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he armed conflict in Guatemala, which has been dragging on for 36 years, is the longest running one in Latin America. It has caused some 150,000 deaths and has left thousands of widows and orphans, as well as one million internally displaced people and some 45,000 refugees. The war began in 1960, six years after a 1954 coup ousted the popularly elected government of Jacobo Arbenz.

The reversal of the Arbenz government and its land reform set the stage for 40 years of turbulent, polarized history. Many Guatemalans, correctly reading the message of 1954, concluded that moderate change would not be permitted. In 1960, shortly after the Cuban revolution, a group of military officers joined forces with disaffected civilians to form a guerrilla movement, one of the earliest in Latin America. Ironically, the first major counterinsurgency campaign in Guatemala was launched during the elected civilian government of Julio Cesar Mendez Montenegro (1966-70). It was in Guatemala that Latin America first saw such phenomena as death squads and "disappearances," which subsequently became standard operating procedure in counterinsurgency wars throughout the hemisphere.

In 1989, the Catholic Church sponsored a National Dialogue, which, though boycotted by the army, government, and private sector, expressed a clear consensus by the other sectors of society in favor of a substantive political settlement. This was the start of the peace process.

The "Agreement on Strengthening Civilian Power and the Army's Role in a Democratic Society" (Acuerdo de Paz Firme y Duradera) signed by the Guatemalan government and the Guatemalan National Revolutionary Unity (Unidad Revolucionaria Nacional Guatemalteca, URNG) in Mexico City on September 19, 1996, covers, among other things, the form of government in Guatemala, the judicial system, constitutional and legal reforms, the establishment of the National Civilian Police and changes to the army. The URNG is an umbrella group of four guerrilla fronts. In October 1996, additional talks were held in Mexico. It now appears peace may be at hand.

This peace process has opened the door to land tenure reform and tenure regularization. Cultural, historical and social obstacles, some inherent in the war itself, will now have to be addressed.

# Land Access Inequality, Indigenous Rights and Social Justice

The replacement in 1954 of Arbenz by Castillo marked a return to an economic policy centered on agribusiness and export development, an emphasis that has prevailed to the present day. These policies contributed to substantial population displacements, with large landowners gradually absorbing the property of Guatemalan peasants. The result has been one of the most skewed land distribution patterns in all of Latin America, a distribution that has fueled the insurgency movement.

# Land Tenure in Guatemala

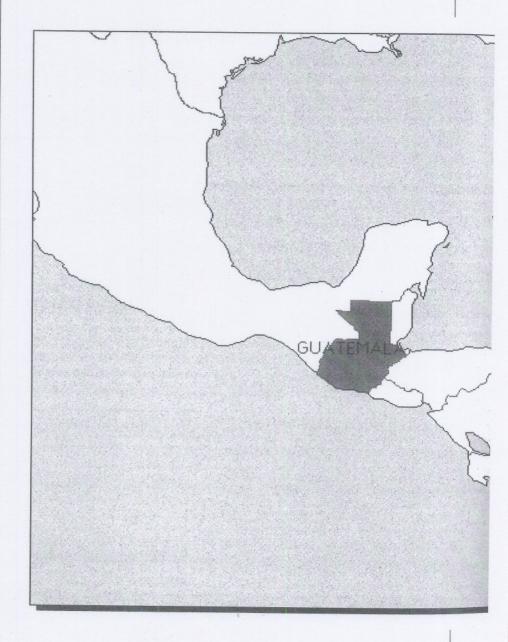
by Steven E. Hendrix

During the 1980s, the government's counter-insurgency policy entailed asserting control over the countryside by confiscating abandoned lands and repopulating them, by force when necessary, with IDPs and peasants from other parts of the country. The legal basis for much of this land confiscation was Article 114 of Decree 1551, which provided that property "voluntarily" abandoned for more than one year would revert in ownership back to the State. The government agency working most closely with the army in the repopulation process was the National Institute for Agrarian Transformation (INTA), the same agency that had assisted in the original settlement of the Ixcan two decades earlier. Acting under Decree 1551, INTA annulled the property rights of those who had fled and granted new titles to those brought in by the army. The military then created "model villages" and "development poles" throughout the area, placing them under its strict control. Civilian patrols (PACs) were also forcibly created to "protect" the villages from guerrilla attack.

The country's displaced persons are now returning home. Thousands of land conflicts have arisen between aspiring returnees and those who occupied their lands during their absence, constituting the most significant challenge to peaceful reintegration. In an effort to meet this challenge, the Guatemalan government has signed three agreements that specifically address the issue of land for returning displaced persons. These are: (1) the May 1989 Declaration of the International Conference on Central American Refugees (CIREFCA); (2) the October 1992 repatriation agreement signed by the Permanent Commission of Guatemalan Refugees in Mexico (CCPPs) and the Guatemalan National Service Commission for Repatriates, Refugees and the Displaced (CEAR); and, (3) the June 1994 agreement between the URNG and the Guatemalan government concerning uprooted

populations. While each of these agreements recognizes the need to provide land to returning displaced persons, their scope varies considerably.

More recently, in September 1996, the eviction by security forces of around 250 rural families who were occupying land left at least one dead and more than 30 injured. The concentration of land in the hands of a few is an old problem in Guatemala. Large estates are left unproductive by landowners, while a similarly large number of rural inhabitants lack even small plots from which to scrape a living. This particular incident was only one of several similar violent evictions this year.



An umbrella organization of indigenous and peasant groups (CONIC) released a communiqué which stated that the government of President Alvaro Arzu "is offering a peace on paper to be enjoyed by the rich," alluding to a peace accord

between the government and the guerrillas due by the year-end, while the problems of the poor "are resolved with bullets, blood and sacrifice of more human lives."

Conflict over land is on the rise in Guatemala, where more than 20 properties have been occupied by groups of landless farmers, most of them coordinated by CONIC. ownership be given the same legal recognition and protection as individual ownership.

# Conditions in the Countryside

Guatemala is an eminently rural and agricultural society, with 62 percent of the population living in the rural areas, and over one-half of the labor force employed in agriculture. Agriculture accounts for two-thirds of all exports and is the major source of foreign income earnings. Although more than one-half of the labor force is employed in agriculture, less than one-fifth of the country's gross domestic

product (GDP) is generated by that sector, reflecting the low productivity of labor in agriculture relative to other sectors.<sup>1</sup>

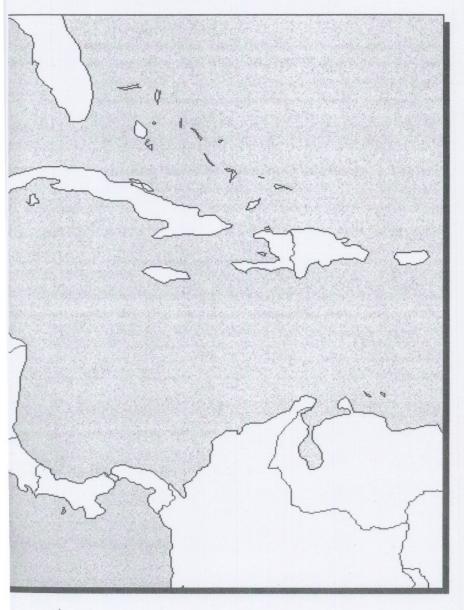
As most of Latin America, Guatemala is characterized by the latifundio-minifundio (large estate-small farm) relationship, in which most of the country's arable land is concentrated in the hands of a few large landowners. The country is considered to have the most skewed land distribution pattern in the region, with a Gini coefficient<sup>2</sup> of .85 (Hough, et al. 1982, p. 2). Data from the 1979 Guatemalan agricultural census reveal that 65 percent of farmland is held by less than 3 percent of farming units. Conversely, subfamily farms<sup>3</sup> - considered insufficient to maintain a campesino (peasant farmer) family - constitute 88 percent of all farming units, yet occupy only 16 percent of total land.

The inequitable distribution of land has long been recognized as a principal cause of the extreme poverty affecting most rural Guatemalans, and the subsequent social and political unrest. According to the most recent Government of Guatemala figures, 80 percent of the population currently lives below the poverty line, unable to meet its minimum subsistence needs (DGE 1991b, p. 40).

Inequitable land distribution is particularly critical for two reasons. First, land is a source of security, food, and income. Second, access to land is a fundamental dimension of how individuals view themselves and each other in Guatemala.

Because of skewed land ownership patterns, Guatemala consists of two distinct agricultural production

groups. On the one hand, many large landholders, controlling much of the good land, produce export crops such as sugar and cotton, using labor that typically earns US\$2 to \$3 per day. (This income has buying power similar to Guatemala of the 1930s.) The land not used for crops on these large farms is usually devoted to cattle ranching. Much of this ranchland is the best land in the country, and is



With respect to indigenous people, a central demand of Maya groups is that their traditional system of community land suitable for intensified crop production.

At the other end of the scale are the campesinos (peasant farmers) with farms averaging about two manzanas<sup>4</sup> in size. The campesinos produce food on their small parcels, and try to supplement their income with work on large farms, where possible.

Smallholdings, with an average size of two manzanas in 1979, are considered insufficient to support rural families. In addition to the land poor, an estimated 419,000 economically active rural Guatemalans were completely landless in 1980 (Hough et al., p. 10). That figure is probably higher today due to population growth. Lack of access to land has resulted in the semi-proletarianization of much of the highland peasantry, and the temporal migrations of several hundred thousand campesinos seeking employment in the sugar, coffee, and cotton plantations of the south coast.

Due to a number of policy and institutional factors, much latifundio farmland is underutilized or left idle, resulting in low levels of agricultural productivity and limited employment generation. These and other factors have also contributed to the failure to activate a dynamic land market in Guatemala, further exacerbating the already exceedingly skewed distribution of land.

It should be mentioned that there may be opposition to an improved property registry system, especially by those who fear efficiency in tax collection or by those who fear that registry reform is the first step toward a new land reform. These issues will need to be considered in the context of project implementation.

National Framework for Geographic Information

Guatemala is said to have two land mar-

kets - one for latifundios and one for minifundios - with little crossover between the two. This is especially true for campesinos, who have no access to the latifundio market because large holders prefer to sell their properties in their entirety or in large plots, the cost of which is beyond the reach of most campesinos.

The failure to activate a dynamic land market in Guatemala can be attributed to a variety of factors:

- The title registration process is excessively bureaucratic, costly and time consuming, effectively discouraging most smallholders from even attempting to acquire title to their land and deterring largeholders from selling their land in smaller plots, more affordable to campesinos.
- Land-taxation rates are extremely low. The highest rate, applied to properties valued at over Q70,000 (US\$14,000), is a mere 0.9 percent. This situation is exacerbated by the fact that taxes are paid on the owner's declared value of the land, which, in the absence of the threat of expropriation, is generally a great deal lower than its real value. 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.
- Largeholder access to subsidized credit from the National Bank for Agricultural Development (BANDESA) has similarly provided disincentives to the more-efficient use or sale of largeholdings.
- Land is often valued beyond its immediate economic productive capacity. It is a source of prestige and in the absence of the threat of expropriation a hedge against inflation.
- Campesinos 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.
- An appropriate financial intermediary and long-term funding mechanism for the purchase of land are absent. Largeholders selling land are often pressured by neighbors not to sell to campesinos, whose presence is feared to bring property values down.<sup>5</sup>

Institutionally, Guatemala relies on a property registry and a national cadastre office.

### The Property Registry

All title documents are currently recorded in one of two offices in Guatemala. The office in Guatemala City is responsible for Guatemala City and 13 other departments (similar to states in the United States, as to geographic area, number of parcels, and so forth). The office in Quezaltenango is responsible for recording title documents for the remaining eight departments.

Guatemala uses a deeds registry system, recording evidences of title (documents), not title itself. Officials in the registry office indicated that Guatemala has a "modified Torrens" (title registration) system, because the registrar is personally liable for errors in the system. However, further research revealed that the liability of the registrar is limited to Q10,000 or US\$2,000. This guarantee is covered by a bond that the registrar must purchase, resulting in a relatively minor cost to the registrar, certainly much less than Q10,000 in any five-year term.

The liability of the registrar for errors has been cited in earlier reports as one of the reasons for the substantial financial remuneration that the registrar receives. Until recently, the registrar received, by statute, 40 percent of the income of the office. Another 40 percent went to the assistant and the typists who make the inscription in the Folio Real, and the remaining 20 percent was placed in a common fund to finance other expenses of operating the office. However, the relatively minimal liability of the registrar seems to place in doubt the veracity of that argument. Indeed, this incredible salary structure has now been changed.

# 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). The registry system is based on the Folio Real system, found in many Latin American countries. For example, this same basic system is used in Costa Rica, where it is has been largely automated. The registry system in Guatemala is entirely manual, using no automation, photocopy, or microphotography technology. The system uses three series of books:

Receipt book;

- · Folio Real book; and
- Copy books (tomes).

#### a. Receipt Book

Documents are first presented, usually by lawyers or notaries, to one of two windows where the receipt of the document is recorded. The receipt book contains columns for owner name, a document number (assigned serially by month), and the volume and page where copy of document is actually filed (in the tomes). The time and date are also stamped on the back of the last page of the document. Two copies must be presented for recording, with a copy kept for filing and the original returned to the owner.

As part of the registration process, documents go through a qualification step that, although not rigorous, does catch a number of errors and some cases of fraud. We were shown several documents on which the signature of a judge had been forged by a lawyer. These forgeries were an example of several types of error and fraud that we observed and were told about. These disclosures were generally made by employees of the registry who were quite candid about the shortcomings as well as the strengths of their system.

About 400 to 500 documents are received for recording each day at the Guatemala City Office, with another 100-125 received at Quezaltenango. Based on the recordings in January of 1992 (about 325 documents per day in Guatemala City), and a review of other materials in the registry, the annual number of documents presented for recording at 80,000 to 90,000.

#### b. Folio Real

The Folio Real is the heart of property registry in Guatemala. The second step in the registry process is inscription of information in the Folio Real book, which is a combination index and abstract of title. It is simple in design, but over time has developed a number of operational problems. The Folio Real system, in one form or another, has been used since 1876.

The Folio Real is a large book (about 15 by 18 inches) containing 250 pages per volume. The pages are two-page sets, facing each other. The left page has three major and several minor columns containing information about rights to the property. For example, the inscription (parcel description) is placed in the center column. Only one inscription is written for each parcel. The left column contains any annotations such as judgments. The right-hand column contains information on cancellations, such as cancellation of a use right. The right-hand page also contains three major columns and several minor columns, all related to encumbrances on the parcel. For example, mortgages and liens are noted in the center column. Columns for annotations and cancellations, similar to the left page, are also available for the encumbrances page. All entries are handwritten.

In theory, all information about a parcel should be on one page, with a new page begun for each parcel. In practice, the information on many parcels is carried



over to one or more additional pages. In extreme cases, it is necessary to examine dozens of pages in dozens of books to fully examine all the information about a particular parcel. Therefore, although the Guatemalan registry has the form of a Torrens-type title registry, it is in fact much like the U.S. deed recording system, using parcels instead of owner name as the primary indexing key.

A large room contains all the volumes of the Folio Real. To gain access to these documents, a user must request that a particular volume be brought to the public work area. However, once in the public work area, records are sometimes changed with correction fluid, erasures, and even torn out of the volume. This opportunity for fraud reduces the faith that can be placed in the system.

An additional 4,000 Folio Real volumes contain information on the other 13 geographic departments that register deeds in Guatemala City.

Certified and noncertified copies are made in the central Folio Real room. All copies are prepared with a typewriter, as no photocopies are permitted. Typists are paid a commission that comes out of the second 40 percent of registry income. The registrar signs, based on his faith in the typist, as honor is an important quality for these workers. The registrar indicated that these people were all extremely honest. However, there is always danger of shortcuts and resulting errors when workers are paid on a commission basis.

The more than 6,600 Folio Real volumes weigh in excess of 80 tons. A persistent rumor regarding the building in which the registry is housed is that it is in danger of collapse, due to the weight of all the records and the fact that the building was not designed for use as a registry. While the rumors may be just that, lack of evidence to the contrary gives some credence

to such concerns.

#### c. Tomes Containing Copies of Real Estate Documents

The third major area in the registry contains the volumes where the copies of all real estate documents are stored. Copies have been kept only since 1933, so no copies exist of documents before that time. Thus complete reliance on the "abstract" information in the Folio Real volumes is necessary for transfer before 1933.

Tomes contain about 300 documents per volume. A cursory review indicated that documents average about four pages and the average volume contains 1,200 pages. In 1933, the first year tomes were used, 16 volumes were required. By 1943, 46 were required, 100 per year in the 1960s, 200 per year by the late 1970s, and about 300 per year since 1982. In total, there are more than 10,000 volumes in the tomes set. Since 1983, the documents have not been bound, but rather are tied up in bundles, with about 300 documents in each bundle. Since these records are open to the public, removal of documents as well as alteration has likely increased since binding stopped. Plans are to resume the binding as soon as time and money are available.

Several hundred tomes are stacked in two first-floor hallways to which the public has access. This is the only place available for these volumes, since the registry was moved to this building after the February 2, 1976 earthquake that destroyed the former building. Several hundred additional volumes of both tomes and Folio Real volumes are stored in a wet basement room. Mildew and mold are prevalent on the books in this room, many of which where stacked on the floor against concrete walls. Again, lack of resources was given as the reason for no action to correct the situation.

Other important registry characteristics include:

- The two current registries need to be continued for political reasons.
- Copying errors (for example, as to references to other documents) are a major problem in the registry.
- Fraud, as to signatures, fake seals, and using correction fluid on seals is a problem.
- Because there are only two registry offices, access to records is limited by travel distance required by people in many parts of the country.
- Supplementary titles are used in some cases, to avoid cost and hassle of registering title. The result is that sometimes parcels are titled 2, 3, or 4 times, without ever actually registering a deed.
- · Cadastral mapping is badly needed, and should be linked to title system.
- Many people, both within and outside of government, are in favor of changing arrangements for financing the registry office (that is, place employees on civil

service salaries and use some of the funds currently paid as commissions to finance modernization of the property registry).

- Lack of institutional capacity in registry office means that even if people wanted to register the vast areas that are currently untitled, the system would be unable to handle the load.
- Registry modernization is not the silver bullet that will solve all titling problems.
- Financing, appropriate technology, and education are needed for registry reform.
- Land surveyors have not had any involvement in the title reform discussions in Guatemala.
- The land reform fee, at Q5 per document registered, has accumulated Q1,000,000 in the one and one-half years it has been in place. (Another source indicated the fund was authorized as of January 1, 1991, and currently has a balance of about Q600,000.)
- The main problems with the current registry system are corruption, the political nature of the registrar (and commission basis of compensation in that office), and lack of cadastral maps.

# National Institute of Agrarian Transformation (INTA)

Although not part of the property registry in Guatemala, INTA is in a position to be a potentially key player in any long-term efforts to improve titling and access to land provided the organization could be de-politicized. INTA was created in 1962 as a government agency charged with providing land titles to campesinos, most of whom do not have title to the land they

occupy and farm. INTA currently employs 1,600 people and in 1991 provided 800 titles. After INTA prepares a title, the documents must be taken to the registry and registered. This final step is often not completed. During the entire five-year administration of the previous president (ending in January 1991), only 800 titles were provided by INTA. Therefore, although progress is slow, some improvement has been realized over the past year. Indeed, one of the current INTA administration's top priorities is the provision of title to beneficiaries. INTA hopes to distribute about 1,000 "titles" per month, for a total of 60,000 titles over a five-year period. This process would be expedited by registry reform.

It has been alleged that INTA is the most corrupt government agency in Guatemala and INTA officials' response is that "it is true." Examples ranging from theft of Q500,000 by 14 employees to sale of gasoline to private individuals from INTA pumps were provided by INTA officials.

The INTA system is entirely manual. Initially, applications are indexed on 4 by 6 inch cards placed in a large file. Payments to employees help ensure that an application will receive priority. Lack of such payments usually results in a steady move toward the rear of the line. It takes an average of 2 to 2.5 years to get an application processed to completion at the office in Guatemala City.

All persons who are granted title must pay for the land. Current terms allow 20 years, without interest, to pay off the cost. Legislative changes have been proposed to decrease the term of payment to 10 years, which is the average period in which land is paid off.

In addition to titling activities, INTA perhaps theoretically provides technical, economic, and agricultural assistance and manages state lands (e.g., natural resource management). This assistance is free for a period of three years following titling, after which fees are charged.

INTA has provided titles in several forms, including family titles and unit titles. As noted above, several legislative changes are currently under consideration, including one that will allow more flexibility for owners to sell land that was initially titled by INTA. Clearly, land registry reform should benefit campesinos who are obtaining titles through INTA, but a direct link between INTA and the registry is needed to ensure that INTA titling results in registered deeds for campesinos.

# Instituto Geográfico Nacional (IGN)

The National Geographic Institute is more encouraging. Despite a reputation for being likely "off limits" to all except military personnel, to the contrary, that the agency is quite open. Further, the work IGN is doing, as well as the expertise it has and is developing, is most encouraging, especially if this work can be integrated with other parts of the land information system in Guatemala.

IGN is the mapping agency for the country and for security purposes has been under the control of the military for the past several years. However, the agency has recently been opened to all users. It currently employs 360 people.



IGN responsibilities include mapping, geodetic surveying, aerial photography, and cadastral (parcel) mapping. Among the map products we saw were 1:2,000 scale orthophotos of Guatemala City. These maps are 30 by 30 minute maps (9,000 by 9,000 meters). IGN is encouraging data sharing; for example it will add telephone, electrical, and municipal water lines to the 1:2,000 base map as soon as data are provided by the respective utilities.

#### a. Cadastral Mapping

In the 1970s IGN began developing cadastre maps. The first efforts were in rural south coast areas. About 22,000 square kilometers were mapped at a scale of 1:10,000. The cadastre maps were completed but not kept up to date. The smallsize plots owned by minifundios were a problem at this scale. Larger-scale landholdings were not considered since the only reason seen for cadastre at that time was for tax collection. Since minifundios do not pay taxes, a cadastre at a larger scale was ruled out.

Thus IGN decided to concentrate on urban areas, and develop products that would have multiple purposes (e.g., taxes, statistical compilations, tenure, and so forth). Example products included 1:2,000 line maps for Guatemala City. These sample maps include roads, parcels, and building outlines. Since there was little use for the sample products, the project in Guatemala City was abandoned. Currently, cadastral projects are under way in 12 urban areas.

A scale of 1:2,000 is used for cadastre maps because of the higher cost of going to a larger scale. The cadastre database being developed for each area by IGN includes both graphic and attribute data. An index page is prepared for each map sheet, including information on parcel boundaries, how the parcel was created,

and public services available.

An index of information is also built to tie parcel map to property owners. These index sheets contain six columns with the following information:

- Lot number (block and lot);
- · Name and address of owner;
- Description of parcel (similar to U.S. tax descriptions, such as plat name and lot number);
- Registry document number;
- · Area (from deed); and
- · Area (actual, from map).

There are often considerable differences between these latter two items. To acquire information from the title records, IGN puts its own person in the registry office. So far, these cadastre maps and indexes are a one-time snapshot - they have not been kept up to date. IGN has not mapped any INTA land yet, since the "INTA records are such a mess."

IGN also produces a statistical abstract for each project area. For example, for each city mapped so far this includes data and bar charts on such items as:

- · Land use;
- Available services: electricity, water, and sewerage. Telephone service will be added as soon as Guatel, the national telephone company, makes the service records available.

#### b. Geodetic Control Networks

IGN has developed and maintains both the horizontal and vertical geodetic control networks for Guatemala. There are about 300 horizontal stations (at 1:50,000 accuracy) countrywide. In addition, there is substantial vertical control, at 2-kilometer intervals along all major highways. There is also substantial additional vertical control in the northern part of country, just west of the Peten, due to a major hydroelectric project that is being planned with Mexico. NAD 27 and NAVD 29 are currently used, but within a few years, NAD 83 and NAVD 88 will be used.

Monumentation (referencing maps to exact physical locations) is typically brass caps in concrete, per InterAmerican Geodetic Survey specifications and also work with the Defense Mapping Agency (DMA). IGN uses some DMA software for adjustment programs, as well as some that it has written itself.

No digital maps have been produced as yet, because the agency does not have the funds for equipment and maintenance. It estimates that US\$150,000 would provide hardware, software, and maintenance to meet its needs for the initial phase of operation.

IGN has well-qualified and trained people in several areas who would be useful in building a multipurpose land information system. Personnel include experts in land use, soils, geology, ecology, cartography, and human geography. IGN appears to be the only in-country agency with the capability to carry out a cadastral mapping project at the present time. It is willing to work with any agency, but insists that cooperators agree to produce and share compatible information.

#### The Future

With the peace process under way in Guatemala, it will become increasingly more important to get a handle on geographic information. This will be driven be concerns regarding relocation of former combatants and refugees, environmental control and monitoring, fiscal resource generation, and other related concerns. GIS and GPS technologies are opening the door to make these applications feasible for this developing nation.

- 1. According to Schweigert, "the apparently 'low productivity of labor' in agriculture...is accounted for by the fact that the agricultural sector contains within it a large subsistence component" (Schweigert 1990, p. 22). Schweigert claims that this subsistence component is often not included in measurements of GDP, while agricultural labor, often measured as full time, is in fact largely seasonal and temporary.
- <sup>2</sup>. The Gini coefficient is a measure of the concentration of goods or resources. In the case of land, it is calculated based on the percentage of land held in categories of farm by farm size. The coefficient ranges from one to zero, zero representing theoretically complete equality and one theoretically complete inequality of the distribution.
- 3. Sub-family farms are those with less

than seven hectares of land.

- 4. A manzana is a measurement of land equivalent to 0.7 hectares.
- 5. This is a function of several factors. General largeholder opposition to land market programs stems from fears of renewed attempts at land reform. More specifically, latifundistas do not like having campesinos as neighbors, whom they consider to be thieves. More importantly, in the event of a confiscatory agrarian reform, farms bordered (as those populated or rented) by campesinos are considered more likely to be targets of reform and expropriation.