thus, lease terms depend on the application, what has been requested, what the Commissioner feels is justified, and so on. The present practice is one year, twenty years or twenty-five years. In other words, the lease term is discretionary and elastic, providing for the best term for all parties involved on a case-by-case basis.

Before the 1940s, the government used to issue "provisional grants" to land. When the land had been possessed and cultivated for five years, the government would convert the "provisional" grant to a definitive "absolute" freehold grant. Since the land was freehold, if the land was subsequently abandoned, the government did not have access to it. This was a major social concern. In the 1940s, the Government policy was to give out ninety-nine year leases. This length of time was quite close to being the functional equivalent of a freehold title, but represented a slight withdrawal from "absolute" property rights. However problems with land abandonment continued and the government came under pressure to readdress the problem. Next, the government began shortening the terms, all the way down to one year leases. Now, most leases are back up to twenty-five years. Anyhow, renewals are nearly automatic if the farmer uses the land productively over time.

More specifically, from a legal perspective, persons with twenty-five year leases (on state lands) have a right to renewal, if the farmer has used the land. Those with twenty year leases (on government lands) do not have an automatic right to renewal because of the Deeds Registry Act. In practice, however, these are automatically renewed as well.

The Forte Crest (Pegasus) Hotel, a favorite spot for international consultants, is on leased land. Since this was commercial property, the file was given to the Minister of Finance, with a recommendation for a ninety-nine-year lease. This application was approved. This is an example of commercial property.

Mortgaging of leased property is permitted, contrary to several reports from international consultants. In the issuing of the lease, there is a clause that requires an application to the Commissioner of Lands to mortgage the property. Legislation is also in place to allow the sale of a lease, upon approval by the Ministry. In practice, such applications are summarily approved. Of course the sale of leased property requires a payment of a 2% transfer tax, calculated on the sale price of the land.

Years ago, sales were more closely reviewed. For example, if an applicant received property and sat on it for five years, not using it, and then applied for the sale of the property, the file would not be warmly received. The government policy was to discourage non-use of land and receipt of land for speculative purposes. If the person was a genuine farmer, there was less resistance to the farmer transferring his interest in the land.

There are instances in which the government decides to sell government or state lands, rather than lease them. This may be due to the type of land usage envisioned by an applicant for a freehold estate in the land, rather than a leasehold estate. This occurs with permanent structures like a sawmill. When such an application is received, the Commission of Lands

writes up a recommendation to the Minister of Agriculture. In principle, the Minister instructs the Commission to proceed with an investigation. The investigation will review the applicant's plans and proposals, what the applicant has done with other lands in the past, and so on. The Commission then gets a financial valuation of the land and prepares a "cabinet paper," a recommendation the Minister can present to the Cabinet for approval, if the application has merit. If the Cabinet approves the sale of the land, the Commissioner can do one of two things. The Commissioner can issue an "absolute grant" to the applicant (once surveyed). This "absolute grant" requires the signature of the President of Guyana. These are exceptional cases, and can apply only to "state lands."

Mortgage applications are made to the Commissioner of Lands. The review will make sure that the applicant occupies the land, the rent has been paid, and the title is in force. The applicant must be the same person to whom the Commissioner of Lands gave the land. This application process can be completed in a couple of hours and is handled routinely.

There is a backlog of about eleven hundred applicants already in the system which must be processed. With new applications that have not yet reached Georgetown, there are perhaps two thousand applicants outstanding. Given that there are about 25,000 agricultural parcels in the country, outstanding applicants account for an equivalent to about 8% of current farmers. There are an additional two thousand provisional titles which need upgrading to regular leases via the addition of land surveys to the files. Exact, realistic counts are problematic due to regionalization of authority. When an application is made at the region, there is currently no report to Georgetown that an application has been made. Only when they enter the system in Georgetown are they included in the count.

The regionalization of the offices of the Commission of Lands and Survey has presented a serious public finance deficiency in the administration of its functions. The national government allocates funds to each region from the general treasury. The region itself then allocates these funds to various uses, such as health, infrastructure, sea defenses, lands and survey, and so on. This allocation is done in agreement with the central government in Georgetown. However, the Commissioner of Lands and Surveys has no authority over how much money is allocated for land and survey activities in any given region. Often, when the resource allocation proves insufficient, the region requests that the Georgetown Lands and Survey Commission help the region in funding its programs. Unfortunately, the central office has no funds for this purpose. Without control over funding, supervising regional activities is extremely difficult.

Before last year's general election, the government titled large tracts of land to Amerindian groups in the country. Amerindian groups now manage and own the land outright. If they wished, Amerindians could decide to parcelize and sell off the land. This however is unlikely to occur. More likely, Amerindians will decide to maintain the land collectively. Theoretically, however, they could decide to mortgage the land, should the group desire increased access to credit. Even this, though, would be a controversial move. The giving of titles before the last elections was widely viewed as an election campaign initiative. It will be interesting to see how the government handles indigenous lands in the future.

The Commission of Lands and Surveys is especially interested in raising lease payments to market rates. Unfortunately, it lacks the technical capacity to design a program to figure out rates. The Commissioner would be very interested in technical assistance in this area of market rents. In 1985, the lease rent per acre per year was about USA\$0.05. This rate has remained unchanged since. In theory, the government has the legal capacity to revise rental prices once every five years, provided it gives a six-month advance notice. In practice this is not done. Future proposals will need to balance policies to promote agriculture, the ability to pay and the fair market value of the land. Different lease rates might be considered for small farmers, medium farmers and larger farmers. A related issue is that of privatization of public lands at market rates. This too is on the table for discussion.

A visit to the Mapping Office of the Commission of Lands and Surveys proved very insightful. The office is the mapping agency for the country. Its responsibilities include mapping, geodetic surveying, aerial photography, and cadastral (parcel) mapping. Among the map products I saw were 1:50,000 scale orthophotos of coastal areas. The country has twenty-one horizontal control stations. Inter-American Geodetic Survey specifications are followed. Maps are tied into the South American grid. GIS and aerial data has been incorporated into sea coast mapping, to an accuracy of three meters. Maps are not digitized.

The office suffers from a profound lack of qualified personnel. Pay scales are grossly inadequate. Employees gain experience in the office, and then leave to double their salaries with the Mines Commission or the Forestry Commission. From there, they move into private practice, again doubling or tripling their salaries. The Commission of Lands and Surveys is simply not competitive enough to keep its best employees.

The Mapping Office has no procedural manual for employees.

Where there are provisional leases being surveyed, the boundaries are adjusted to the boundaries in fact being cultivated. For example, if a farmer was allocated 50 yards of frontage (face) but actually occupies 300, the Commission of Lands and Survey may simply make a second grant to the individual for the additional 300 yards, assuming there is no conflict with neighbors.

Many transactions in land--mortgages, subleases, sales--are done on an informal basis. Formal applications for mortgages per week amount to only about two or three per week. Applications for transfer of leases average only three or four per week. Applications for new land are handled at the regional level and therefore estimates are not available. There are very few applications for subleasing, as most are handled informally. Still, only approved subleases are legal. Informal subleases are not lawful.

Because of the great level of informality in subleases, the Commission of Lands and Surveys finds itself the arbiter of many agricultural disputes. When a lessee fails to vacate a lot, the lessor often goes to an attorney. But the attorney and court expenses are prohibitive. So the landlord approaches the Commission. Every Monday morning, the Commission has an open window for agricultural problems. And on most Mondays there are at least forty new disputes between landlords and tenants in informal arrangements. The Commissioner

estimates that 80% of his staff's time is spent resolving problems between farmers, not preventing problems and carrying out the functions of the office.

In theory, lease titles are kept in two locations. One is kept at the regional level and the other is sent to Georgetown. Cadastral 1:50,000 maps also have backups. One is available for inspection and the other is kept in a vault. Microfilming of documents was considered at one point, but the project was never started.

Management of cadastral projects to date has been disappointing. The cadastral maps produced by the Commission of Lands and Survey are not linked with maps being produced by Mines or Forestry Commissions. The Ministry of Agriculture also had land use surveys done. But even these were not compatible with maps in the Commission of Lands needed for parcels. Perhaps most discouraging is the lack of basic maintenance and preservation of existing maps. Some appear almost rags rotting on shelves.

Lack of accessible, reliable data in the Commission of Lands and Survey has chilled foreign investment. On a daily basis, the Commissioner receives requests for data from foreign investors. Because the Commissioner cannot supply the data, the impression is that the Commission is blocking investment. Requests for land suitable to plant mangos or peanuts must go unanswered, since the Commissioner has no adequate land capability maps at his immediate disposal. In this climate, the Lands and Survey Commission cannot do business professionally.

An index is used to record applications received by the office. In this "application registry," the following information is noted: the applicant's name, location of the plot solicited, the date, a receipt number and the signature of the registry supervisor receiving the application file. A second index is used at the time a lease is issued. Information in this index includes eleven columns of data: file application number; lease number; date of issue; holder's name; number of acres involved; locality of the lease; county; terms of the lease in number of years; expiry date of the lease; annual rental payable; and a listing of actual rental payments.

To locate a property within the system, users of the system must know the lot number, the lease number or must find the property on a map. There is no index by owner, land use, or any other variable.

Assuming there are no complications, applications for a lease take about three months to process.

D. THE POTENTIAL OF A MULTIPURPOSE LAND INFORMATION SYSTEM

A well-organized land information system could provide policy-makers with data on many of the country's development problems. While providing for security of ownership, the system would also help in the relocation of populations to land suitable for sustainable agriculture. The data could also be used for water irrigation projects, police protection, fire

departments, sanitation and the planning of a myriad of other government programs and services.

Clearly, the present property registry system in Guyana is in need of major reform. However, many additional land and land-related problems and issues face Guyana. These problems and issues all require the synthesis and analysis of a variety of data to make decisions. An MPLIS is the approach that many decision makers are turning to as a tool to aid in these complex decisions.

1. Definition of Multipurpose Land Information System

An MPLIS, as the name implies, is a land information system designed to serve a variety of purposes. The MPLIS typically contains a variety of information about land, including ownership, use, cover, soils, geology, zoning and other use restrictions, wetlands, and floodplains. The MPLIS also includes a geodetic foundation, usually the geodetic survey network, which serves as a means to link or integrate the data in the system. Land survey monuments (the coordinates of their location) serve as the pins by which data can be tied together.

The data in an MPLIS consists of a series of layers. Ownership parcels are the base for several layers. Other layers are built from information collected in areas such as soils, land cover, and geology. The common reference framework (the geodetic survey network) makes it possible to combine parcel and polygon data for a variety of uses. The main purpose of an MPLIS is to provide system users with information about land ownership, value, and use.

Each layer of data in an MPLIS is maintained by a custodian for that layer. Thus, the property registry maintains the ownership parcel, the assessment office maintains property tax data, and a planning or similar office maintains data on land use and soils. Various layers can include county, state, and federal agencies. Potential areas for inclusion as the program gets underway are floodplains, wetlands, land cover, soils, a Reference Framework, etc.

Because the MPLIS serves a variety of users, it must be constructed and maintained so that the data in it are:

- Accurate enough to support the uses envisioned;
- Compatible enough to be used in combination with other data sets that are part of the system; and
- Comprehensive enough so that both current and appropriate data are available when needed.

But an MPLIS is more than data, computer programs, and computers. It also includes the staff and the institutional support for its operation. A coordinated program to build and maintain all aspects of an MPLIS is needed for its success.

2. Benefits

Several types of benefits accrue when MPLIS systems are put in operation. These include benefits due to increases in efficiency, responsiveness, effectiveness, and equity.

Greater efficiency results from use of an MPLIS. Costs are lowered due to the reduction in duplication of data collection and maintaining multiple similar map sets. Other costs, while not lowered, will be stabilized, benefiting government operation.

Improved responsiveness is a second class of benefits that accrue to an MPLIS. Titles can be issued more quickly due to availability of a complete, coordinated database. New technologies and new data, such as location data from global positioning systems, can be added to the database quickly and easily.

Improved effectiveness of government is a third benefit of an MPLIS. Improved access to data and analyses stored in the system, and ability to use them for additional tasks, improves the government's effectiveness. This in turn makes government more competitive, whether within departments, within the country, or competing in world trade. Improvements in the land-transfer process, providing an equitable basis for property taxation, and providing information for resource management and environmental planning can be expected with the carrying out of an MPLIS.

MPLIS systems are perceived to be more fair and equitable than manual systems, since land information technology can incorporate detailed information without the real or perceived biases that are sometimes associated with manual systems. Use of the system will increase since users believe they are being treated more fairly.

In sum, the benefits of an MPLIS system are many. Early savings due to reduced data collection and storage, and sharing of data among system users can be expected. Over the longer term, benefits will accrue from increasingly complex analyses and capabilities as well.

3. Design and Implementation of an MPLIS

The design and carrying out of an MPLIS is a complex process. As noted above, an MPLIS is more than computers and computer programs. Therefore, setting up is much more than buying the hardware and software on which the system will operate. The hardware, software, and other components of an MPLIS need to be carefully matched to the needs and characteristics of the total organization.

To develop and carry out an MPLIS that matches the system to users' needs, seven steps that are critical to the success of an MPLIS include:

- Determining the scope of the system;
- Introducing MPLIS technology to the community that will develop and use the system;

- Assessing user needs;
- Performing systems requirements analysis;
- Designing the system;
- Designing the implementation plan; and
- Designing pilot projects, demonstrations, and benchmark evaluations.

At present, the Government of Guyana counterpart for modernization of the registry probably would be an Inter-Institutional Commission for Registry Reform.

a. Determining Project Scope

A critical first step in MPLIS design and start up is to figure out the scope of the project. Decisions must be made concerning what agencies and functions the MPLIS is expected to serve. The key is to include enough participants to capture the major benefits of an MPLIS and still limit the project so that the government can manage it and finance its construction and operation. Even at this early stage, it is important to consider not only what data files may be included but how they will be maintained and updated. A database without proper maintenance will deteriorate quickly and usually doom an MPLIS to failure.

b. Introduction of MPLIS Technology

Technology introduction has two purposes. First, it exposes an organization to new ideas, methods, and equipment that form an MPLIS. This step is designed to address questions about the MPLIS system. For example, what new equipment, techniques, and methods will be used? How will the products and services produced be changed? What are the potential costs, benefits, and other implications of MPLIS technology? Second, technology introduction introduces prospective participants to the process of setting up an MPLIS. How will the organization make the transition to the MPLIS? Why and how will users participate in the user needs assessment? What is the likely long-term role of users as to the use and maintenance of the MPLIS?

An MPLIS, by definition, involves many separate agencies and people. Because of the many different perspectives of such groups, a leader to help the process is necessary. Therefore, if a leader has not emerged in the "deciding the scope" step, one needs to be clearly identified in the "introducing technology" step. This leader must sell the vision of what an MPLIS can accomplish to users of the system, and to policy makers who must fund and support the system. Realistic assessments of costs, benefits, and institutional changes necessary are critical to successful implementation.

c. User Needs Assessment

The first step in a user needs assessment is to identify potential users of the MPLIS. Next, determination must be made of what each user does, how each user does it, what data and techniques each user uses, and how each user might be able to use MPLIS technology. Among the questions a needs assessment addresses are the following:

- Who uses the land records in this organization?
- What kinds of data does this organization manage?
- How are the data used (as to analyses done, decisions made, and information products generated)?
- How often are the various types of records used and updated?
- Who is responsible for data maintenance?
- What improvements might be possible through automation (for instance, what can be done more efficiently or more effectively, and what new things are possible)?

Needs assessments usually consist of surveys and interviews with potential users of the MPLIS. Earlier studies, documents, and legislation should also be examined. Needs assessments are helpful in identifying the goals and objectives of a project, and refining the scope of the MPLIS project.

A substantive needs assessment is the key in facilitating the design of the MPLIS system. To be of maximum use, potential users must have a good understanding of an MPLIS and be able to articulate how an automated MPLIS will affect their jobs and responsibilities. Therefore, constructive results from a needs assessment depend on doing a thorough job in providing a sufficient understanding of MPLIS technology. Potential users must understand that an MPLIS involves much more than the automation of their existing procedures.

d. System Requirements Analysis

This step uses the results of the user needs assessment to develop the technical requirements of the MPLIS. These requirements include hardware and software configuration, sources of data, management procedures, data accuracy requirements, and the kinds of products that the system is expected to produce. Assessment ensuring that expectations are reasonable in light of current technology is important. Other factors include staffing and staff training that will be needed, space needed for staff and equipment, security considerations (both in public access areas and for backup databases in case of disaster), costs, and how improved efficiencies will be monitored.

Software functionality (for instance, can the computer programs do what is needed) is a major consideration in requirements analysis. A review of several vendor packages is a good

place to begin. However, the final consideration is what the system needs currently are and the expectations for the near-term future. These requirements can then be clearly defined in any request for proposals that are issued.

Hardware costs, while not inexpensive, are a small proportion of total MPLIS costs. Hardware should be selected that can meet the needs of the software (software selection should be made first), and handle data volumes that are projected. Since data volumes and system uses often continue to grow, buying as large a computer platform as possible is recommended.

e. System Design

System designs vary from the simple to the very complex. The design may include a model for how the system is organized institutionally. It may also include such things as data models and the form of hardware and software. The data model itself may be made up of several components including data flows, user interface methods, and how data are to be indexed and archived.

In this step, many decisions must be made that involve tradeoffs. Decisions must be made regarding speed, flexibility, and detail that the MPLIS will provide. Here again, likelihood of success is enhanced if the decisions made regarding system design build on the results of the user needs assessment and requirements analysis completed earlier.

f. Implementation Plan

Once an MPLIS is designed, a plan is needed for implementation. A major consideration in setting up an MPLIS is how the shift will be made from the current manual system to the new automated system. Most such plans call for incremental implementation and work plans. Work plans may include details on what is to be done for a particular task; who is responsible; when the task is to be started and expected completion date; and what are the resources, in terms of data, staff, and funds. Further discussion of the incremental approach is included below on funding requirements and benefit streams.

g. Pilot Projects

Pilot projects, demonstrations, and benchmark evaluations are designed to test all the design and development work on a small scale, before full commitment is made to the new system. For example, a new property registry system might be tested in one or two departments before being set up country-wide. Pilot projects provide the opportunity to fine tune the system, gain experience with the hardware and software, and try out different options for solutions to particular problems. This is also a good time to produce products to show policy makers that the system can deliver what system designers claim it can.

4. Funding Requirements and Benefit Streams

The financing of an MPLIS presents several problems. For example, costs of MPLIS systems tend to occur early in the life cycle. Costs for hardware, software, and data (often amounting to 75 percent or more of total system costs) must be paid for before the system can go into operation.

Benefits, on the other hand, tend to be generated as a stream over a longer period than costs. This means that total benefits do not equal total costs until 5-10 years of operation. Further, benefits are often of the intangible variety—such as having more accurate data faster and being able to generate new products that were not possible before. Not only are many benefits intangible, many are unknown or not expected when the project begins. These factors all combine to make it difficult to develop a precise economic evaluation of an MPLIS before it is put into operation.

To ensure continuing financial support of an MPLIS by policy makers, they should be clearly briefed on costs and benefits that are to be expected with an MPLIS. The implementation plan should also consider incremental ways to put in place the various pieces of an MPLIS. The ability to phase in certain costs should also be analyzed in terms of the immediate needs of government (and the private sector) for output from the system. That is, a particular need to improve the property registry system, revise the property tax system, or solve a specific environmental or land use problem may make it necessary to give priority to items not foreseen in a strict cost analysis.

One way to develop a priority list for funding MPLIS costs is to consider the components of the system itself. For example, a geodetic foundation is often funded first, since this is the foundation (that is, the basis for spatial coordinates) by which all "layers" of data can be linked and analyzed. A base map is often developed as an early step, to be used as a background for other spatial data layers. Computer hardware and software are needed immediately to produce high-quality graphics often required to maintain support for the system. Finally, people and procedures are needed to operate and maintain the system.

This suggests that the major area where decisions can be made to carry out an MPLIS incrementally is regarding the construction of specific data layers. Here again, the most demanding needs, coupled with availability of resources to fund these particular applications, can help in making these tough choices. As additional funds and needs surface, more data layers can be added. This approach makes it critical that a comprehensive plan be completed before any part of the system is begun. Such a plan will ensure that pieces added later will drop neatly into place and provide the output that is needed.

Plans to monitor benefits need to be included in implementation plans for the system. Expected benefits should be labeled as such and documented when practical. Also, procedures should be developed to help identify and quantify unexpected benefits that are certain to occur as the system continues to operate over time. The importance of these unexpected benefits is very important. Experience with prototype MPLIS systems shows these unexpected benefits account for most of all benefits. (Thus, while they are called

unexpected because we are unable to identify them specifically, they are "expected," since we know that many benefits of this type will occur.)

Once an analysis is made of the potential costs and benefits, a set of measurable objectives can be developed against which actual performances of the system can be compared. While it is unlikely that targets will be met precisely, they will provide a general indication of how well the MPLIS is operating and suggest any modifications needed in the implementation plan.

5. Monitoring and Evaluation of an MPLIS

As the above section suggests, it is a good idea to include a mechanism for monitoring and evaluation in the MPLIS plan. Using the measurable objectives and priorities developed by the system's builders and users, this monitoring will provide guidance both to system operators and policy makers who must continue to ensure financial support.

For the proposed MPLIS, Guyana should take advantage of international donor and academic experience in the Caribbean (Trinidad, Jamaica, Venezuela, St. Lucia and other registry projects), and tenure projects in other countries with a Dutch/Roman legal system overlaid with British Law.

SECTION V TENURE POLICY PROJECT

USAID's P.L. 480 Program calls for the Government of Guyana to begin tenure policy reforms. Recommendations from the IDB, World Bank, FAO and others strike a similar cord.

Guyana has been making significant progress since 1988 in opening its economy. Few countries have made greater stride toward structural adjustment and democratization. In the area of property rights, however, issues of market rates and divestiture have not been addressed. In large part, this is due to the lack of institutional capacity within the country. Financial constraints and limited staff make it difficult for the Commissioner of Lands and Survey to address the issues in hand. Nevertheless, the problems remain urgent.

A program of policy development and applied research is proposed to clarify these problems and devise more effective strategies for dealing with them, along with addressing issues of institutional capacity.²⁷ The program of policy development and institutional strengthening should include applied research, workshops, consultancies, and training to explore these questions and to enhance the ability of the Agricultural Ministry technical and policy staff to deal with them.

Basic to the idea of the program is that divestiture or leasing should not be considered in isolation. It is a critical and formative element in shaping Guyana's future land policies. In this context, the Ministry of Agriculture and the Commission of Lands and Survey are confronting many complex, technical issues in the tenure field. These include:

1. How can property tax revenues be collected effectively?
2. How can lease rents be established at market rates?
3. How can market values be established for land to be privatized?
4. How can land divested be provided efficiently to medium and small private farmers?
5. How can security of tenure be assured to the small and medium farmers? How can their freedom to make land management decisions be expanded?
6. How can small and medium farmers most effectively interact with the larger economy for technical advice, inputs and marketing?
7. What institutional constraints must be addressed for privatization to be carried forward? How can they be addressed in the current climate of fiscal austerity?

8. What are the linkages between tenure and a sustainable environmental policy for a rational use of agricultural land and forestry land?

These issues arise directly in the divestiture and leasing contexts. They can be addressed through exploration of the following issues:

1. What obstacles and opportunities exist to the expanded participation of small and medium family and private farmers as land recipients under the divestiture/leasing program?
2. What are the major categories of land recipients, who are being excluded, and to what effect?
3. What is the nature of the conflicts over land which trouble the divestiture/leasing process? Are there ways to implement divestiture which would reduce their incidence or to better manage their resolution once they do arise?
4. How are different categories of recipients using the land? Are they investing in improvements? Do they need greater security of tenure? What other constraints on investment may be operative?
5. Are there needs by these farmers for the alienability and mortgagability of land, or are they finding other ways to adjust land access to variations in their labor and capital endowments over time and to obtain access to funds for investment?
6. To what extent are the dispositions of land in divestiture/leasing being adequately recorded and, in those circumstances in which it is legally appropriate, registered? To the extent this is not happening, why not, and what strategies might be effective in providing security of tenure for these land recipients?
7. Are there community structures of administration which can administer land effectively?
8. Given the withdrawal of the state from many functions in the agricultural sector, how well are the needs of these farmers for credit, inputs, and market access being met?
9. What patterns of informal and formal collaboration and organization are being created by farmers to help them interact with the larger economy, and what can be learned from these initiatives about both their needs and their effective means of addressing them?
10. Is there a potential role for grass-roots farmer organizations in promoting and facilitation titling programs?
11. To what extent will women participate in the divestiture/leasing process as beneficiaries or otherwise be affected by it?

12. What does the planned divestiture/leasing suggest with respect to land policy in Guyana more generally?
13. What do the experiences elsewhere in the Caribbean suggest about the viability of particular strategies or solution to problems of divestiture/leasing and tenure policy in Guyana?
14. How would those strategies or solutions need to be adjusted to Guyana's particular circumstances?

The program of policy development and institutional analysis proposed here has three central points of emphasis: (1) applied research on divestiture, leasing and related issues; (2) Relevant comparative experience from other Caribbean countries; and (3) a continuous process of policy exchange stimulated by the first two points of emphasis.

A. Applied Research:

Policy making needs to be far better informed about what is happening on the ground in divestiture and lease situations. Problem parameters will be redefined and sharpened in the process. This will be achieved through:

- case studies of state land divestitures;
- development of a broader if elementary data base on state land divestitures and leasing programs generally; and
- information gathering in connection with a series of consultancies focused on problem areas in land policy and divestiture/leasing.

B. Access to Comparative Experience

Policy making needs to be informed by empirical data. It also need the land policy experience of other similarly situated countries. This is critical both in evaluating the feasibility of possible strategies in divestiture/leasing and in placing divestiture/leasing in a broader, longer-term land policy context. The need would be addressed through involvement in an institution with expertise in the comparative experience and the transfer of that expertise through:

- short-term training overseas;
- study tours to nearby Caribbean countries;
- periodic workshops in Guyana; and
- the series of consultancies.

C. Continuous Policy Dialogue

The objective must be continuing, broad discussion of policies throughout the life of the project. This would be achieved through:

- basing the research in a local institution with a clear commitment to policy discussion and the facilities to pursue that objective;
- creation of regular opportunities for discussion of policy options. This is achieved through seminars on preliminary research findings, the results of study tours, and consultant findings and through three major policy workshops;
- ensuring ongoing, active participation in thinking through the policy implications of research findings by officials from several agencies concerned with land policy through establishment of an Advisory Committee for the project;
- seeking opportunities through publication in media which receive wide distribution to encourage broad public discussion of policy options.

While recommendations will emerge over the life of the project, and some should be acted upon before conclusion of the project, an effective conclusion of the project will require:

- a high-level workshop to review findings and prepare a package of recommendations;
- publicity for and public discussion of those recommendations;
- development and discussion in a donor/government seminar of preliminary recommendations. This includes development of start up scenarios with personnel, financial and other requirements.

D. Institutional Arrangements and Staffing

The project would be carried out by the Ministry of Agriculture with another institution, possibly a university or research center.

The Ministry of Agriculture is proposed as the implementing unit. The present Minister brings to the project an understanding and commitment to research on land issues. The MOA will be very actively involved in stimulating public discussion of land issues throughout the country. The MOA's activities fit well with the emphasis of this project, and its work seems to attract the attention of policy makers.

The role of the university or research institution is threefold: (1) to provide land tenure and research methods expertise, filling a resident senior researcher post and identifying expatriate consultants; (2) to help expose local research staff and professionals to diverse experiences with land tenure through on-the-job instruction, planning of short-term training,

and organization of workshops; and (3) to stimulate a continuing policy exchange and dialogue on land issues.

The research project will be headed by one expatriate senior researcher who, with a MOA counterpart, will be responsible for day-to-day management of the project. They will work under the direction of the Minister of Agriculture, in consultation with senior staff of the university/research center. They will be supported by a MOA-based research staff of three additional local professionals. The four local researchers will be an economist, a lawyer, an agronomist and a geographer. They will participate in the design of fieldwork for the case studies, in data entry and analysis, in report preparation, and in dissemination activities like the proposed seminars and workshops.

The Carter Presidential Center in Atlanta is supportive of holding a series of seminars and workshops on tenure concerns. The University of Guyana is also interested in the topic. These two institutions may wish to participate in or sponsor future conferences or workshops with the selected university or research institution, and the Ministry of Agriculture.

The project must be firmly nested in a single institution to ensure effective administration and accountability. A mechanism must be found which can bring to bear on problems the diverse comparative advantages regarding land issues of the many units in the Ministry of Agriculture, in other ministries, and in the university. It is proposed that an Advisory Committee be created for the project. Institutional membership would be agreed upon by the Ministry of Agriculture and select donors, and senior technical staff charged to represent institutions. The Committee would meet at least three times a year to review project plans, act as a sounding board for initial research findings and discuss the policy implications of those findings. The intent is not just to mobilize the expertise within the various institutions concerned with land policy, but to create among key staff of those institutions an understanding of and commitment to policy recommendations generated by the project. This is best achieved through their regular participation in the process.

SECTION VI MPLIS PROJECT DESIGN

General agreement exists in both the public and private sectors that a major reform of the Guyanese land registry is needed. Interested groups holding this view include the Registry of Deeds, the Ministry of Agriculture and various external funding sources such as USAID.

There is also considerable interest by these groups in improving the land database for a variety of land issues for several land resource areas. These include data needed for improved land markets, the environment, resettlement of disadvantaged groups and returning refugees from Venezuela, and land taxation.

Many of these land issues are related to one another, at least as to the data requirements that must be met to develop solutions. Consequently, a broadly-based MPLIS should be designed that can serve the needs of a variety of land information users.

This does not mean the entire system be developed and carried out presently. Rather, the system should be done in phases over a period of years. The project design should therefore provide for two things: (1) the inclusion of the major land files and decision processes in Guyana, and (2) the phased development of the system logically and consistently over a period of years.

The "layer" (sometimes called a "module") of the MPLIS that incorporates land title record improvement should be a first target for the revised system. This report and earlier efforts clearly document the need to deal with the reform of the land title system expeditiously. Further, simply straightening out the current records before entering any data will be a tremendous task.

A. SPECIFICITY OF THE MPLIS PLAN

The MPLIS plan should include sufficient detail to support both development and evaluation of the system over time. Therefore, a set of goals for the system should be developed at the outset. Further, specific objectives should be developed for each goal to ease monitoring of progress in system development and operation. These objectives may include certain expected payoffs that can be measured without undue difficulty. Goals and objectives should include a temporal dimension as well—what is expected in the short term, what is expected in the longer term, and how are these short-term and long-term periods defined in terms of months or years.

It is difficult to overemphasize the importance of a plan that is both sufficiently specific and includes the basis for ongoing evaluation as the project proceeds. These attributes will help ensure that the MPLIS plan is comprehensive and complete. The capability to monitor

progress through an ongoing evaluation program will also help ensure the support that is necessary to sustain the development and operation of the MPLIS over the long run.

Some goals in the MPLIS plan will likely be of a general nature, such as providing backup copies of documents in the title registry. Detailed goals and objectives should also be included. For instance, what type of document backup system will be developed? Both microfilm and computer-stored document imaging have been suggested in the past. Ultimately, the needs of all users and how these needs can best be met through an integrated information system should be used to determine specific document storage system attributes.

Finally, while specificity is a desirable virtue of an MPLIS plan, there is also a need for flexibility as the project develops. Needs will change: new needs will be determined; technology will improve, both as to capability and speed of carrying out a task. Therefore, the system design should be specific enough so that goals and objectives are easily identified, but simultaneously flexible enough to permit these goals and objectives to be reached using the most current, most effective means possible.

B. PROJECT DESIGN TEAM NEEDED

A project design team is needed to develop a design for the Guyana MPLIS. The complexity of such systems requires that a variety of people with a variety of skills be included in the design effort. This approach is supported by experience in other countries, including Costa Rica, Saint Lucia, and Trinidad and Tobago, Jamaica and Venezuela, and countries with a Dutch/Roman legal system, overlaid with British law.

It is also important that individuals from the governmental and private sectors in Guyana be included in the initial MPLIS design efforts. Although the expertise of individuals from outside the country is important, it should be leavened with the inclusion of nationals with an interest and knowledge of land information system improvement.

1. Makeup of Project Design Team

Several areas of experience and expertise are needed for a well-rounded MPLIS project design team. A design team will need about four to five advisors, beyond a similar number of in-country members. The team should include, but not be limited to, the following experts:

a. General Design of MPLIS Systems

The MPLIS design team should include one or more members who have experience in the design, carrying out, and operation of land information systems. Experience in determining what MPLIS systems can and cannot do, what functions to include, and how to integrate a diverse team of land information system users to ensure achievement are all critical skills.

b. Attorneys

Team members with knowledge of the legal system, including Guyanese law are necessary. Familiarity with the current land title system will be helpful, and the ability to analyze the constitution, current statutes, and other legal regulations that affect land titles and land title registry activities. Similar skills will be needed as to land taxation, land use, surveying and mapping, and natural resources. Legal skills are needed not only to evaluate the current situation, but also to develop possible changes for the legal system. This could include various aspects of drafting, passage, and setting up of statutory and constitutional provisions.

In the legal area, especially as related to the land registry reform aspects of the MPLIS system, it is important that the team include both Guyanese nationals and foreign advisors. Members of the Guyana Bar Association should provide a good pool of expertise within the country from which to draw.

c. Hardware, Software, and Programming

Although not absolutely imperative, it is likely that an MPLIS capable of providing the support needed for land records and issues in Guyana will be an automated one. Therefore, knowledge and experience of hardware, vendor programs (software), and custom programming are important. For instance, although it is not expected that members of this team would prepare any custom computer programs, an understanding of the programs needed, the skills necessary to prepare such programs, and knowledge of where such programming skills might be obtained (especially within Guyana) would all be useful.

The design team should also include persons with a knowledge of currently available computer hardware suitable for supporting the proposed MPLIS system. Evaluation and recommendations of hardware should include such factors as reliability of the software, ease of repair, access to personnel and parts to make repairs, and ease of shifting to other platforms in the future. The latter point is critical since changes in hardware (and starting of new versions or different software) can be expected to occur periodically. Therefore, the design should include plans to make such changes, and do so with the least amount of disruption for managers and users of the system.

d. Knowledge and Experience with a Variety of Land-Related Issues

Land title registry reform is the central focus of this report. However, this report has also noted many other issues related to land titles and ownership which need attention. Many land issues in Guyana are so closely related and intertwined that the only way to address them is to integrate them. Therefore, the design team must include members who are familiar with land issues and the relationships among them.

It is not expected that the design team will be equally knowledgeable about all land-related issues, however, team members should be familiar with many of the following:

- **Natural Resources Management.** Improved natural resource management is critical to Guyana as it struggles to improve its internal economy, expand foreign trade, and increase the efficiency of agricultural production. An MPLIS will provide resource inventories to simplify development and use of these resources. Improved accuracy and security of land boundaries will also help protect and improve many natural resources.
- **Agricultural Production.** Increased production can improve the internal economy and provide needed foreign exchange. Ways to realize such improvements and still protect fragile areas are possible using MPLIS technology.
- **Security of Tenure.** Security of tenure is important to all land owners in Guyana. Such security will lead to increased agricultural production, increased investment in land improvements, and better, less expensive land transfers.
- **More Efficient Land Markets.** Land registry reform will help. However, ways need to be found to provide land market access to family and communal lands.
- **Taxation.** Property taxation policies and procedures are in need of reform. Such reforms would lead to a broader base for taxation, and help ensure the equitable treatment of all property taxpayers.
- **Reduced Cost of Land Record Processes.** Costs related to land transfer, figuring out taxes owed, and so forth are now high. These costs can be reduced with the use of an MPLIS. Lower costs will in turn lead to greater access and use of the land record system generally.

e. Geographic Informations Systems (GIS) Expert.

GIS technology is rapidly changing. Use of such technologies could potentially reduce costs of carrying out of any MPLIS design.

2. Level of Effort

The design team will need to spend four to eight weeks in Guyana, meeting with individuals and groups who will build, operate, and use the proposed MPLIS system. Additional data will be collected as to the current system and scope of challenges. Task lists will be developed and attempts made to reach consensus on the priority order in which these tasks will be addressed. In all these steps, the Guyanese members of the design team will play an integral role.

Following the in-country phase, an additional three to four months (at half time for team members) will be required to finish the project design. At the end of that time a project design document, suitable for use in developing financial support for system implementation, will be delivered to the agencies that funded the system design.

3. Costs for System Design

Costs will be affected by the level and quality of cooperation by in-country participants. These participants will include personnel from the Government of Guyana, aid agencies (such as IDB, The World Bank and other donors), and private groups. A budget will have to include costs for a team of five to come to Guyana, travel, and administrative support.

4. Financial Support for Systems Design and Subsequent Implementation

The Government of Guyana could initiate an MPLIS design, possibly with donor assistance. Once the design is complete, the Government would be in an excellent position to approach other donors for implementation funding.

An MPLIS will provide substantial benefits to a variety of land information users. Therefore, it is logical for the system itself to be funded by a consortium. Potential contributors include the Government of Guyana (both with general purpose funds and with funds collected for land registry reform, i.e., a small per transfer tax.) Use of funds from a registry reform tax is logical since it is assumed that registry reform will be a top priority item in the MPLIS design and development. Other contributors could include the United Nations Development Program (UNDP), the Inter-American Development Bank (IDB), and the World Bank. These agencies all have an interest in improved land information in Guyana and would likely be involved in subsequent funding of actual system implementation.

As noted at the outset of this section, it may be necessary to address short-term, more modest objectives in early stages of land information system improvement in Guyana. However, it is critical that a comprehensive plan for an MPLIS be prepared before modernization efforts begin. This comprehensive plan will help ensure that early stage efforts will be compatible with and lead to the more complex steps in the process as resources permit and needs require.

ENDNOTES

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2. Jameson, Kenneth P. 1977. *Income and Land Distribution in Guyana: A Summary of Existing Information*. Washington: AID. (manuscript, at 3).
3. "Guyana: Big British Aid Package Hailed," Inter Press Service (April 6, 1993).
4. See, for example, "Guyana: Uproar Over Terms of Contract with Foreign Group," Inter Press Service (March 2, 1993).
5. "Guyana: Squatters Try to Clean Up Their Act," Inter-Press Service (May 25, 1992).
6. For a discussion of the conflicts between Guyana's forestry sector and indigenous populations, see "Guyana: National Park Plan Creates Fears for Indians' Lifestyle," Inter-Press Service (April 7, 1992).
7. Art 3, State Lands Act, Ch. 62:01.
8. Art's 5-9, State Lands Act, Ch. 62:01.
9. Art 10, State Lands Act, Ch. 62:01.
10. Art 11, State Lands Act, Ch. 62:01.
11. Art's 2-5, State Lands Regulations, Ch. 62:01.
12. The World Bank, Guyana: Agriculture Sector Review (1992) at 30.
13. Art 3 (a) and (b) of the State Lands Regulations, Ch. 62:01.
14. Art's 8-9, State Lands Regulations, Ch. 62:01.
15. Art's 8-11, State Lands Regulations, Ch. 62:01.
16. Art. 37(a), State Lands Regulations, Ch. 62:01.
17. The World Bank, Guyana: Agriculture Sector Review (1992) at 30.
18. Art. 41, State Lands Regulations, Ch. 62:01.
19. State Lands (Amerindians) Regulations, Ch. 62:01.
20. Art's 36 and 41, Amerindian Act, Ch. 29:01.
21. "Sugar Sell-Off to Take Place This Year," Lat. Am. Week. Rep. (July 9, 1992).

22. Jameson, Kenneth P. 1978. *Income and Land Distribution in Guyana: A summary of Existing Information*. Washington: AID. (manuscript, at 3).
23. "Guyana: Caribbean Development Bank Loan for Repairing Sea Defenses," BBC, Summary of World Broadcasts (December 31, 1991).
24. Comments by Martín Stabile at a meeting with Hugo Cohan, Martín Stabile, Edward Costello and Kevin Barthel, all officials of the IDB, Washington, DC (May 13, 1993).
25. Comments by Martín Stabile at a meeting with Hugo Cohan, Martín Stabile, Edward Costello and Kevin Barthel, all officials of the IDB, Washington, DC (May 13, 1993).
26. Art. 18, Constitution of 1980 (Guyana).
27. A major agricultural policy/land divestiture initiative by AID in Mozambique was carried out very successfully by the Land Tenure Center in coordination with the Ministry of Agriculture's Center for Agricultural Training. Much of the language for this proposal for Guyana closely follows this successful model. See John W. Bruce, Donald R. Jackson and Antonio A.S. Francisco, A Research Proposal: Land Policy and Divestiture in Mozambique (1991, Land Tenure Center).

ANNEX A
SELECT LIST OF PERSONS INTERVIEWED

The following is a partial list of the persons interviewed, along with their affiliation. All meetings were held in Georgetown, Guyana unless otherwise noted.

William C. Thiesenhusen	Agricultural Economics Department, Land Tenure Center, University of Wisconsin. (2/23/93, by phone in Madison, Wisconsin).
Dermott Joyce	Caribbean Manager, Jefferson Smurfit Group (4/26/93, by phone in Caracas, Venezuela).
John Panzer	Team Leader, Agriculture Sector Review, World Bank (5/12/93, Washington).
Hugo E. Cohan	Mission Leader for Agricultural Mission to Guyana for the Inter-American Development Bank (5/13/93, Washington).
Kevin Barthel	GIS expert, Member of the Guyana Mission of the Inter-American Development Bank. (5/13/93, Washington).
Martín Stabile	Tenure and Agricultural expert, Member of the Guyana Mission of the Inter-American Development Bank. (5/13/93, Washington).
Edward Costello	Operations Department, Member of the Guyana Mission of the Inter-American Development Bank. (5/13/93, Washington); (6/7/93 in Georgetown).
Amb. George F. Jones	U.S. Embassy, Georgetown. (6/2/93, 6/9/93).
Don Smith	Chief, Trade Development Office, AID office in Barbados (6/2/93).
Daniel Wallace	PL 480 Representative, U.S. Embassy in Guyana (6/2/93).

Thomas Poindexter	USAID consultant for Guyana. (6/2/93).
Patricia Smith	Democratic Initiatives Advisor, AID. (6/2/93).
Fazel Ali	Member of Parliament; Acting General Secretary of the Rice Producers Association (6/2/93).
Mr. Bashir	Chief of the National Congress of Local Government Authorities and Vice President, Rice Producers Association. (6/2/93).
Mr. Sing	Research Officer, Rice Producer Association (6/2/93).
Mr. Ruplal	Grievance Officer, Rice Producer Association (6/2/93).
Ms. Ramroop	Deputy Registrar, Deeds Registry of the Victoria Law Courts in Georgetown (6/2/93).
Roberta Van Haeften	U.S. Department of Agriculture, Food Security Advisor to AID.
Prabhu Sookraj	Permanent Secretary, Ministry of Agriculture (6/3/93).
Sarah Parnell	Advisor to the Permanent Secretary, Ministry of Agriculture (from the World Bank)(6/3/93, 6/7/93, 6/9/93).
Elsie Croal	Chief, Crops and Livestock Officer, Ministry of Agriculture. (6/3/93).
George Howard	Chief Hydraulics Officer, Ministry of Agriculture (6/3/93).
Kumar Datadin	Commissioner of Lands and Survey, Ministry of Agriculture (6/3/93, 6/7/93, 6/9/93).
Jean Sankies	Nutritionist, Ministry of Agriculture (6/3/93).
Nigel Durant	Economist, Ministry of Agriculture (6/3/93, 6/7/93).

Dhanmattie Sahai	Economist and Coordinator of Programs with the IDB, Ministry of Agriculture (6/3/93).
Ben Carter	Agriculture Sector Program Advisor, Ministry of Agriculture (6/3/93, 6/7/93).
Cecilia McAlmont	Head, Department of International Economic Cooperation, Ministry of Foreign Affairs (6/3/93).
Oscar Dolphin	Desk Officer, Department of International Economic Cooperation, Ministry of Foreign Affairs (6/3/93).
Mark Byude	Desk Officer, Department of International Economic Cooperation, Ministry of Foreign Affairs (6/3/93).
Mr. Ally	Regional Chairman, Essequibo Region (Region No. 2) (6/4/93, Anna Regina).
R. Jagernauth	Former Commissioner of Lands and Survey (6/7/93).
Leon Rutherford	Assistant to the Commission of Lands and Surveys, Survey Office (6/7/93).
Edward A. Anderson	Assistant Commissioner--Lands; Lands and Survey Commission (6/7/93).
Charles P. Kennard	Agriculture Rehabilitation Program, Ministry of Agriculture (6/7/93).
Bernard de Santos	Attorney General (6/7/93).
Mrs. Bender	Chief Agricultural Officer, Office of Planning, Ministry of Agriculture (6/7/93).
Santiago Rueda	Agriculture Policy Advisor, IFAD (6/7/93).
George Greenwood	Representative, Inter-American Development Bank (6/8/93).

R. Mark Kirton	Head, Department of Political Science and Law; University of Guyana (6/8/93).
B. Stewart	Head, Department of Sociology, University of Guyana (6/8/93).
Ashton Chase	Attorney at Law, Queen's Council, Senior Counsel to the President; Chairman of the Council for Legal Education; former President of the Guyana Bar Association; former Presidential candidate; Former member of the National Assembly (6/8/93).
Gloria Dowri	Assistant Supervisor, Registry of Deeds, New Amsterdam. (6/9/93, New Amsterdam).
Floretta Hamilton	Supervisor, Registry of Deeds, New Amsterdam. (6/9/93, New Amsterdam).
Mike Heath	Economics Officer, U.S. Embassy in Georgetown (6/9/93).
Manuel Barrera	Deputy Chief of Mission--Guyana, at U.S. Embassy in Georgetown (6/9/93).
Harry Marwitz	Guyana Liaison Officer of the RDO/C, USAID/Barbados (6/10/93).
David Carrol	Latin American Program, Carter Presidential Center (by phone in Atlanta, 6/17/93).
Debby Davenport	Hewlette Fellow, Global 2000 Environmental Program, Carter Presidential Center (by phone in Atlanta, 6/17/93).

I also attended a meeting to discuss tenure constraints to development and food security in Region No.2 on June 5, 1993. In attendance were about 40 farmers, producers and individuals from grassroots organizations, along with government officials from the Lands and Survey Office, Sea Defense, Health, Environment and Regional Government offices.

ANNEX B
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