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LAND TENURE ISSUES IN RURAL HAITI

Review of the Evidence

by

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with contributions by

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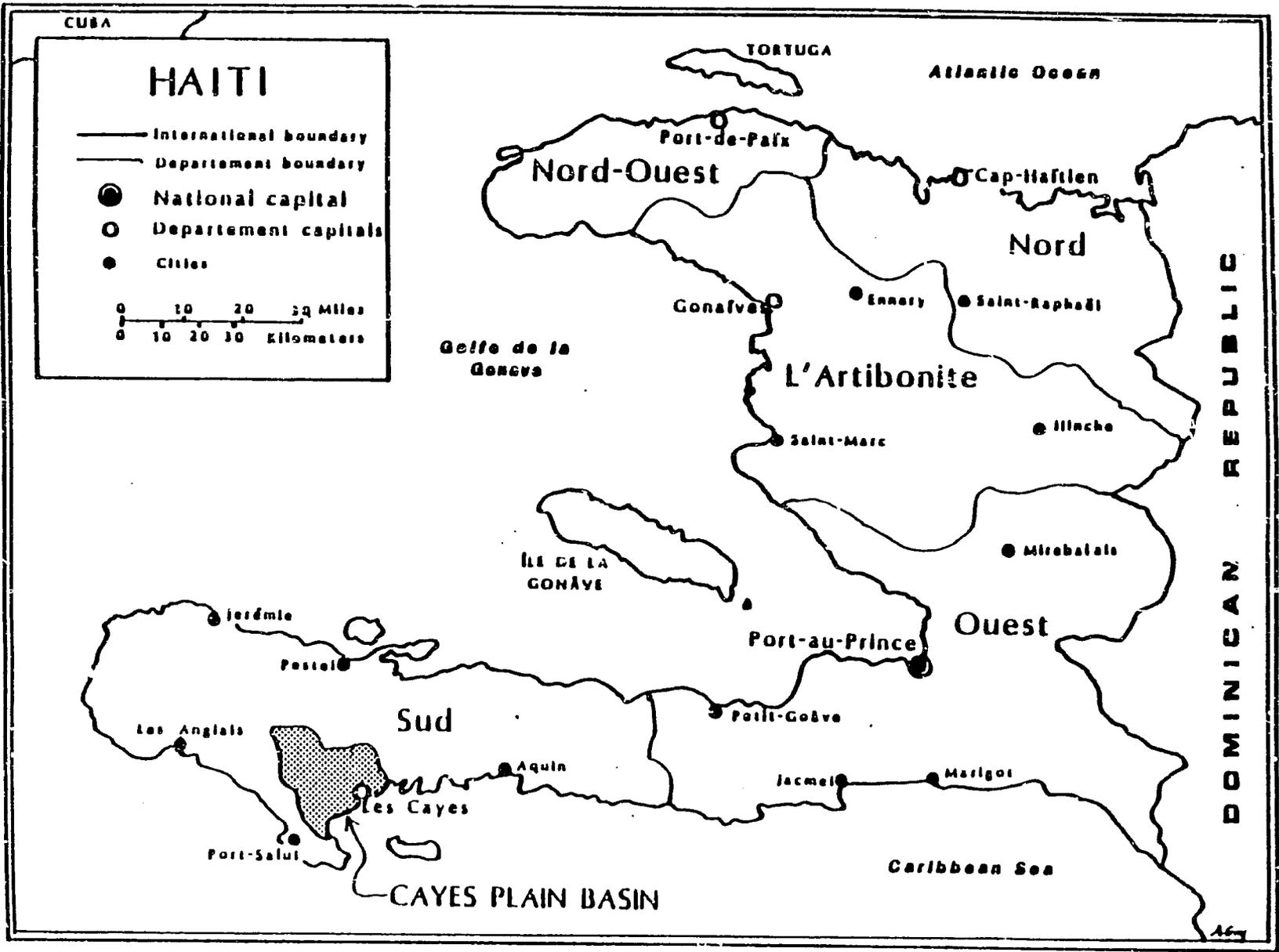
ERRATA SHEET

The reference to Research Paper No. 94 on pages 3 and 80 is incorrect. It should be Research Paper No. 95.

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SOURCE: William J. Coffey, Laurence A. Lewis, and Ann B. Hauge, "Social Institutional Profile of the Cayes Plain Basin: Towards a Coordinated Rural Regional Development Strategy" (Port-au-Prince: USAID/Haiti, 1984).

INTRODUCTION

Small peasant agriculture dominates the Haitian socioeconomic system and physical environment. According to the 1971 demographic census, 73.3 percent of the employed population (age 10 and over) worked in the agricultural sector and 72.9 percent were classified as farmers, farmworkers, hunters, and fishers. The agricultural sector accounted for approximately 44 percent of the gross domestic product (GDP) in 1976. Although a few large plantations exist, much of the domestic and export agricultural production are carried out on thousands of small plots. There is a consensus in the literature that most peasant farmers have access to land and that the majority own some of the land they farm. However, rural Haiti is characterized by extreme land pressure and fragmentation so that most peasants also rent and sharecrop land. Land is also owned by the state, but neither the extent nor the location of state-owned lands has been documented.

Land is the fundamental resource for the Haitian peasant. It provides food and materials for subsistence and also gives peasants access to cash. The active land market in rural areas is due in large part to the manipulations of smallholders as they attempt to balance the need for cash with the need to accumulate land for production and inheritance. The land market is primarily local and is governed as much by traditional as by legal conventions (Moral 1961).

Two property systems coexist in rural Haiti: a traditional, local, peasant-managed, extralegal system; and a formal, legal, French-based, notarial system. The notarial property system as formalized in the Rural Code of 1962 provides for methods of land transfer, deed registration, and conflict resolution. The local system described in anthropological case studies developed as local adaptations and revisions of the notarial system in a situation of minimal rural governmental infrastructure. Many of the tenure issues and policy alternatives identified in this paper arise from the tension between the two property systems.

To understand the dual nature of the present land tenure structure, it is necessary to understand Haiti's history. After the arrival of the Europeans and the decimation of the indigenous population, large sugar plantations dependent on imported slave labor were organized by the French. The first slaves arrived in 1502 and as many as 33,000 per year were brought to Haiti during the colonial period. The slave revolt in 1791 eventually led to Haiti's independence in 1804. All lands held by whites, between two-thirds and nine-tenths of the arable land area, were expropriated by the new state.

Lundahl's (1983) historical explanation for the development of the two property systems focuses on the land redistribution undertaken after the revolution as a political instrument to gain and hold mass support and to pay the army. Land redistribution was also a response to the collapse of the export market for Haitian sugar and the subsequent scarcity of economic resources. For the state and urban elites, peasant agriculture became the key source of tax revenue and export income. Subsequently, urbanites have made little significant investment in agricultural production or rural development.

Following independence, the state attempted to maintain large production units, but with the division of the country between north and south in 1806, 100,000 hectares of government land were distributed to 10,000 people. The plantations survived for a time in the north, relying on forced labor, but by the mid-1800s most plantation operations had been abandoned. The remaining plantations were farmed on a sharecropped basis (Madian-Salagnac 1978). An effort to reintroduce large estates during the U.S. occupation from 1918 to 1934 was unsuccessful. At that time the Haitian Constitution was rewritten to allow foreign ownership of land. Subsequent activities such as aerial photography and a cadaster in the Artibonite sought to regularize the property system. However, there was little outside interest in agricultural investment. The lack of potential investment coupled with the difficulty of putting together large, contiguous tracts of land meant that only two major plantations, HASCO and Plantation Dauphin, were functioning by the mid-1930s.

The land which moved into the hands of peasant farmers during the 1800s has been divided into smaller plots through the processes of inheritance, land sale, and tenancy. Population growth and lack of urban employment alternatives have increased pressure on the land, causing massive deforestation and soil erosion; this was already of major concern decades ago (Metraux 1951). Peasant holdings are now characterized by small size and fragmentation. At the same time, several researchers have pointed out that a countertrend of land concentration could occur in areas where land values are rising (Raynolds 1985, Murray 1978a). Stories are told of people using false titles to take land from peasants, and Lundahl (1983) notes that persons wishing to accumulate large expanses of land have been able to do so. Nonetheless, the overall impression from the recent land tenure literature is that the process of fragmentation is more important than land accumulation.

Accumulation of land by the state is another important land issue. While the state controlled virtually all of the land after the revolution, the amount of land held by the state today is unknown. Some lands were never part of the early land grants and may now be part of the state lands that are rented out or protected. Over the years, the state has also confiscated land as a part of interelite battles. Observers suggest that some of the current conflict in the Artibonite Valley is due in part to renewed land claims by landowners expelled by the Duvaliers. Although the state-land question is an important one politically, the limited data available suggest that only a relatively small percentage of peasants are affected by state lands. There is also considerable doubt about the quality of such lands in terms of their potential use to peasant farmers.

Clarence Zuvekas's 1978 review evaluated the land tenure information available up to that time, reported the state of knowledge on land distribution and tenure, and identified tenure issues which could affect rural development projects. The principal issues cited were tenure insecurity, land conflict, and lack of information on land distribution, especially the extent and tenure status of state lands. His review drew on three sources of information: the 1950 and 1971 censuses, a 1970 socioeconomic survey, and several case studies.

In 1986, the United States Agency for International Development (USAID) mission in Haiti asked a team of researchers from the University of Wisconsin

Land Tenure Center to update the Zuvekas review and also to carry out a preliminary assessment of land tenure constraints to long-term improvements of fragile hillsides and irrigated bottom lands. Our analysis of the land tenure structure included a review of current literature and Haitian land law, a definition of hypotheses on the relationship between tenure and the USAID mission's hillside strategy in the Cayes region, an agenda for policy dialogue, and an assessment of additional research needs. The data used to assess the land tenure situation were drawn primarily from recent anthropological case studies, socioeconomic and farming systems survey results, development project reports, and the Haitian Civil and Rural Codes. Interviews conducted with other researchers, development project personnel, and Haitian government officials and lawyers provided additional information about the social and environmental issues related to land tenure.

The summary of our findings is divided into four parts. Part I is a review of the scholarly literature on land tenure in Haiti, especially studies completed since the Zuvekas review in 1978. The purpose of the review is to synthesize case studies and project-specific analytical work to draw out central themes and hypotheses about the land tenure structure, the possible effects of tenure patterns on conservation projects, and the potential effects of land improvement projects on tenure patterns and other social relationships.

Part II examines the laws and legal institutions relating to land, trees, and water. The laws currently on the books are specified and analyzed to see how relevant they are to the hypotheses raised in Part I. Areas where customary practice for dealing with rural land transfers, uncertainties, and conflicts differs substantially from written law are pinpointed and an assessment of the need to modify the laws to effect changes proposed in the policy dialogue is given.

Part III of the report focuses on the implications of tenure structure for the development of a strategy for hillside agriculture and soil resource conservation. The implications of three aspects of tenure structure (tenure security, tenure stability, and tenure uncertainty) for project implementation are discussed. General issues related to rural development policy as well as specific watershed management issues are also examined.

Part IV contains our conclusions and recommendations for research and policy initiatives. Questions concerning the need for a land registration system, the strengthening of formal legal procedures governing land transfers, and the means for implementing procedures to strengthen tenure security are among those examined. In discussing alternative policies, we focus on the potential economic and social impacts of proposed changes. On the research side, one of the major difficulties encountered during this study was the lack of information and data on the implementation of the land laws and the relationship between land tenure and land use and productivity. As a first step in overcoming these data limitations, we identify information gaps and present ideas for additional research. When the preliminary version of this paper was presented to USAID/Haiti for comment in May 1987, we were just beginning a research project in the Département du Sud which focused on the relationship between land tenure status and farmers' willingness to adopt conservation techniques. The results of that study are to appear as a companion piece to the present report, as LTC Research Paper no. 94.

I. REVIEW OF RECENT LITERATURE ON LAND TENURE IN HAITI

In the following section we review the recent literature on land tenure practices in Haiti in order to gain a better understanding of some of the potential effects of land tenure on the USAID mission's hillside management strategy and to formulate some basic hypotheses for future study. The different tenure types and their regional variations are discussed first. The issues of tenure security and tenure stability and their influence on social relationships, land use, and agricultural investment are then examined within both the legal and the extralegal property systems. In view of the apparent differences between tenure patterns on irrigated and nonirrigated parcels, a brief review of irrigation and land tenure is also presented.

A. Tenure Types

Before examining the issues of tenure security and tenure stability, it is useful to outline the types of tenure relationships discussed in the literature published since the appearance of Zuvekas's literature review. Figure 1 shows a classification scheme for the tenure modes existing on Haitian farm plots. It is based on the scheme proposed by Murray (1978a) and also on variations which appear in Smucker (1982), Coffey et al. (1984), Larose (1976), Madian-Salagnac (1979), and others. One of the difficulties in specifying a tenure scheme for all of Haiti is that local variation within types is considerable. Since tenure is only one aspect of agricultural and social systems, the customs and laws surrounding tenure relationships reflect adaptations to complex and changing local conditions. Tenure rules evolve as conditions change. In rural Haiti, survival and risk aversion are the guiding principles in a climate of relatively scarce and diminishing resources. In consequence, mixed tenure configurations which change over time are the modal form.

Definitions of tenure status also vary geographically. For example, sharecropping on the large estate examined by Lowenthal (1983) varies considerably from the sharecropping found in the highland village analyzed by Smucker, and even from the relationship between landlord and tenant on the fringes of the large estate. The discussion here therefore draws not only on the tenure mode of the plot, but also on the social relationships between landlord and tenants.

1. Ownership

Three main categories of tenure status can be distinguished: owned land, lands held under various forms of tenancy, and usufruct lands. Owned land includes land inherited and purchased under a variety of circumstances. Five types of owned land have been identified (see paper published by Madian-Salagnac 1979): (a) land for which the owner provides a notarized title to the buyer (tè tit); (b) acquisition by an outside party if all heirs agree to the sale (tè honoré); (c) land for which the buyer purchases the "right and claim" (droit et prétension) to the seller's share of undivided family land (tè aine); (d) lands which are purchased as a result of a "manager" relationship

FIGURE 1

BASIC CATEGORIES OF HAITIAN LAND TENURE

- I. Ownership with clear title
 - A. Purchase (te achte)
 - B. Inheritance (eritaj)
 - C. Donation (don, kado)
- II. Purchase without title
 - A. Simple receipt ("sous seing privee")
 - B. Purchase of estate share (dwa e pretansyon)
- III. Inheritance without clear title (te byen mine)
 - A. Designated share of estate (divize pa dwet, divizyon amiyab): Informal division of family land by consensus
 - B. Undesignated share of estate (te endiviz, gen dwa, pretansyon): Collective ownership of undivided family land
- IV. Usufruct ("usufruit")
 - A. Inherited use rights to undivided family land (byen mine)
 - 1. Rotating occupancy of field gardens (fe jaden)
 - 2. Collective grazing plots (te lage bet)
 - 3. House-and-yard sites (anplasman kay, lakou)
 - B. Use rights based on designation of pre-inheritance plots
 - C. Use rights based on inter-vivos donations
 - D. Temporary access (gardening, grazing or house sites) based on friendship, servitude, clientship or kinship
 - E. Use rights based on status as agricultural worker or sharecropper on a large estate
 - 1. House-and-yard sites
 - 2. Garden sites
- V. Managed Land (te jere), public or private domain
 - A. Small holdings
 - B. Large estates
- VI. Tenancy on private holdings
 - A. Sharecropping (asosye, demwatye)
 - 1. Smallholders
 - 2. Intra-family
 - 2. Large estates
 - B. Cash rentals (fem)
 - 1. Short term (fem)
 - 2. Long term (potek)
- VII. Public Domain ("domain prive de l'etat")
 - A. Leasehold (fem leta)
 - 1. Smallholders
 - 2. Large estates
 - B. Subleasing
 - 1. Smallholders
 - 2. Large estates
- VIII. Squatting
 - A. Public domain
 - B. Private holdings

between the seller and the buyer; (e) lands which have been inherited (tê hê-ritage). Apparently more land is owned by virtue of purchase than by virtue of inheritance.

Inherited land may be either divided or undivided, and the indivision may persist for generations (Bellande et al. 1980). A specified series of steps, including surveying the land, notarizing the deed, and registering the division, must be taken to divide family lands legally. More often, according to Murray (1978a), lands are divided according to an informal, extralegal procedure whereby the siblings use a piece of rope to measure the land before two community witnesses. Inherited lands that are not divided either formally or informally are less common. Murray asserts that land in Haiti is rarely cropped in common. However, family land that is not arable may be kept as common property for grazing. In the Cayes plain, exceptionally productive land is sometimes left undivided to be farmed by heirs on a rotating basis (Murray 1978a; Raynolds 1985).

2. Tenancy: Sharecropping

Another major tenure category in Haiti is tenancy, including sharecropping, renting, and managing. Of these, sharecropping is probably the most common, although there are regional variations in the extent to which renting and sharecropping are preferred. Coffey et al. (1984), who looked at tenure in both the highlands and the lowlands in the Cayes region, report that both renting and sharecropping are more common in the lowlands than on the hillsides.

In Haiti, sharecropping is traditionally based on a 50/50 split of the plot output. The landlord supplies the land, the sharecropper supplies the labor, and the proceeds are divided equally between the two. This prototype is often modified, depending on the social relationship between the landlord and the tenant, the type of crop, topographical characteristics of the plot, etc. The timing of the harvest division is particularly important because it affects the amount of control which the sharecropper has over the plot's output.

Murray (1978a) notes that in Thomazeau, with the exception of sugarcane plots, sharecropped land is divided before the harvest and the landlord is responsible for harvesting his/her own part of the plot. Elsewhere references to harvest division imply that the division is based on the crop yield rather than on the plot area. Lowenthal (1983) notes that considerable variation in harvest division occurs on the estates of the Cul-de-Sac:

Specific sharecropping arrangements apply to each separate crop Cane itself is separated 40/60 with the landowner receiving the largest share of the price paid after weighing Patat are separated 50/50 and are most often sold either as a standing crop, or by the sack after harvest by the sharecropper Significantly, intercropped crops are not officially subject to separation at all, although the jeran's (manager's) requests for some peas, for example, for home use will rarely be answered unfavorably.

The percentage division of the output (or of the plot area) may vary as well, with the tenant receiving a larger share under some circumstances.

Smucker (1982) found that landlords receive a smaller proportion if the tenant pays more of the expenses, particularly if the tenant has to pay cash for inputs. The proportions also vary depending on the land quality, the crop type, and the relationship between the landlord and the tenant.

All of the case study evidence seem to support the notion that sharecropping agreements are relatively informal, short-term (usually for one growing season) arrangements. According to Reynolds (1985), sharecropping arrangements in the community of Foscave are unwritten and are constantly renegotiated. Smucker (1982) reports that the sharecropping agreement is almost always a part of a more extensive personal relationship between the landlord and tenant--an extension of a patron-client, a kinship, or a ritual kinship relationship. Lowenthal (1983) emphasizes the difference between sharecropping in estate agriculture and in neighboring freehold plots in the Cul-de-Sac:

Even where the same crops are grown, the economic and social relationships "surrounding" the fields are qualitatively different--the met bitasyon is a mistrusted, powerful and sometime arrogant superior, while the peasant landowner is, more often than not, a neighbor, friend and peer.

Murray's dissertation (1977) probably contains the most extensive discussion of Haitian sharecropping practices. He observes that the incidence of sharecropping in the village of Kinanbwa in the Cul-de-Sac has increased over time. Only a small proportion of the landlords are not residents of the community and most of the landlord-tenant relationships are between kin and, in particular, between father and son. He argues that the sharecropping relationship in Haiti is replacing previous usufruct arrangements, such as preinheritance grants. The change is seen as an evolutionary response to land and population pressure. Evidence supporting the validity of this interpretation is offered by both Coffey et al. (1984) and Reynolds (1985) for the Cayes region, although the economic logic of the hypothesis has been challenged by Lundahl (1983). The literature indicates that, in Haiti, sharecropping arrangements tend to occur between members of the same social class and, often, between members of the same family. A central point is that while the incidence of sharecropping is common and likely increasing, the sharecropping relationship differs substantially from the Latin American stereotype and is, therefore, not amenable to the kinds of reforms used in Latin America.

3. Renting

Throughout Haiti, renting appears to be a much less flexible and a much more formal tenure arrangement than sharecropping. Both Smucker (1982) and Reynolds (1985) report that rental contracts are written and witnessed. They also require an advance payment. The landlord gives up more rights when renting land than when sharecropping it. For example, whereas a sharecropper has no right to harvest fruit or wood for market, the lessee not only may have such rights, but he/she can also prohibit the landowner from entering the land to harvest wood or fruit. According to Conway (1986), the practice of specifying the terms of tree tenure on both rental and sharecropped lands is becoming increasingly prevalent. Variation in the terms of these agreements is apparently considerable.

Case studies conducted in both the plains and the highlands indicate that renting is less common than sharecropping. Smucker (1982) reports that slightly less than half of the plots farmed under some form of tenancy in L'Artichaut are rented for cash. One-year rentals (fèn) are much more common than long-term (potèk) contracts. Raynolds (1985) also found that renting was relatively rare in the Cayes plain. Rental payments are high and must be paid in advance. Nonetheless, renting irrigated land offers the lessee an opportunity to increase his/her earnings significantly.

The recent literature also suggests that rental arrangements are a means of acquiring cash and are used as an alternative to selling a piece of land. The length of the contract is probably a reflection of how much cash the owner needs. Murray's (1978a) research indicates that renting is generally less profitable for the landlord than sharecropping. In addition, landlords lose more control of their land if they rent it on a long-term basis. However, renting also requires less supervision.

4. Managing

A variation on the sharecropping and usufruct (see below) relationship is the manager arrangement. References to managing in the literature are more scattered than for sharecropping or usufruct and the term "jeran" (manager) appears to be used in several different ways. Smucker (1982) observes that in L'Artichaut, "managed land is an ambiguous category of tenure in which an absentee landlord pays a local manager to oversee his land." It is not socially acceptable in this area to leave land untended even if it is planted. Absentee landlords are not necessarily wealthy, or city dwellers, although some of the larger ones probably are. Some are people who have a piece of land, often inherited, that is too far from their residence to be managed directly. The manager arrangement corresponds very closely to sharecropping in the area around L'Artichaut. Cash is rarely exchanged and the manager is paid in produce, access to farmland, or a combination of the two. In contrast to sharecropping, however, the landlord is responsible for all investment costs. People compete to become managers because the manager is in an advantageous position if the owner decides to sell the land.

Managers were also mentioned during the interviews we conducted in Char-donnieres. Many peasants from this area have migrated to the Cayes plain or Port-au-Prince but continue to hold interests in undivided family land. Often one family member is selected to manage the entire plot. In this case, the jeran arrangement more closely resembles usufruct than sharecropping. We also were told that coffee lands are not sharecropped and are only rarely rented out. If an owner of coffee land needs cash, he or she may agree to a long-term rental (potèk) rather than selling the land, which is only considered as a last resort. Managers are often hired to cultivate coffee lands when the owner lives outside the area.

Finally, managers are also found on the sugar plantations of the Cul-de-Sac plain (and presumably in other areas where large landholdings occur). Lowenthal (1983) identifies five regions in which large landholdings are found. The manager of such holdings is the local representative of the absentee landowner. The relationship between the manager and the resident, dependent

sharecroppers is one of status inequality. The reciprocity found in other sharecropping arrangements in Haiti, where the relationship is intraclass, is not present on these large estates.

In her discussion of tenure changes in Foscave, Reynolds (1985) points to the existence of the manager as an indicator of fundamental change in the property system. Landholdings, even of absentee owners, are not large, so that production is not organized on large plantations despite the presence of irrigation. Reynolds suggests that rising production input costs coupled with an increase in the migrant labor supply and the number of absentee landowners could lead to a shift from small farmer production on a sharecropping basis to the hiring of a manager, more frequent use of wage labor, and mechanization.

5. Usufruct

While Murray argues that usufruct arrangements are disappearing in favor of sharecropping, Smucker (1982) found that usufruct relationships continue to be an important part of the overall tenure structure in L'Artichaut. There, usufruct exists in the form of preinheritance land and anticipated donations, rotating occupancy of undivided family estate land, general access by all heirs to undivided land for grazing purposes, absentee coheirs giving use rights to their shares of informally divided family estate lands, absentee siblings or other close relatives giving use rights to other types of plots, and the granting of temporary garden privileges to children and other relatives, servants, and friends. The majority of households and fully 25 percent of all plots in this mountain peasant community were being farmed by virtue of usufruct. The incidence of usufruct was relatively higher among the land-poor. Such arrangements appear to be closely linked to kinship and fictive kin ties as well as to other highly personalized relationships such as patron-client relations.

Sixty-five percent of the households in L'Artichaut farm some land by virtue of usufruct ties known as preinheritance grants. Under the preinheritance grant arrangement, a parent gives a son or (less often) a daughter access to a piece of land which he/she will eventually inherit so that the young person can set up an independent household. At times this grant is given by an aging parent who can no longer physically farm the land. Since the child usually returns a portion of the harvest to the parent, the relationship is barely distinguishable from sharecropping. Coffey et al. (1984) report that they encountered two virtually identical cases in which one person referred to the arrangement as sharecropping and the other referred to it as a preinheritance grant. Gifts of the use of land to relatives may also be made. For example, when a person returns to the community after a long absence, relatives may give him/her use of some land to help him/her get started again.

6. Tenure on State Lands

The tenure relationships discussed above refer primarily to privately held land. State lands are also occupied both legally and illegally by agrarian populations. Review of the literature shows very little information and a great deal of confusion on the subject of state lands. It is not at all clear how much land is involved, where this land is located, how many leaseholders

there are, nor how much land they occupy. Neither census data nor tax records are very helpful on the subject.

Folsom (1954) cites U.S. occupation reports dating back to 1927-28 which estimate 54 percent of the country as state land. There is certainly no evidence for this scale of state ownership at the present time. Pierre-Charles (1967) cites a 1961 report estimating state land at 30 percent of the territory. Deyoung (1958) cites Dartigue (1948), reporting 22,445 tenant farmers on 234,000 acres of public domain registered with the finance ministry. If this figure for smallholders were to be combined with the largest state concessions reported at the time, e.g., SHADA* (60,000 hectares of forest and sisal lands), HASCO (11,000 hectares of sugar land), and Plantation Dauphin (19,000 hectares of sisal), the total would come to about 7 percent of the national territory. In view of urban public holdings and reports of additional rural state lands of unknown dimensions, it is quite likely that the present total is significantly larger than this 7 percent figure. In terms of geographic distribution, state lands are reported in the northwest (Mole St.-Nicolas, Baie de Hennes); the northern plains (Limonade, Fort-Liberte); the Artibonite; the Plateau Central (Cerca la Source, St.-Michel de l'Atalaye); Morne de la Selle and the Foret des Pins; Morne des Commissaires; the plains of the Cul de Sac and coastal zones between Port-au-Prince and Montrouis, St.-Marc, Leogane, Cayes, and the Massif de la Hotte (Pic Macaya); and most of the land on Haiti's offshore islands, the largest of which are La Gonave and La Tortue.

According to Folsom (1954), legislation of 1908, 1922, and 1927 provided for short- and long-term leases on state land. Long-term leases were from nine to thirty years and oriented to enterprises such as the Plantation Dauphin. Short-term leases were from one to nine years. These were oriented to smallholders and charged an annual rent of 6 percent of appraised sale value. The 1927 law accorded a certain preference to squatters in the establishment of formal leases on government land already occupied.

It is also a matter of some interest to note the passage of homesteading laws in 1883, 1908, 1932, and 1934. Between 1935 and 1952, 508 smallholders reportedly gained title to 1,571 hectares of state land in keeping with the Homesteading Law of 11 January 1934, the *Bien Rural de Famille* (see *Le Moniteur*, 12 February 1934). Homesteaders were given an upper limit of 5 hectares of land. If they could demonstrate prior occupancy for a continuous period of 10 years, they were eligible for accelerated access to title. Pierre-Charles (1967) mentions the establishment of "agricultural colonies" on state land for the benefit of displaced farmers in the wake of Trujillo's 1938 massacres of Haitian peasants living in border areas.

At the present time there are thousands of peasant smallholders farming state lands in such areas as La Gonave and the other offshore islands (see Smucker 1981; Smucker and Delatour 1979). In practice these cessions are inherited, purchased, subleased, and sharecropped in a fashion parallel to

* See accompanying glossary of acronyms and Haitian terms (p. 88 below) for assistance in definition.

peasant land tenure patterns on private land. There is good evidence of a common pattern of underpayment in which lessees understate the amount of land under leasehold. According to interviews in Camp-Perrin, individuals farming state lands in the southern highlands often pay the tax on 1 carreau (1.29 ha., or about 3 acres) while farming 3 carreaux. This type of squatting is facilitated by corrupt tax office "volunteers" charged with verification of leases.

7. Squatting

There is an uninterrupted tradition of squatting in Haiti which goes back to the marronage of the eighteenth century slave-plantation era. In the present era this practice reflects both the legal ambiguity of private landholding patterns and the limited central state control over lands falling within the public domain. Certain practices among smallholders may be assimilated to squatting but are exercised in the form of subtle maneuvers perhaps more accurately classified as border violations or garden theft. In the latter category are deliberate grazing violations such as where one farmer ties animals in another's field at night, or efforts to expand garden borders by planting creeping hedges, or grazing and gardening on plots temporarily abandoned by absentee owners. Another murky area is the special relationship between sharecroppers and landlords on large private estates. In practice, maneuvers on both sides of the relationship raise the question of squatting and unregulated gardening.

According to the law, prescription rights based on ten- and twenty-year periods of continuous occupancy may be exercised on private lands but not on state land. This is evident from case studies in the disputes over land rights. Given the poor documentation of land titles, it is quite possible that legal prescription rights play an important role in the resolution of land disputes. This is an area which requires further investigation. To what extent are prescription rights exercised? Do they provide a measure of protection to the land-poor, especially in the context of disputes over ancestral land? Do they serve to legitimize land claims originating in the practice of squatting?

There is evidence of a great deal of squatting on state lands. Some of this takes the form of "furtive gardening" in poorly supervised zones where agriculture is forbidden, e.g., Pic Macaya, Morne de la Selle, and the Forêt des Pins. Furtive gardening also takes place on large state concessions such as the Plantation Dauphin or SHADA sisal lands. In such settings, the gardeners are unlikely to establish residence, though rudimentary shelters may be constructed in remote areas for limited occupancy during peak labor periods. Other forms of squatting take place via maneuvers within the system of leaseholding on state lands. As noted earlier, lessees characteristically understate their holdings for purposes of tax avoidance. It may be that varying interpretations of the unit of measure contribute to the problem of understated leaseholdings. Tax records show leaseholdings in hectares whereas the standard unit of measure for peasant farmers is the carreau or a fraction thereof. Third, state lands are sometimes used for open range grazing by smallholders. The 1962 Rural Code does not allow open grazing but it is commonly practiced in arid regions of the country characterized by limited agriculture and access to uncultivated state land (see Smucker and Delatour 1979).

8. Landlessness

A final status that should be considered in a discussion of land tenure is landlessness. In his review of Haitian land tenure, Zuvekas (1978) noted that there was little information about landlessness in Haiti, a generalization that still holds true. It is important to distinguish between people who have no access to land, as owners, tenants, or users, and those who simply own no land. While there are no reliable data on the number of people who lack access to any land, it is clear from the case studies and interviews that, because of internal migration, there are some areas (especially the fertile, lowland plains) where a significant number of landless workers are found.

Raynolds (1985) found that 10 percent of the households in Foscave had no access to land. All but one of these households consisted of migrants dependent on agricultural wage labor or were households in which no male laborer was present. She notes, however, that some of these households could have rights to small portions of family lands in the mountains. In a sample of farmers from the Cayes peninsula, Coffey et al. (1984) found essentially no landlessness. The three people they encountered who had no access to land will inherit in the near future. They make the point that few people without access to land are likely to be encountered in the rural areas because these are precisely the people who migrate to the cities. Even in the relatively urbanized area of Ca-Ira on the Leogane plain, Plotkin (1979) found that most of the migrants into the area were able to obtain land to sharecrop.

In contrast, landlessness in the sense of not owning any land is more common, although the vast majority of Haitian peasants claim to own at least some land. (In many cases the land may be only a house plot with its adjacent garden.) In L'Artichaut, Smucker (1982) found that while none of the households lacked access to land, 17 percent of the households did not own any land. Both Murray and Smucker found that the amount of land owned is often correlated with age and stage of the life cycle. Another important factor is household misfortune such as death or illness requiring large amounts of cash and forcing the premature sale of land. Smucker also found evidence of land stratification going beyond age or life cycle, suggesting a pattern of differentiation indicative of classes of smallholders. These and other case studies tend to support the conclusion that a majority of peasant households are relatively land-poor, but that the land-poor are distinguished in important ways from both landless and relatively more landed peasant families (see Smucker 1982, and Murray 1977).

B. Tenure Structure

Zuvekas presents data from the 1950 and 1971 censuses which show a more equal distribution of land than in most Latin American countries, a slight tendency toward greater inequality over the twenty-year period, and a relatively small average size of farm. At the same time, he cautions strongly that the data from both censuses are very unreliable and in particular that they obviously seriously undercount large landholdings.

Tabulation of data on landholdings from the 1982 census apparently has not been completed. The IHSI gave us tables from six departments for area by size

LAND DISTRIBUTION IN SIX DEPARTMENTS, 1982 DEMOGRAPHIC CENSUS*

TABLE 1

Number of Farms per Farm Size Category
[area in carreaux (1.29 ha./cx.)]

DEPARTMENT	TOTAL #	UNDER 0.5		0.5-1.54		1.55-4.99		5-9.99		OVER 10.0	
		#	%	#	%	#	%	#	%	#	%
Nord	65212	16916	25.9	36152	55.4	10775	16.5	1032	1.6	337	0.5
Nord-Ouest	44163	6893	15.6	24267	54.9	11001	24.9	1591	3.6	421	0.9
Sud	67295	20336	30.2	33751	50.2	11771	17.5	1184	1.8	253	0.4
Grand-Anse	88431	16306	18.4	49350	55.8	20090	22.7	2183	2.5	502	0.6
Sud-Est	62003	15200	24.5	32162	51.9	12838	20.7	1435	2.3	368	0.6
Nord-Est	33144	5184	15.6	19662	59.3	7348	22.2	730	2.2	220	0.7

TABLE 2

Total Area of Farms per Farm Size Category
[area in carreaux (1.29 ha./cx.)]

DEPARTMENT	TOTAL Area	UNDER 0.5		0.5-1.54		1.55-4.99		5-9.99		OVER 10.0	
		Area	%	Area	%	Area	%	Area	%	Area	%
Nord	72967	3968	5.4	29580	40.5	27066	37.1	6107	8.4	6245	8.6
Nord-Ouest	65352	1675	2.6	20289	31.1	27443	41.9	9372	14.3	6572	10.1
Sud	72615	5092	7.0	28947	39.9	27721	38.2	6230	8.6	4625	6.4
Grand-Anse	116391	4055	3.5	41340	35.5	49734	42.7	12936	11.1	8325	7.2
Sud-Est	79078	3300	4.2	28407	36.4	31000	39.7	8211	10.5	7160	9.2
Nord-Est	44189	1310	2.9	17133	38.8	17888	40.5	4338	9.8	3521	7.9

* Definitions (translated from the census): (1) Farm: All land used entirely or in part for agricultural production which is considered as a technical unit (with respect to labor and other means of production, i.e., animals, machinery) and which is farmed by one person, alone or helped by other persons, independent of the title of possession, of the legal mode of tenure, of the size or location. (2) Total Farm Area: The sum of the areas of all the parcels held by the farm. It includes the area possessed and cultivated, the area taken in lease, and the area cultivated under other modes of access. (3) Parcel: A piece of land of a single mode of access held by a single farm and surrounded by boundaries such as ditch, fence, road, or natural limit, or by parcels of other farms, or by lands not belonging to any farm.

of farm and number of farms by size category. These breakdowns are shown in Table 1 and Table 2. (Size categories and area are in *carreaux*; 1 *carreaux* = 1.29 hectares.) No data are available for the country as a whole and, because of the change in the designation of departments, the 1982 distributions cannot be compared directly to earlier years, and the size breakdowns are too gross to calculate meaningful Gini coefficients. In addition, comparisons are complicated by the differences in size categories used in the three censuses.

The lack of reliability and comparability in these figures precludes analysis of trends over time in land fragmentation or concentration, but some broad observations can be made. The 1982 data show that in these six departments there are higher percentages of farms and of land in farms, with 5 *carreaux* or more of land than were found for the country as a whole in 1971, but the proportions of farms in these categories are still considerably lower than in 1950. Comparisons of 1971 and 1982 data at the lowest end of the scale are not possible. The proportions both of farms and of land in farms of less than 0.5 *carreaux* increased between 1950 and 1982. Looking at farms of 1 *carreaux* or less, Zuvekas noted a similar increase in microfundia between 1950 and 1971.

Clearly in these six departments there is a predominance of very small farms, with about three-fourths having less than 1.5 *carreaux*. (Percentages vary from 71 to 81 percent.) At the same time, these small farms encompass less than half of the land in farms (from 34 to 47 percent). While the data in no sense offer any verification of the hypothesis, it is possible that the change in the land distribution is similar to the change in other countries, with simultaneous concentration and fragmentation. We expect to make future contributions to the understanding of this issue as data become available to us.

C. Tenure Security

Zuvekas identifies tenure insecurity as a potentially serious constraint to development activities. Thome (1978) and Murray (1978a) address this problem in theoretical terms. As yet, no studies provide any empirical evidence to demonstrate that the peasant perception of security matches that of the Western social scientist.

In the case of Haiti, it is particularly important to draw a distinction between tenure security and title security. Thome (1978) identifies two questions that have been raised about tenure security in Haiti. Will increases in land values and productivity result in the eviction of peasants who do not have legal deeds and titles by larger landowners or outsiders? This is essentially a question of title security, a situation which, at least in principle, is empirically verifiable. The second question has to do with tenure security, a subjective assessment by the landholder of his/her assurance of continued access to a piece of land. The primary question raised here in terms of development programs is whether peasants with secure tenure rights are most likely to invest in the land, for example, through the adoption of erosion-control measures. Subjective tenure security or insecurity may be associated with different tenure relationships. According to Thome, squatting, sharecropping and renting, and "owning" land without official titles are insecure tenure

statuses. At the same time, he notes that there are neither reliable data on the incidence of tenure insecurity defined in these terms nor evidence that Haitian peasants themselves define insecurity in this way.

Murray (1978a) argues that a peasant's perception of insecurity varies with the way in which he/she has gained access to the land. Purchased plots, which are always covered by at least a notary's written declaration, are considered to be more secure in the eyes of the peasant than inherited plots, which have been informally subdivided among siblings and carry the potential for intrafamilial conflict. Murray assumes that rented and sharecropped lands are insecure because there is no assurance of continued access across growing seasons.

Smucker (1982) offers a similar "continuum of land tenure security," ranging from most secure (ownership through either purchase or inheritance), to moderately secure (usufruct arrangements such as preinheritance grants, undivided family land, and temporary use rights), to least secure (rental, sharecropped and managed lands). He argues that the peasant balances security of tenure, as defined by the peasant, with land quality in deciding how much labor to allot to a given parcel:

It is explicitly recognized that the various modes of access to land are not equally secure. The factor of risk is clearly taken into account in the willingness to invest labor in building up a garden with a view to long-term production.

Thus the evidence from L'Artichaut tends to support the thesis of insecurity as a significant factor in agricultural decision-making.

Tenure security is also the subject of a paper published at Centre de Mardian-Salagnac (1979). In terms of "owned" property, the author says that the degree of security depends on three factors: birthright, type of acquisition, and existing investments. Owned land includes land inherited and purchased under a variety of circumstances. Birthright is a factor in security because, in the case of family land, the firstborn is normally the person who holds the "master deed" for lands which are either not divided or divided informally without the services of a notary or surveyor. In interviews in the Cayes area, we were told that sometimes the most educated of the male heirs may hold the deed if the eldest sibling is absent or less capable. There is a general agreement in the literature that land acquired through purchase is more secure than inherited land, since family land carries the possibility of competing claims from absent relatives. Purchased land with documented proof of purchase is also considered more secure than land purchased without such documents.

A number of land tenure researchers hypothesize that security leads to increased investment. In this paper we argue that the converse may also hold true in Haiti: investment can contribute to security. In Haiti land is held not only as a factor of production, but also as a sort of bank account. Smucker (1982) stresses the role that land plays in providing peasants in the L'Artichaut region with access to cash:

Land is the prime object of investment and a key form of savings.
 . . . It is the aspiration of peasant farmers to purchase land in

order to cover funeral expenses and leave an inheritance for the children.

The purpose of holding land does not seem to be accumulation per se but rather to accumulate enough land to pay for inheritance and burial expenses. In these circumstances investment and tenure may both be seen as parts of a broader scheme. A renter who is interested in purchasing a piece of land, or in preserving his access to a plot of land, may make an investment (such as planting trees) in order to show his concern for improving the land (Conway 1986). Smucker (1982) describes a peasant farmer who rents land to plant corn even though he owns land which would be suitable for corn. The farmer knows that corn is more destructive of the soil than beans, so he rents in land in order to preserve his own land for a less destructive cropping practice.

1. Security within the Formal Property System

Two property systems, one based on legislation and one based on customary practice, operate in rural Haiti. Security and insecurity are defined differently within each system, although there is some overlap since the customary, or informal, system is adapted from the legal, or formal, system. The formal system attempts to provide tenure security through a process involving an official survey of the parcel, the notarization of a deed describing the transaction, and the registration of the deed at the tax office. A deed may be obtained either through purchase or through inheritance.

Is insecurity within the formal system a factor in shaping the pattern of peasant investments on the land or in their vulnerability to expulsion from the land? Overall, there is a general consensus that peasants generally do not register land transactions, presumably because of the cost involved. At the same time, Murray (1978a) notes that land purchases in the Thomazeau area always involve the exchange of a notarized document. The peasant perceives that the document provides security within the formal structure because it certifies the transaction and gives the buyer the right to call in a surveyor later if necessary. Reynolds (1985) reports that in Foscave, where land values are increasing, sales are now routinely both notarized and surveyed.

Inherited land presents another problem in terms of the formal system, since it is usually divided only informally among heirs without recourse to a surveyor, notary, or deed registrar. The issue of whether "master deeds" for large blocks of family lands actually exist and whether they would be defensible in court is discussed by both Murray (1978a) and Zuvekas (1978). Outsiders rarely see these documents, and their use in land transactions in the informal property system is not really clear in the literature. Murray asserts that his evidence from Thomazeau indicates that all or most of the land in that area is covered by a deed of some kind or another, and that these "master deeds" can be brought forth when necessary. Whether peasants in other areas of Haiti also possess master deeds in usable condition is unclear. It is important to note that a peasant is less likely to lose his/her land because he/she does not possess a valid deed to the land than he/she is to lose it to a person with the resources to buy a competing, bogus deed to the same plot of land (Murray 1978a). The question of security then becomes one of defending the master deed within the legal system. The literature contains no information on this

process or on the crucial question of the degree of security which the formal system, through the courts, does in fact afford the peasant landholder.

The literature on land tenure indicates that tenure security as defined by the formal system apparently has little effect on peasant investment decisions. A notarized piece of paper certifying purchase and community witnesses are used to document the informal division of family lands. Peasants consider this to be owned land and apparently behave accordingly (Pierre-Jean n.d.).

2. Security within the Informal Property System

Security of tenure in the informal system is based on community consensus about property rights. Conflicts are largely resolved locally through a process of consensus-mending (Lahav 1975a). Lahav hypothesizes that increased land pressure has contributed to the decline in the number of land disputes settled within the relatively informal processes of the community. Conflicts within the informal system may produce insecurities. According to Smucker (1982), in L'Artichaut "the protection of boundaries is the most visible source of social friction." The literature suggests that, in these circumstances, the existence of insecurity may both inhibit and encourage investment. Perennial crops are often not planted on land marked by dissension. At the same time, however, trees may be planted or irrigation ditches may be dug for the express purpose of marking boundaries in an attempt to strengthen land claims.

Insecurities which affect investment decisions are apparently common on inherited land within the traditional property system. Evidence of intrafamilial disputes, especially disputes between different branches of the family and heirs through different sets of parents, appears in all the case studies. Pierre-Jean (1980) provides a particularly instructive example of such a conflict in a case study of the inheritance process on a plot of land in Changieux. The case demonstrates that a peasant may hesitate to plant or build structures if he/she feels an absent family member may return to claim the land. Alternatively, family members may simply not make decisions about land investments when some of the "owners" are not present. Our informants in the Cayes region considered absentee landlords one of the major impediments to successful implementation of agroforestry projects. At the same time, we were told that this problem is to some extent offset by the tendency to discount an absent member's wishes when making land-use decisions. Similarly, Smucker (1982) comments that in L'Artichaut the claim of the person actually farming the land is traditionally more powerful than the claim of paper ownership. Both Murray (1977) and Smucker (1982) also suggest that the loss of inheritance rights due to abandonment may be enforced more readily for women than for men. Although family conflict may inhibit investment to some degree, the fact that both informal and formal systems prohibit the sale of family land to outsiders until all heirs have declined to buy and agreed to an outside buyer means that investments will usually benefit the family, if not the individual.

3. Tenure Security and Tenancy Relationships

Insecurity in terms of ownership is only one aspect of tenure insecurity. Tenancy relationships of various types are generally considered inherently more insecure than ownership, at least within the formal system. The literature on

tenancy makes clear, however, that security within the informal property system in Haiti is a function of the social environment and personal relationships. Research from an agroforestry project (Conway 1986) shows that, despite the recommendation that participants plant trees only on "securely" held lands, farmers are planting on informally divided, inherited land and on rented and sharecropped land as well as on purchased or formally surveyed, inherited land. Evidently the personal relationships underlying the formal tenure status of plots also play a role in a farmer's willingness to invest in trees.

Both legally and traditionally, renting offers relatively more security to the tenant than sharecropping and usufruct arrangements. The assurance of having use of a piece of land over an extended period of time means that planning is possible. At times perennials, coffee trees, and fruit trees are planted on rented land. Conway (1986) reports one case in which the tenant planted trees on land which she had rented for two successive periods of five years each in order to reinforce her desire to continue renting. Rental arrangements are sufficiently stable and secure that children sometimes inherit rental contracts from their parents. Whether these inheritable rental contracts also exist on state lands is unknown.

The importance of tenure security in development programs derives both from the nature of tenure relationships and from the direction of change in tenure structure. One relevant aspect is that tenancy relationships are apparently more common in fertile lowland areas (particularly in irrigated zones) than in the less fertile highlands. In the Cayes Basin plain, Coffey et al. (1984) found a significantly lower percentage of owner-operated plots in the lowlands. Reynolds reported that 66 percent of the irrigated plots in Foscave were farmed by renters or sharecroppers. On the other hand, Smucker said that in the northern highland village of L'Artichaut only 25 percent of the plots were held by tenants. On the Cul-de-Sac plain, Murray observed that only 30 percent of the plots were owner-operated, and Plotkin found an even smaller percentage (20%) of owner-operated plots in the more urbanized Leogane plain.

Although cross-sectional evidence such as that presented above cannot be used to analyze changes over time, both Reynolds and Plotkin suggest that increased land values contribute to a situation in which peasant smallholders are less able to purchase land and are therefore forced to rely on tenancy. More affluent peasants or nonresidents who have the cash resources to buy land coming on the market are the landowners. This hypothesis is worthy of further investigation.

4. Tenure Security on State Lands

Under homesteading laws, a person who farms state land for twenty years is eligible to apply for title to the land. The titling process is fairly involved, requiring a survey, the drawing up of a notarized deed, and a payment to the deed registrar (see Section III of this report for a fuller description of the titling process). According to our informants, acquiring title also requires having personal connections with members of the legislature who can sponsor the application for title. While a brief examination of the records at the Contributions Offices in Les Cayes and Camp Perrin showed that some titles have been issued in recent years, we do not have any data as to the frequency with which this process occurs.

Because of regional diversity in the extent of state holdings and the historical patterns of land use, there is no single, clear pattern of security of tenure or of perception of security for state-held lands. On the state-owned offshore islands, cessions are bought and sold and inherited in much the same manner as privately held lands elsewhere (Smucker 1981). In interviews near Chardonnières, we were told of similar practices both on state lands in the villages and on the remote hillsides. Yet Kulibaba (1983) notes that the experience of expropriations for construction of the Peligre Dam in the 1950s left the peasants in that region both insecure and suspicious about any state actions. Although USAID's "Environmental Profile" (1986b) asserts that "there is good evidence that both State lands and absentee holdings are virtually 'mined' by poor householders and sharecroppers," we were unable to find any systematic study comparing land use on state and absentee holdings with land use on other types of land. Within the formal system, tenants of state lands are, at least on the surface, less secure than others because they run the risk that the state will decide to use the land for other purposes and that tax collection may be better implemented in the future. However, the decentralized and personalized nature of the administration of state lands probably means that subjective insecurity is increased only when there is a perceived threat that the state will cease to lease the land. Such a threat could be particularly relevant in areas targeted for environmental projects.

Security from the point of view of peasant investments is presumably no greater on those state lands which are leased in large blocks and then sublet to peasant renters or sharecroppers than on other tenant farmed lands, since many of the tenants are unaware of the ownership status of the land. At the same time, holders of large state leases presumably would have less interest in protecting or improving these lands than private landowners who rent out their holdings. The lack of information on state holdings makes any investigation of these relationships difficult.

D. Tenure Stability and Land Transfers

The issue of tenure security has received considerable attention in the literature. However, stability of tenure is potentially a more important factor since it affects both willingness to invest in the land and security itself. From both a theoretical and an empirical point of view, instability has been subjected to much less scrutiny than security. The literature suggests that an extremely active land market and the extreme fragmentation of landholdings in Haiti are the most important contributing factors to tenure instability. All the case studies reviewed for this report confirm Murray's (1978a) observation that "most peasants eventually get involved in land transacting." Each farmer holds multiple plots under a variety of tenure modes. Through a continual series of land transactions, both the number of plots farmed and the type of tenure associated with any particular plot vary considerably from year to year. Murray reports that 50 percent of the plots in the Cul-de-Sac village of Kinanbwa had been farmed by the current cropper for less than five years. In Foscave (Raynolds 1985), 68 percent of the irrigated plots had had the same cultivator for less than three years. A plot could be farmed by the owner one year, sharecropped the next, and later rented out or sold. An understanding of how particular plots fit into a peasant's overall subsis-

tence strategy and of the factors that affect the tenure status of a particular plot over time may be as important in planning for investments in the land as "security" of tenure.

The literature suggests that several important factors contribute to the prevalence of mixed tenure modes and the active land market. First, peasant agriculture focuses more on minimizing risk than on maximizing production. One hypothesis is that, by holding several plots in diverse ecological regions, the peasant can minimize the effects of losses due to natural factors. A variety of soils, moisture levels, and altitudes also allow for planting a multiplicity of crops to cover subsistence and marketing needs. Peasants buy, sell, rent, and sharecrop different plots over time to create an ecological balance (see Zuvekas 1978; Smucker 1981).

Coffey et al. (1984) question this hypothesis. They argue instead that the fragmentation of holdings and mixed tenure modes result from land scarcities. Peasants have diverse holdings because land is not available near their homes. They rent and sharecrop land because it is unavailable for purchase or costs more than they can afford (see also Reynolds and Plotkin). In the Cayes plain, Coffey et al. found that individuals do farm multiple plots, but all are located within a single ecological zone. Other studies (Smucker 1982; Murray 1977) also show that the largest contiguous holdings in the community belong to older people who, over a lifetime, have purchased adjacent lots as they have become available.

A life-cycle explanation for landholding patterns appears in the literature as a third factor contributing to fragmentation of holdings and the mixed modes of tenure observed cross-sectionally (see Murray 1977; Smucker 1982). Over a lifetime, a peasant tries to accumulate enough land to cover burial expenses and to provide an inheritance for his or her children. The farmer also must balance current consumption needs with cash needs and labor availability. A peasant may sharecrop out some land while renting in land to grow a particular needed crop. Land may be rented in when there is domestic labor available but later sharecropped out when the peasant himself is unable to do physical labor. Although Smucker (1982) offers several case histories to illustrate the relationship of life cycle to land transfers, generally the literature gives little attention to this relationship.

For the peasant, land is the most significant form of investment, in part because it is readily transferred and exchanged for cash. The amount of cash needed and the channels through which cash is available affect the type of transfer a peasant chooses (see Smucker 1983). Recent case studies consistently show that land is almost always sold when a death occurs, to cover burial expenses. Ideally, some land has been set aside for this purpose. Increasingly, in some parts of the country (especially the southern peninsula), land also is sold to cover migration costs. The literature generally reports that peasants first seek other alternatives short of land sale to acquire cash. There is a lively land market in rural Haiti, but sale of land is viewed as a last resort to be used for major purposes only, including death and migration. The amount of cash needed also affects the amount of land involved in a transaction. Peasants usually transfer only a portion of a plot, a factor which has contributed significantly to fragmentation of holdings. Coffey et al.

(1984) suggest that the recent slaughter of pigs, which eliminated them as a source of cash, increased the amount of land being transferred. In interviews we were told that selling out to migrate is the most frequent source of relatively large blocks of land on the market.

Presumably different types of transfers are acceptable for different plots of land as well. For example, some plots, such as residential or ancestral plots or those reserved to cover burial costs, are not alienable. Also, coffee lands are not sharecropped but may be farmed by a manager. All of these considerations should affect land investment. There are few data in the literature on this topic, in part because few data have been collected by plot rather than by household. Without such data, no definitive statements can be made about the relationship between plot type and farmer investments. In a 1985 memo, Smucker notes that "since land readily changes hands, there may be a relative disincentive to build it up in perennials except as a long range investment strategy for those more well to do." On the other hand, both tenants and landowners may benefit from investments in irrigation, in terms of both improved productivity and increased land values (Murray 1978a). Thus the relationship between tenure mode, tenure stability, and characteristics of particular investments may be important to an assessment of the effect of land tenure on a watershed-management project.

Besides considering the social and economic forces underlying land transfers, it is also important to examine the nature of the land market itself. The central question in the literature concerning land markets is the relative importance of forces leading to fragmentation versus concentration of landholdings. Generally this is viewed as a difference between transfers internal to the rural peasantry and transfers involving individuals from outside the area. The concern about outside intervention in the local market is discussed most directly by Murray (1978b) with reference to irrigation systems. He bases his concern on anecdotes from the Artibonite. Some of these concerns are addressed later in this report in the sections on irrigation and irrigation law.

Rural land markets are local and the majority of rural land transfers occur among individuals within a community, generally among kin. In L'Artichaut, Smucker (1982) found that 25 percent of the land was owned by people not living in the community. Almost half (43%) of these "absentee landlords" were peasant farmers from a neighboring community with local kin ties and 33 percent were "town peasants," former local residents who moved their houses to town. Only about 4 percent were truly absentee in the sense that they hired managers, visited their land, and did not depend on agricultural income. Murray (1977) found a similar ratio in Kinanbwa in the Cul-de-Sac in the early 1970s, as did Reynolds (1985) in Foscave.

In contrast, the Ca-Ira community on the Leogane plain (Plotkin 1979) had an extremely high percentage of outside landowners. Eighty percent of the plots were owned by nonresidents, the majority of whom were noncultivators who let the land out to resident sharecroppers. Most of the owners lived in the town of Leogane. Although there are some extensive absentee-owned lands in the plains areas, such areas tend to be the exception rather than the rule.

Several hypotheses are presented in the literature to explain the fact that land markets are local:

1. When family lands are sold, other family members have the right (in both formal and informal property systems) to buy the land before it can be offered to outsiders. All family members must agree on the buyer and the price before the sale can be completed. On nonfamily lands, a similar principle works for tenants and managers. When a piece of land comes up for sale, the person working the land has the first rights to buy.
2. Without modern systems of communication, information about land that is being sold or rented is not readily available outside the local community. Nonresidents who wish to purchase land usually must do business in the community in order to have access to such information. Typically these nonresidents are surveyors, speculators, moneylenders, doctors, etc. (see Smucker 1982; Reynolds 1985; Plotkin 1979).
3. In general, there is little evidence that the nonresidents who have information on local land markets, or who gain possession of rural lands because they have been used as collateral on loans, are interested in accumulating land. They are interested in purchasing land as a short-term investment. They make money from the land by reselling it, usually within the same peasant community.
4. For historical reasons, land is not as important as a source of wealth, power, or income for the urban elite as it is in other Latin American countries. There has been relatively little effort on the part of elites to accumulate land outside the irrigated lowlands (see Lundahl 1979).

The local nature of the land market favors the process of fragmentation rather than concentration. It also partially explains peasant resistance to cadasters and land surveys, since the only people who would benefit substantially from formalizing the system would be outsiders attempting to gain entrance into local land markets or state officials attempting to enforce land-tax regulations.

E. Special Issues Concerning Irrigation and Land Tenure*

Although the above discussion applies to both nonirrigated and irrigated parcels, given the higher productivity generally associated with irrigated land, a summary of the tenure issues as they relate specifically to irrigated land is warranted. Irrigation has been practiced since the early days of the colonial era in Haiti. In the eighteenth century, Haiti was one of the most productive tropical agricultural zones in the Caribbean, and sugar--much of it irrigated--was the principal crop as early as 1716 (Murray 1977). During the

* For a discussion of the institutional aspects of irrigation, see Section II of the present report.

century and one-half following independence, much of the irrigated area of the country reverted to rain-fed farming, as the diversions, dikes, and canals constructed under the French deteriorated and funds were not available for rehabilitation. Reinforcing the lack of capital for reconstruction of irrigation works was the fact that the irrigated farmland, held in large plantations before independence, was parceled out to soldiers and supporters of the early Haitian governments. Thus the social organization required to manage and maintain complex irrigation systems, formerly embodied in the plantation, disappeared with the emergence of smallholder farms.

According to the World Bank (1984, see Annex C), only about 180,000 of the 1.4 million hectares of agricultural land in Haiti are irrigable. Of these, approximately one-fourth, or 45,000 hectares, are equipped with infrastructure sufficient to produce crops year-round, and another one-fourth have some sort of irrigation network, generally suitable only for supplemental watering during the four to six rainy months of the year. Thus there is substantial potential for increasing the productivity of well over 100,000 hectares of land on the alluvial plains.

Table 3 shows the importance of the Artibonite Valley in the irrigated sector: more than 40 percent of the land under modern irrigation is located there. The other 60 percent is scattered throughout the alluvial plains in all regions of the country, with the Cul-de-Sac being the largest other than the Artibonite. The crops grown on the different systems vary by soil type and climatic factors as well as by the condition of the irrigation works. The Artibonite produces rice in monoculture; sugarcane dominates in most of the other large- and medium-scale systems.

The population density on the irrigated plains is 650 per square kilometer, twice as high as on the nonirrigated plains and more than three times the national average (World Bank 1984, Annex C). In consequence, the average farm sizes are smaller in the irrigated areas,* but apparently average incomes are still higher there than they are in the uplands. On the other hand, the averages conceal what is apparently a larger dispersion of landholdings and incomes in the irrigated areas: the incidence of landlessness--presumably associated with lower incomes--is higher there than elsewhere.

Land tenure is less ambiguous in irrigated areas than elsewhere. The percentage of land held under different forms of tenure in different agro-ecological zones in the Département du Sud is shown in Table 4. Irrigated areas comprise most of the "rice" stratum and are well represented in the "intensive plain." Undivided family lands and rented lands are much less prevalent in these two strata than in the extensive (dry) plains and uplands. From what the LTC team learned in the Cayes region, it is apparently also true that more people hold documentary evidence of ownership on irrigated land.

* We of course abstract from the large plantations in the Cul-de-Sac and in the North in making this statement. The data presented by ADS-II for the Département du Sud confirm the generalization: average parcel size was 0.3-0.4 ha. on the plains and 0.5-0.73 ha. in the mountains (Bertelsen et al. 1986:9).

TABLE 3
Modern, Functioning Irrigation Systems
(those over 100 hectares)

LOCATION	SYSTEM	IRRIGATED AREA (ha)
Vallée de l'Artibonite Port-au-Prince	Artibonite	30,000
	Rivière Grise	8,968
	Rivière Blanche	4,954
	Carrefour	360
	Mtuvier	250
	Gros Jean	136
	Des Varreux	548
	Papeau	267
	Oazeau	99
Croix des Bouquets Thomazeau	Duspuzeau-Palmiste	4,090
	Duthil	456
	Trou Caïman	196
Duvalierville/Archaie	Courjolles	2,210
	Matheux	1,795
	Torcelle	1,308
	Bethel	560
	Source Matelas	198
	Cazale	122
Logane	Verguier	3,092
	LaSalle	326
Petit-Goaïve/Grand-Goaïve Gonaïves	Barrette	113
	Bahonnais	1,623
	Rivière la Quinte	1,743
Cayes	Avezac	1,394
	Dubreuil	2,000
Jacmel	Lavanneau	146
	Areguy	198
	Lafond	265
	Meyer	106
	Marigot	150
	Cayes-Jacmel	155
	Anse à Pitres	200
Cap-Haïtien	St. Raphael	1,086
TOTAL AREA		69,114
Systems under 100 hectares		561
GRAND TOTAL		69,675

SOURCE: Adapted from World Bank, "Haiti Agricultural Sector Study," vol. 1, draft (Latin America and the Caribbean Regional Office, 1984), Annex C.

TABLE 4

Modes of Tenure by Agro-Ecological Stratum, Département du Sud, 1985
(percentage of total area in each stratum)

MODE OF TENURE	INTEN- SIVE PLAIN	RICE	EXTEN- SIVE PLAIN	INTEN- SIVE UPLANDS	EXTEN- SIVE UPLANDS	RURAL VILLAGE	TOTAL
Ownership	53.9	67.7	54.0	51.6	23.5	79.4	48.5
Sharecropping	25.5	10.8	10.2	29.8	16.5	9.5	25.9
Rental from:							
Private Owner	4.9	7.5	1.2	4.9	20.0	2.9	7.4
State	0	0	0	2.1	4.2	0	2.0
Without Title	0.5	0.8	1.3	0.9	1.9	0.3	1.0
Undivided Family	12.6	11.3	30.7	10.6	32.0	7.8	14.4
Other	2.5	1.8	2.5	0.0	1.9	0.1	0.8

SOURCE: M.K. Bertelsen et al., "Results of the Pilot Agricultural Survey in the Département du Sud: Second Agricultural Season, 1985," ADS-II Report #22 (USAID/Haiti, August 1986).

NOTE: The small share of rental from the State may be deceptive. It is possible that some farmers who sub-lease land from fermiers de l'état (renters of state land) think that they are renting privately owned land, especially if the fermier de l'état has held the land for many years; thus a share of land shown here to be rented from a private owner may in fact be state land. In addition, it is far from likely that surveyed fermiers de l'état will declare their holdings of state lands to survey researchers any more accurately than they do to the Contributions Office.

Irrigable land has a higher value per hectare, and it is well documented that this is a consequence of irrigation rather than of some other land quality or locational factors (Bellande et al. 1984; Rigaud 1983; Coffey et al. 1984; Hauge 1984). This has meant that the transaction costs of registering title transfers, etc., amount to a smaller percentage of land value; hence there is less of an economic barrier to formalized procedures. In addition, boundaries are easier to trace in irrigated areas because of the imperatives of the water-control system; therefore, disputes over boundaries are less likely to remain unresolved for long periods of time.

Cadasters. It is not surprising that the only significant attempts to perform cadasters in Haiti were in irrigated areas. The first modern effort was undertaken in the Artibonite in the late 1950s; 33,600 hectares with 35,000 parcels in the valley were covered then, and there was no attempt to update the files for over twenty years. A second cadaster was begun in 1977 in the Plaine des Gonaïves on 2,750 hectares. There were two other cadasters in the Artibonite in 1980 and 1982, covering 3,600 and 2,230 hectares, respectively. These were all primarily physical cadasters (i.e., land demarcation), with only 1,500 ha. (7,200 parcels) of the 1950's ODVA cadaster being a legal cadaster (i.e., with formal determination of title). In 1984, the government established an office to coordinate and execute all currently existing and future cadasters.* It is not clear that the existence of the cadaster has reduced conflicts over land, nor has any research been attempted to verify the impact of cadasters. Many of the incidents of land invasions, pitched battles, and court cases about which the LTC team heard originated in the Artibonite and Gonaïves, although we do not know if they concern the areas covered by the cadasters. Hauge (1984) questions whether cadasters are at all desirable, not only because of their high cost, but also because she feels that they are not really in the interests of the farmers. There is also a political reason why cadasters are not necessarily advisable: governments have been willing "to allow considerable peasant autonomy on land tenure issues as a basic price for power." In other words, there has apparently been considerable local opposition to cadasters. It is not clear from the literature or our discussions whether this opposition comes from elites, squatters, or other groups whose interests are best served by ambiguity.

Hauge (1984, Ch. 5) summarizes the effects of irrigation on land tenure and other socioeconomic factors, as she has gleaned them from the literature, as follows: (1) acceleration of land fragmentation; (2) increased land prices and rents; (3) increased dispersal of house plots (lakou); (4) decreased reliance on escouads and colonnes (traditional agricultural labor groups); (5) increase in labor costs; (6) reduction in the geographical dispersion of farmers' farmed plots; (7) increase in longer-term, hence more secure, forms of tenure; (8) increased documentation of land transactions; (9) decreased access to land for the landless (this is an implication of finding #7); (10) increased use of inputs; (11) decreased livestock raising; (12) increased influx of outside labor. She concludes by stating that it is unclear which groups benefited from the increase in agricultural production generated by irrigation. In Hauge's analysis, as in most of the rest of the literature, land tenure is a dependent variable rather than an explanatory variable. Thus we have no information here on the differing productivity of parcels held under different forms of tenure. Hauge does mention (1984:5.8) that "it would also be of considerable interest to have good data on . . . what influence tenure status, land rents, . . . have had on the farmers' net returns from the land." We agree.

* For the decree concerning the legal establishment of the Office National du Cadastre (ONACA), and also the decree describing the proper execution of cadasters, see Le Moniteur, 139th year, no. 86 (Monday, 10 December 1984).

II. THE LAW OF RURAL PROPERTY

In this part of the report we will consider a number of legal issues related to land tenure and land use within the framework of the formal provisions of the existing codes. Reference will also be made to the dispute-settling mechanisms that prevail in rural Haiti. Since no field research has been carried out as part of this report preparation, we have relied on the existing literature together with an analysis of the current code provisions. The section is divided into four parts: private lands, state lands, land disputes, and final assessment.

A. Private Lands

The Haitian land-law system, based primarily on the original draft of the Code Napoléon, emphasizes privately held land. In the following pages we systematically consider those areas of the law relevant to a review of the private property based land tenure system and its problems.

1. Land Transfers

a. Ownership. Within the Haitian legal framework, ownership is the right to enjoy and dispose of things in an absolute manner, provided they are not put to a use prohibited by laws (lois) or regulations (règlements). No one may be compelled to give up ownership except for public use and even then only in return for a proper indemnity paid prior to the loss of possession (Civil Code, Article 449). Ownership of property, either movable or immovable, gives the right to everything which that property produces. This is called the accession right.

Ownership of land carries with it ownership to what is above and beneath it. The owner can plant and build anything he deems proper with the exception of that which comes under the provisions dealing with servitudes (infra, Section B.4). The owner may also excavate and construct below ground level and extract from these excavations all the products they may yield except where prohibited by laws and regulations.

The Civil Code contains some very specific rules dealing with rights of accession relating to immovable property (Civil Code, Arts. 457-465). Among the laws relevant to watershed-management projects are the rules governing alluvion and changing water courses. Alluvion means land gained and additions formed on property bordering on a stream. The land formed through alluvion belongs to the owner of the bank to which the new earth has attached. However, if a stream or a river carries away a considerable part of a field by a sudden gush of water and that piece of field is ascertained to be part of someone else's field down stream, the owner of the part of the land carried away can reclaim his property (Civil Code, Art. 464). The owner must make his demand to reclaim the land within one year. If he does not, he loses his land, unless the owner of the field to which his land has attached has failed to take possession of the new land. The Civil Code also deals with rivers, streams,

and other water courses that change course. When this happens the person who loses land to the new course takes land from the newly created fields in proportion to the amount of land he has lost.

b. Purchase and Sale of Land. According to the Haitian Civil Code (arts. 1367 ff.), a sale is an agreement by which one party binds himself to deliver a thing and another party agrees to pay for it. This transaction is final and ownership passes as a matter of right to the buyer from the seller as soon as an agreement as to the thing and the price is reached. The sale is complete even though the object of the sale has not been delivered or the price paid.

In order for a sale transaction to be legally valid and result in a secure title for the buyer, three elements have to be satisfied: (1) the seller must document his ownership, usually through a deed or a title; (2) the civil court must authorize a survey of the land in question; and (3) a written document including the contract of sale along with the survey data, price, terms, name of vendor and purchaser, etc., must be prepared and recorded at a notary's office. The notary then must deliver certified copies to the vendor, the purchaser, and the tax office, the Bureau de la Conservation Foncière des Contributions.

Most commentators on Haitian land tenure emphasize that there are two ways to transfer land: in accordance with the law, and in accordance with informal local practice. The literature indicates that the formal system controlling land transfers tends to be used more by persons with secure title.

Murray (1978a) discusses two ways that land is sold or purchased. The first involves plots that have been formally surveyed and deeded by the buyer, and the second involves those plots for which the buyer relies solely on the notarized record of the transaction. Smucker (1982) notes a third informal proceeding based on a simple, unnotarized receipt (sous seing privée). If the first method is followed, the seller and buyer agree on a price. On a predetermined day they go to a notary, the buyer bringing his money, and the seller, his deed. The notary records the transaction and charges a fee proportionate to the price of the plot. With the notary's document, the buyer goes to a surveyor who measures the plot of land and draws up a new deed for the buyer. This process results in a fully titled piece of land. Murray (1978a) estimates that fewer than one out of ten land transactions in rural Haiti involve a surveyor. Informal maneuvers are utilized instead.

Many land transactions also occur without recourse to a notary. When a notary is involved, an attempt to minimize the notary's fee is usually made. Since the notary's fee is a percentage of the total purchase price, the vendor and purchaser often agree that a sum of money is to be paid in advance and not included in the purchase price. The notary normally charges a 10 percent (10%) fee, but since the parties to the transaction reduce the declared price, some notaries have increased the fee to 20 percent (20%) or even 25 percent (25%) in some cases.

Social obligations also affect land transactions. For example, the high cost of funerals and mausoleums required for a dead kinsman often puts rural

Haitians under extreme financial pressure. Individuals often sell property to meet these costs. Frequently the property being sold has recently been inherited from a deceased parent but has not yet been divided. If a sibling wants to purchase the property to help the vendor through his emergency, then the land stays in the family. However, if no one in the family wants to purchase the land, the person who wants to sell has to have the land subdivided. Typically, subdividing land entails hiring a surveyor to work out the plan of division. A survey is costly but must be done prior to a sale, unless the vendor sells his "right and claim" to his share of the inheritance. The latter method of selling land has apparently become an accepted practice through much of Haiti. The purchaser can actually bring a surveyor in once he has the "inheritance right" of the vendor and can separate his plot from the rest of the inherited land.

Murray (1978a) claims that the practice of purchasing the inheritance right has become so widespread that the survey procedure is now often bypassed. Buyers rely instead on the contract of sale prepared at the notary's office as sufficient evidence of their right to the land. It is important to follow up Murray's observations to see how widespread this informal system of property transferral has become. Murray makes it clear that the surveyor has been cut out of the sale primarily because of the need to reduce costs. It is imperative that this situation be investigated very closely to determine how the sale of land is being handled--in fact, there may be a wide variety of local variations--in order to devise steps to decrease costs so that all land transactions take place under the same rules.

c. Inter Vivos Gifts. The Civil Code allows for two methods of disposing of property gratuitously: by donation inter vivos (a gift), and by will (Civil Code, Arts. 723 ff.). An inter vivos donation is an act by which the donor divests himself irrevocably of the thing given in favor of the donee who accepts it. It is not possible to make a gift to a person as a substitute for someone else. If a gift is made with the idea that once a condition is met the property will be transferred from the donee to a third person, it is void. However, a provision in a gift document that allows a third person to take the gift if the donee is unable to take it is valid. If part of an inter vivos gift provision is contrary to the law or morality, those provisions are deemed not to exist, although the rest of the document is valid.

In order to make a gift inter vivos, the person making the gift must be of sound mind. If the law declares a person incapable of either making a gift or receiving one, any attempt to make the transfer is void.

There is a special procedure and form that must be followed to make a gift inter vivos. All instruments or documents containing an inter vivos donation must be made before a notary in the form of a contract. If the original does not remain with the notary, the transaction is void. A donation that is properly accepted by the donee is complete. Acceptance is possible by consent of the parties as specified in an agreement to give and to receive the gift. The ownership of the object to be given is transferred to the donee without need for any other delivery once the parties consent.

The donor can transfer only that property which he presently owns. If he includes in the gift property which he expects to get in the future, the gift

is void in respect to all future properties. Likewise, every donation made subject to conditions whose fulfillment depends upon the will of the donor is void. The donation is also void if it is made conditional upon payment of debts or liabilities not in existence at the time of the donation or which are not mentioned in the instrument creating the donation or a schedule attached to the instrument. However, if the property in question does exist, but the donor has reserved to himself the right to decide when he will dispose of it and he dies before he can donate the property in question, the article is inherited irrespective of what the instrument of donation stated.

When a person makes a gift, he can reserve for himself or transfer to a third party the enjoyment of the usufruct of the movables or immovables given. The donor may also stipulate that the object of the donation shall be returned to him in the event that the donee or the donee and his descendants predecease him. This stipulation can be made only in favor of the donor and not for a third person. However, the donor could make a subsequent instrument of donation when he gets the object of the donation back from the estate of the deceased donee. The effect of the right of return is to cancel all transfers of the property donated and to return the property to the donor.

Inter vivos donations are generally irrevocable, but, like most areas of law, there are some exceptions. A donation inter vivos can be revoked only for nonperformance of the conditions under which it was made, for ingratitude, and because of the birth of children:

- (1) In the case of revocation for nonfulfillment of conditions, the property reverts to the donor, free of all encumbrances created by the donee; the donor shall have all the rights he would have had against the donee himself if the donee had transferred the immovable to a third person.
- (2) An inter vivos donation can be revoked for ingratitude only if:
 - (a) the donee sought to take the life of the donor;
 - (b) the donee has been guilty of cruelty or tortuous activity or has inflicted serious injuries on the donor;
 - (c) the donee refuses to support the donor when he is legally obligated to do so.
- (3) All inter vivos donations made by persons who have had no children or descendants actually living at the time of the donation, irrespective of the value of the donation or the reason it was conferred, are automatically revoked by the birth of a legitimate child of the donor, even if posthumous, or by legitimation of a natural child by subsequent marriage, if the child was born after the donation. The revocation takes place even if the child of the donor had been conceived at the time of the donation. Even if the donor includes a statement in the document renouncing the revocation of the donation, the birth of a child will revoke the donation.

It is unclear to what extent the Civil Code provisions on inter vivos gifts or donations are formally utilized for purposes of making transfers of

land. However, in view of field reports of customary donations to children and others in peasant Haiti, one could assume that this method of transferring land would have some degree of utility. The actual incidence of notarized inter vivos transfers should be further investigated.

d. Inheritance. Inheritance is governed under the Civil Code, Articles 578-722. The law follows the French Civil Code in virtually all of its particulars. As Thome (1978) notes, the Haitian law of succession is typical of the civil law one finds applied throughout Latin America.

According to the code, a succession takes place at the time of the death of an individual. To inherit property, a person must be in existence at the time the succession opens. Thus, a child who is not conceived at the time of the death cannot inherit. There is also a category of "unworthy" persons who are not entitled to participate in a succession. Included in this category are potential heirs who (a) participated in an act that led to or attempted to lead to the death of the deceased or (b) falsely accused the decedent of a capital offense. An heir who is excluded from the succession by reason of unworthiness must return all the fruits of the estate received since the opening of the succession. The children of an unworthy heir are entitled to participate in the succession on their own right. However, they cannot claim a right to property that either their father or their mother would have claimed, since that property would have to be returned to the estate.

The succession devolves upon the children, the descendants, the ascendants and collaterals of the deceased. In Articles 553-598, the Civil Code sets out the order in which persons participate in the succession. When the succession goes to ascendants or collaterals, it is divided into two equal parts, one for the relatives in the paternal line and the rest for relatives in the maternal line. Legitimate children take priority over all others. They share equally without regard to sex or primogeniture even though they may have been born out of different marriages. Natural children do not inherit from the father or their mother or from their natural ascendants unless they are legitimated. They never inherit from the legitimate ascendants of their father or mother. However, if there are no legitimate descendants, the full estate devolves on the natural children. If a child predeceases the decedent, his descendants have the right of succession in accordance with the rights that would have applied to their deceased father or mother. A child born out of an adulterous or incestuous relationship is not entitled to inherit (Art. 611).

One of the principal issues concerning successions in Haiti is the partition of property. We will look at the code provisions, then review the process for partitioning land both amicably and when there are disputes. We will then examine some of the practices that have been documented showing how heirs circumvent the partition of land or how they participate in the informal system of partition.

Code Art. 674 states that no one can be compelled to keep his interest in the estate in an undivided state. Partition can always be demanded, notwithstanding prohibitions and agreements to the contrary. Nevertheless, the interested persons can agree to suspend partition for a limited time. Although the agreement to suspend cannot be for more than five years, it can be renewed.

It is possible to make a request for formal partition even when one of the heirs has enjoyed a part of the property separately if there has been no act of partition or possession which justifies prescription (Art. 675).

Articles 674 and 675 are interesting, since it is widely reported that one of the major land tenure problems is the failure to partition inherited property in accordance with the principles of the Civil Code. One could argue, however, that the Civil Code supports the current practice of informal land partition.

First, under the authority of the code, heirs can request that partition be postponed for five years. As noted, the request for postponement can be renewed. Thus, it is possible for heirs to circumvent the formal provisions of the code by getting an extension to avoid partition. At the same time, the land can be partitioned through informal mechanisms. If the heirs can agree to a method of partition and prepare a document for purposes of evidencing their agreement, it is possible to circumvent the formal process of partition with its related costs. It would only take ten years, two five-year periods of postponing partition, to fulfill the "petit prescription" period which would allow title to pass. If there is nothing that supports a "color of title" claim, it would then take twenty years for the period of prescription to be fulfilled.

This suggestion of how the code could be used to support local practice is worthwhile only if empirical situations are investigated. Systematically collected information which would help indicate directions for change in the code relating to inheritances is not currently available. If Haitians are, indeed, dealing with their inherited property in a manner which avoids fragmentation and yet conforms with the code, tampering with the code may not be wise.

The Civil Code (Arts. 681 ff.) deals with the situation where one of the coheirs opposes the partition. Disputes which arise must be submitted to a local court with proper jurisdiction. If the parties cannot agree, the court has the power to order a sale of the property. The action taken by the court is then referred to a notary. If the property is to be sold, the notary must prepare a record in order to protect the new owner's right.

If the heirs agree to partition, they generally go to a surveyor who petitions the proper court for permission to make the division. When the surveyor receives permission, he divides the land into equal plots. On the basis of the surveyor's map, a notary is then asked to make out new deeds. He prepares the deeds, provides each relevant person with a copy, and sends copies of all the deeds to the Bureau de Contributions, which acts as the government agency for the registration of deeds.

Both the disputed and the amicable partition processes are relatively expensive for the heirs. If the partition is undisputed, the heirs must pay the notary, the surveyor, and the tax collector. If it is disputed, one has to add in the costs of court proceedings, lawyers, etc. The cost factor is clearly one reason why an informal system has developed.

e. Lease. Field researchers in Haiti often refer to the complicated nature of the land tenure structure. Individuals can have both freehold and rental lands. One explanation for the predominance of mixed tenure is that, when a farmer's property is located too far from his principal homestead, he leases that plot to someone and then rents land closer to his homestead for his own production. Thus, the lease is an important tool in the ordering of the agricultural system. Most observers also believe that it is one of the factors leading to tenancy insecurity.

The concept of a lease in Haiti is similar to the concept in France. At first, leases were considered merely as contracts and were dealt with purely as a personal interest and not as a real (property) one. Thus, it is not possible for a lessee to claim prescription rights (though a usufructuary can), mortgage the property, or bring any possessory actions. On the other hand, the lessee cannot be expelled by the assigns of the lessor if his lease agreement has a fixed period to run. Normally a lessee also has protection against the lessor's creditors.

Traditionally leases of agricultural land were considered entirely contractual and the provisions of the Civil Code applied when there was no express agreement between the parties involved. The landlord remained the owner of the land and in general had the upper hand. The landlord controlled cultivation and could refuse to renew the lease at his pleasure. This situation is now changed because agricultural leases are controlled by a combination of the Civil Code, the 1962 Rural Code, and local custom and usage. In addition, there is recognition of the relationship of métayage (sharecropping) which had been considered outside of the law.

The Civil Code defines a lease of a thing (as opposed to a lease of work) as a contract by which one of the parties permits the other to enjoy a thing for a certain period of time in return for a certain price which the latter undertakes to pay. The lease may be written or oral, but, in the case of rural leases, if one of the parties does not read and write, the Rural Code stipulates that the contract be drawn up by a notary (Rural Code, Art. 288). The termination of the lease depends upon the stipulations written into the agreement. However, it is possible for the term of the lease not to be included. In such cases the lease is controlled by Articles 290 and 291 of the Rural Code of 1962. The code provides as follows:

- (1) If the lessee takes the property with no cultivation on it, the period shall be:
 - (a) five (5) years when it is pasture, a banana plantation, or planted to cotton;
 - (b) three (3) years when the cultivation is for annuals or a nursery;
 - (c) seventeen (17) years when the cultivation is coffee or cacao, fruit trees or rubber trees;
 - (d) ten (10) years for all other cultivation which does not start producing for three (3) years or more.
- (2) If the lessee receives the land already cultivated, the duration of the lease shall be:

- (a) three (3) years if the production is bananas or cotton;
- (b) nine (9) years if the production is coffee, cacao, rubber, or fruit trees;
- (c) five (5) years for all cultivation which does not start producing for three (3) years or more.

A lessee has two obligations: (1) to pay the applicable rent on time, and (2) to use the property prudently in accordance with the rules applicable to land, especially those which call for erosion-control measures. If the agreement stipulates how the lessee will use the land, it must be modified if the land is used in another manner. However, if the lessee determines that he cannot use the land in the way stipulated in the agreement, he can utilize the land in another fashion under the guidance of a qualified agent of the Department of Agriculture. The department can then issue a certificate to the landlord explaining why the cultivation system was changed. The certificate replaces the need to modify the lease and the lessee is not held to have breached the agreement. When the lessee makes improvements to the property, the lessor has to pay the cost of those improvements unless the lease stipulates otherwise.

One could argue that the section of the Rural Code governing leases could be used to establish a relationship between landlord and tenant that provides the tenant with greater security. However, empirical evidence is needed to clarify the actual relationship between these two parties.

f. Sharecropping (Métayage)

The sharecropping relationship is recognized in the 1962 Rural Code (Art. 285) as a contract between a landlord and the sharecropper, who is also treated as a tenant. When the contract is for sharecropping, the lessor is responsible for half the cultivation expenses, unless the written agreement stipulates that the sharecropper is responsible for all cultivation expenses and that the sharecropper will receive in compensation at least two-thirds of the production. If the sharecropper does not know how to read, the stipulation is to be included in an instrument drawn up by a notary. However, if a sharecropper can read, it is not necessary to have an instrument drawn up by a notary if the agreement is oral. In terms of the number of years the agreement will last, the same provisions mentioned above in the leasing section apply (see Arts. 290 and 291, Rural Code of 1962).

Another limitation imposed upon the sharecropper concerns subleasing. The sharecropper cannot sublease unless the agreement includes a stipulation allowing him to do so. If no such stipulation exists, subleasing is a condition which will allow the contract to be cancelled. If unauthorized subleasing occurs, the landlord can demand damages from the sharecropper.

Other than these differences, it is assumed from the manner in which the Rural Code presents the articles on leasing and sharecropping that, where specific mention is not made of sharecropping, the general provisions on leasing apply. Although none of our informants in Haiti mentioned that sharecropping should be considered a legal relationship, it clearly is. Data need to be collected to clarify the extent to which sharecropping takes place and whether

or not sharecropping agreements follow the principles laid out by the 1962 Rural Code. One should not speculate too wildly in this instance, but it may be that there is a need to provide public education on the rights and obligations of the sharecropper.

g. Prescription. Land can also be acquired by prescription, a process by which title passes to a person who has had uninterrupted possession for a specified statutory period. In order to acquire title by prescription, possession must be continuous and uninterrupted, peaceful, public, unequivocal, and under a claim of ownership. In Haiti there are two forms of prescription: (1) "grand prescription," necessitating twenty years of continuous possession (Civil Code, Arts. 2030-2032), and (2) "petit prescription," requiring ten years of continuous possession and occupation of the land in question under a "color of title" (Civil Code, Arts. 2033-2035).

There is a presumption that a person possesses for himself, although it can be rebutted by showing that possession was for another person. If a person takes possession by violence, the period of prescription does not commence. However, if possession commenced through violence and then that violence terminated and the person continues in possession, the period of possession toward prescription begins to run when the period of violence ends. When a person takes possession and tries to show he was in possession during a prior period, he is also considered to have been in possession during an intermediate time if there is no proof to show that he was not in possession during that period. The proof of uninterrupted possession is crucial to a claim of prescription.

A person who possesses the land for someone else can never make a claim for prescription. Thus, a person with a lease for farm lands, the usufructuary and anyone else who possesses land by authority of the owner, cannot prescribe for it. However, a person whose right to be in possession has been defeated by a superior claim of a third person or improper possession proved by a claim by the owner, has the right to start a period of possession toward prescription. This is true even though the possessor has taken possession under a "color of title."

Prescription can be interrupted where the possessor has been deprived for more than a year of the enjoyment of the possession of the thing in question by either a third person or the owner. An interruption can also be caused civilly, when a court order prevents the possessor from continuing. There are also specialized rules relating to the termination of the period of prescription for heirs designate and spouses.

When the twenty-year period comes to a close, the person claiming prescription must petition the court. The person alleging prescription need not produce documentary proof of possession and the defense of bad faith cannot be raised against him. If a possessor is asserting a right by prescription, it is not possible to use a defective deed to claim possession under color of title. Since it is presumed the possessor had good faith, the challenger must rebut that presumption.

It should be noted that public lands are not subject to prescription. It is also true that persons who have possession of another person's lands for

more than twenty years should not feel secure about their potential ownership rights by prescription. Thome (1978) notes that the courts are not receptive to "grand prescription" claims. Apparently the court's reluctance to accept "grand prescription" claims is due to the number of individuals who make fraudulent claims. The courts have allegedly enforced the rights of persons presenting notarized documents attesting to ownership rather than recognizing the rights of persons with prescription claims.

It is important to determine if the reluctance to rule in favor of prescriptive claims is generally the case. It is also crucial to determine the frequency and types of land involved in prescription claims. One could potentially find that there are claims made by persons for unpossessed government lands that may have been subleased or simply not utilized. It is also possible that undivided lands inherited by a person who has migrated could be involved, and that the court is unwilling to partition the land on the basis of a prescription claim. The fundamental point is simply that it is currently unclear to what extent prescription claims are made, whether they are made over lands for which prescription is possible, and whether the courts really issue judgments favoring persons who can show documents to justify their rights. It is imperative to clarify the situation before specific policy suggestions are made.

2. Land Use

This section deals with the legal issues relating to the actual use of the land. Three principal issues are covered: soil conservation, forest and trees, and water-use issues. The questions of usufruct and servitudes, both of which relate to the use of land belonging to someone else, are also reviewed.

a. Cultivation and Protection of Soil. The cultivation and protection of the soil is given separate coverage in the Rural Code of 1962. However, it should be remembered that soil conservation is closely related to cultivation systems and vegetative erosion-control practices. Although the legal issues associated with soil conservation and forestry or tree planting are presented separately, the two areas are so closely linked that considerable overlap occurs between the next two sections.

1) Cultivation. Article 43 of the Rural Code clearly indicates that every individual (including societies and collectivities) who owns or enjoys a piece of land is responsible for improving the soil. Farmers can ask either the Department of Agriculture or any other competent organization for a chemical analysis of the soil before beginning cultivation. The results of the analysis are to be provided free of charge (Rural Code 1962, Art. 45). In fact, the law requires the governmental department or other organization to provide extension services to the farmer "by having an agent provide to the farmer all information, explanations and advice in light of the soil test results." There is also a general article in the Rural Code (Art. 61) which provides that a variety of local bureaucratic personnel (members of the Administrative Council, rural policemen, agricultural police, personnel from the Department of Agriculture, or persons from any other competent organization) have the obligation to motivate farmers to conduct agricultural activity properly.

The code also dictates that the extension agent should indicate the proportion of land to be used for each category of crop or other product. If the extension agent does not provide the formula for the land in question, Article 47 of the Rural Code requires that one-third of the land be planted with materials for export, one-third with materials to support local agro-industry, and one-third to support dietary needs. This is a harsh provision given that the government provides virtually no extension services. It is assumed that very few, if any, farmers abide by the formula.

According to the Rural Code of 1962, once the farmer contacts either the Department of Agriculture or another competent organization, certain legal obligations arise. First, the farmer is obligated to perform all the prescribed improvements and the person legally responsible for cultivation of the land must pay all charges that accrue from the extension agent's recommendations. In cases where there is a danger of insect invasion or fungus infection, the farmer is obligated to follow the instructions of the proper authorities. Where there is in fact an invasion of insects, etc., the farmer is obligated to make a report to the proper person at the Department of Agriculture, to a competent technician, or to a police agent. Once the report is made, the farmer must follow the instructions received from the authorities.

Article 58 of the Rural Code prohibits a farmer from harvesting his crop before maturity. When harvesting, the farmer is required to follow the techniques provided by law or by the Department of Agriculture or other appropriate organization. It is not clear whether there are extension techniques that are utilized as part of an organized bureaucratic program for harvesting crops. Article 59 of the Rural Code has a provision requiring all fruits or other crops which grow on trees to be harvested with care prior to the time they fall from the tree and placed in an adequate receptacle. However, no sanction is included in the Code.

Two additional provisions of the Rural Code relating to cultivation need to be mentioned. The first relates to cultivation which takes place over an area of more than 20 hectares and has farm workers (the minimum number is not specified) living on the premises for more than three months a year. In such cases the farmer must provide food for his workers. He can meet his obligation in a number of ways: he can use the farm surplus to feed the workers; he can provide the workers an allowance adequate to meet their needs; or he can maintain a reserve plot sufficient to meet the workers' dietary needs. If the farmer chooses this last alternative, he must follow a rotation that will provide adequate nutrition for the workers. According to the code, the rotation plan can be drawn up by a competent local extension officer. The size of the reserve plot is determined by the number of people working at the site and the fertility of the soil.

2) Soil Conservation. Although the Rural Code has separate provisions on soil conservation and trees or forests, there is a very close connection between soil conservation and tree planting. The material considered here provides us with terms of reference controlling the planting of specific types of materials designed to prevent erosion and preserve soil integrity.

According to the definition in Article 62 of the Rural Code, erosion means all damage done to the soil by rainwater, by running water, or by wind. In

order to prevent erosion it is prohibited to deforest or clear land on slopes greater than 30 degrees in the arid zone, 40 degrees in the semiarid zone, and 50 degrees in the rain-fed areas. Arid zones have an average annual rainfall of less than 750 millimeters; semiarid zones have an average annual rainfall of more than 750 millimeters, but less than 1,350 millimeters; and rain-fed zones have an average annual rainfall of 1,350 millimeters or more. If land is to be used for national defense purposes or for the public benefit, the laws concerning clearing are not applicable.

Land located in the various zones where the slope of the land exceeds the above figures, but which was cleared for cultivation prior to the enactment of the 1962 Rural Code, must be cleared of the existing cultivation and planted with appropriate trees or bushes. A delay may be allowed at the discretion of the technicians of the Department of Agriculture or a person from another appropriate organization. If the cultivation predating the enactment of the code is fruit trees, coffee trees, or any other kind of tree which protects the soil, the farmer may continue cultivating in the same manner.

The rules concerning the type of cultivation allowed are very specific for hillside lands. Both the rainfall classification and the slope must be taken into consideration. For example, perennials like coffee, cacao, or fruit trees, or anything else approved or designed by the Department of Agriculture, can be cultivated on slopes of less than 30 degrees in the arid zone, 40 degrees in the semiarid zone, and 50 degrees in the rain-fed zone. Seasonal or annual crops like bananas, congo beans, cotton, or sisal cannot be planted without special authorization from the Department of Agriculture or other appropriate organization on slopes exceeding 25 degrees in the arid zone, 35 degrees in the semiarid, zone and 45 degrees in the rain-fed zone. No special authorization is required to cultivate seasonal or annual crops on slopes less than those mentioned above.

Soil conservation methods such as terraces, dry walls, holding canals, etc., must be used on slopes exceeding 10 degrees in any rainfall area. One can also plant legumes and forage grasses in controlled pasture areas when the slope is less than 15 degrees. On steeper slopes, the usual soil-conservation methods must be utilized. In cases where the slope is less than 10 degrees, one can generally plant without utilizing soil-conservation techniques. However, the Department of Agriculture or another appropriate organization can require that forage grasses be planted even on slopes of less than 10 degrees.

Where vegetative soil-conservation techniques are necessary, the planted material must follow the contour of the slope. However, when the land in question borders on a river or a similar type of water course, different rules apply. First of all, bamboo or a plant similar to bamboo must be planted along both sides of the river bank. The planting must be between 5 and 15 meters in width depending on the relationship of the bank to the river or other source.

Special rules also apply in the case of fallow lands and gorges or ravines. Fallow lands cannot be left bare on sloping land: either forage vegetables or grass must be planted. Tree cutting is prohibited on the sides of gorges and ravines or any similar landform. The requirement for a 15 meter border of perennials also applies to gorges and ravines. In addition, all

slopes where trees have been cut must be replanted. However, a delay can be granted by a qualified agent of the Department of Agriculture.

When cultivating savanna areas, it is obligatory to plant a three-row windbreak perpendicular to the prevailing wind direction every 3 kilometers. Article 80 of the Rural Code provides for the collaboration of the Department of Agriculture in the planting of windbreaks.

Although the rules calling for erosion-prevention measures are very specific, the extent to which they are being followed is uncertain. The involvement of the Department of Agriculture is not as extensive as required by the Rural Code. Nonetheless, the Code presents a model which, if properly implemented, could significantly help curtail hillside erosion in Haiti (if it is not already too late). The obvious next step is to determine how much of the code could actually be implemented.

b. The Law Relating to Trees and Forests

1) History of Legislation Regulating Forests and Trees. The regeneration and protection of Haitian forestry resources have been important issues since the very earliest days of independence. The original Rural Code of 1826 stated that the cutting of trees on the crest of a mountain, at the head or around a spring, or on the banks of a river was especially forbidden. The owners of property watered by springs or rivers were required to surround the source of the springs and plant the river banks with banana trees, bamboo, and other appropriate trees to maintain coolness. Although the language of that original act was a bit awkward, the inclusion of these rules indicates that policymakers appreciated the relationship between trees, water, and soil at a very early date.

The idea of criminal sanctions for violating the laws protecting trees first appeared in the Rural Code of 1864. Article 14 of the 1864 Code simply restated the prohibition of the earlier code while adding a penalty of a 100 gourde fine for violations. Article 7 also imposed criminal punishment for unauthorized cutting of trees on state lands. Since a 100 gourde fine represented a heavy fine at the time, one can conclude that there was already concern that the cutting of wood would have detrimental effects in the future.

Between 1804 and 1844, the protection of forestry resources was in the hands of the rural police or the finance police. In 1844 the Secretary of State for Agriculture was given power to oversee these resources, in conformance with Article 128 of the Constitution of December 1843. Beginning in 1926, a number of laws restructuring the Department of Agriculture were introduced. Numerous laws governing natural resources and forests were also passed. The following laws were among those introduced from 1926 to the present time:

- a) The law on the establishment and functioning of the National Forest Reserves (3 February 1926).
- b) The decree (arrête) prescribing measures for the protection and conservation of state forests (30 January 1933).
- c) The law which reorganized the National Service for Agricultural Production and Rural Education, placing it within the Ministry of Agriculture (30 September 1935).

- d) The law calling for measures to stop deforestation (28 May 1936).
- e) The Order-in-Council on the regulation of forests. This text created an "agricultural police" force to implement the laws dealing with agriculture and forestry. It is considered the first of the laws important to current forest-management policy (23 June 1937).
- f) The Order-in-Council which allowed the contract between the Republic of Haiti and the Haitian American Society for Agricultural Development (SHADA), giving SHADA a monopoly on the exploitation of the pine forests of Morne La Selle and Morne des Commissaires. This arrangement led to the education of the first Haitian foresters and introduced the concept of rational forest management into Haiti (28 August 1941).
- g) The Order-in-Council which reorganized the Department of Agriculture and created the Division of Water and Forests within the department. This represents the first coordinated approach to natural resource protection (29 September 1944).
- h) The Order-in-Council subjecting persons who cut, peel the bark, or make incisions in pine, acacia, oak, lignum vitae, logwood, cedar, and other species of tree to a fine of between 20 and 2,000 gourdes with imprisonment up to six months and the confiscation of the cut wood. The state can then sell the confiscated wood in order to obtain funds for reforesting hillside lands. This potentially onerous law is considered the second of the important laws for forest management (27 June 1945).
- i) The Order-in-Council which reorganized the Department of Agriculture, creating the Direction Generale of Agriculture and adding meteorology and hydrology to the activities performed by the Division of Water and Forests (24 December 1945).
- j) The law regulating cultivation, tree cutting in forests, and the functioning of limestone kilns. This is considered the third important text for coordinating soil and forest protection (17 August 1955).
- k) The organic law which reorganized the Department of Agriculture into the Ministry of Agriculture, Natural Resources, and Rural Development. The Division of Natural Resources at this time had two new sections added, Fisheries and Geology and Mines (14 March 1958).
- l) The law protecting soil against erosion, defining rainfall zones and setting out regulations for forest exploitation. Conditions for the scientific and rational exploitation of forests are set forth (19 September 1958).
- m) The Rural Code of 1962 which replaced the Rural Code of 1864. This code extended resource protection but also reduced forest-related fines and abolished confiscation of illegally cut wood (24 May 1962).
- n) The law declaring the watershed of Morne l'Hôpital a protected zone in order to assure the city of Port-au-Prince a potable

water supply. The law also forbade the cutting of wood and the manufacture of lime (27 August 1963).

- o) The law declaring 1966 the first year of a five-year reforestation campaign. This law also stated that any vacant area of private or state land which should be part of the reforestation program would come under the authority of the Ministry of Agriculture (5 July 1966).
- p) The decree declaring that reforestation is of "public utility and of general interest." This decree also established "communal forests" in all areas of the republic (20 November 1972).
- q) The decree creating the "Special Fund for Reforestation" which provided the Forestry Service with a useful tool of work according to the order of priority of each reforestation project (20 November 1972).
- r) The decree which reduced the import tax on a gallon of kerosene. This was designed to stop or reduce the use of charcoal by making kerosene more widely available (20 November 1973).
- s) The decree creating the "National Council of the Environment and the Campaign against Erosion" which simply recognizes the global nature of environmental problems (9 April 1977).
- t) The law making forests and other natural resources part of the national territory (3 November 1982).

An examination of the above legislative initiatives indicates that there has been an abundance of legal activity concerning the regulation and management of Haiti's soil and forest resources. The most important pieces of legislation over the years have been of two different kinds. First, there are documents which introduce important resource-management and protection concepts into the Haitian legal framework. Second, there are the three Rural Codes which provide the legal framework for a coherent approach to life in rural Haiti. Unfortunately, it is not clear that the codes or any of the individual laws promulgated over the years have had any great success in being implemented. It would not make any sense to keep revising the laws without understanding how the existing ones actually operate, or could be made to operate, in present-day Haiti.

2) The Rural Code of 1962. The Rural Code of 1962 has a coherent set of provisions dealing with forests and trees. For purposes of this report, the sections of the 1962 Rural Code will be presented as the law on the books on forests and trees. The Avant Projet of a 1985 revision of the Forestry Law has been reviewed and a brief comment is included below (Section b.8). The forestry provisions of the 1962 Rural Code concern five major topics: forest classification, forest reserves, exploitation of forest resources, forest protection, and tree protection.

a) Forest Classification. Forests in Haiti are divided into two classes. One group includes forests that protect water sources and the crests of mountains and their slopes that have a slope of more than 60 degrees; the national and communal parks; the set of trees that need protection because of their aesthetic or scientific value; and mangrove trees. The other group includes all other kinds of forests.

b) Forest Reserves. A forest is considered a "reserve" when it protects a water source, a mountain crest, or slopes exceeding 60 degrees. If the area around a water source or the crest of a mountain is either totally or partially denuded of trees, it is to be declared a reserve area. These forest reserves are declared by decree by the President of the Republic. If such lands are privately owned, they cannot be expropriated without an appropriate payment. The owner of the land also has to agree, in conjunction with an appropriate official from the Department of Agriculture or any other appropriate organization, on a plan for the planting of trees. The owner can participate alone or, if he so chooses, cooperatively with the Department of Agriculture or another organization.

If the land is in possession of a person other than the owner, the conditions for proper exploitation of the land are to be communicated to the possessor. If either the possessor or the owner refuses to improve the land in the manner indicated by the proper authority, the work can be done by the Department of Agriculture or other organization. The landowner or possessor can be brought to court and an order may be issued against the person who refuses to develop the land. The amount of money invested in land improvements is to be repaid to the government either in money or in production from the land. If the owner is not willing to make the proper payment, the land can be expropriated by the Department of Agriculture or other appropriate organization. If land is taken, another rural family can acquire the land by paying the amount due to the Department of Agriculture or other appropriate organization.

c) The Exploitation of Forests. The exploitation of forests, whether for the purpose of cutting wood, taking the bark, or extracting the resin, sap, or rubber, can be granted to an individual or a business only after a decision has been taken by the Council of Secretaries of State and a contract has been included in a register set up by the Department of Agriculture. The Department of Agriculture's approval is required for exploiting forests on land that has more than a 30 degree slope in an arid zone, more than a 40 degree slope in a semiarid zone, and more than a 50 degree slope in a well-watered zone. If the person who receives permission to cultivate the forest area is not the proper person, then the government's authorization is void.

d) The Protection of Forests. The rules concerning forest protection are designed primarily to minimize the danger of forest fire:

i) Wood cannot be burned inside a forest or on its periphery without a written authorization from a qualified representative of the Department of Agriculture.

ii) Campfires can be started only in areas prepared especially for fires. All twigs and leaves have to be cleared away for at least 1 meter on all sides of the fireplace and the fire must be carefully extinguished after use.

iii) Matches and cigarettes may not be thrown down in forests.

iv) Smoking is prohibited in the forest during drought periods.

v) Smoking is also prohibited near bushes or under trees that have dry leaves.

vi) Traveling through a forest with a torch or burning wood is forbidden.

vii) Lanes which serve as windbreaks must be built by the Department of Agriculture or other appropriate organization. They must be more than 2 meters in width and must be built section-by-section in a direction perpendicular to the dominant winds.

e) The Protection of Trees. The protection of trees is also strictly regulated. For example, according to Article 207, fruit trees may not be cut for firewood (including charcoal) unless the tree is already dead. Even the removal of bark from a tree for either tanning or medicinal purposes is controlled. No more than one-sixth of the circumference of the bark may be taken in one year; the bark removed cannot be more than 10 centimeters in width; and bark cannot be taken from the same tree more than once every three years (Art. 206).

It is unlawful to cut down a tree that is less than 20 centimeters in diameter and less than a height of 135 centimeters for lumber. Except on land being reclaimed for agriculture, it is also prohibited to use fire to destroy a tree or a stump that could be capable of regeneration (Art. 205).

Authorization is needed from the proper person at the Department of Agriculture if a person wishes to utilize trees in the following two ways: cut, peel the bark, or extract the sap from any tree (Art. 202); or cut so-called "precious" species of trees in rural areas and along public ways (some of the species included in this prohibition are mahogany, ebony, oak, small leaved almond, laurel, and lignum vitae).

3) Draft Forestry Law of 1985. In October 1985, a meeting was called to consider the general issues of natural resources with special emphasis on erosion and reforestation. As part of the proceedings of the conference, the Ministry of Agriculture presented a draft version of a new forestry law. The law is a complex, all-encompassing piece of legislation. The objectives of the law, as stated in Article 1, are: reforestation; the development, protection, extension, and cultivation of the forests and of the lands where forestry is practiced; and forestry education.

Since most of the provisions of the draft law are already incorporated into the Rural Code of 1962, it might be better if the draft law were reconsidered. It would be best to compare the proposal with the forestry and tree provisions of the 1962 Rural Code. Where amendments or additions are necessary, it would not be out of the question to amend the 1962 Code. To simply rewrite the forestry law continues an often counterproductive tradition of scrapping pieces of legislation while seeking a higher, but usually unattainable, perfection. At this time, a review of the forestry and related provisions of the 1962 Code should be undertaken. Where gaps are found or inappropriate provisions exist, repeals, amendments, or new provisions can be proposed.

c. Usufruct. Usufruct is the right to enjoy things of which another is the owner--in the same manner as an owner, but subject to the obligation to conserve the substance. The usufruct can be established by law or will of man.

It can be established for life, for a specific period of time, or conditionally. It may be established over all types of property, movable or immovable. The principal provisions covering usufruct are in the Civil Code, Articles 478-510. There are also provisions dealing with usufruct in the Rural Code of 1962, Articles 31-34. However, the Rural Code makes it clear that the Civil Code provisions relating to usufruct apply to rural properties and that the rights and obligations concerning cultivation apply to the usufructuary and not to the owner of the property.

1) The Rights of the Usufructuary. The usufructuary has the right to enjoy all natural, industrial, and civil fruits which the usufruct may produce. Natural fruits are things produced spontaneously from the soil, while industrial fruits are things produced by cultivation. Any natural or industrial fruits not taken from the land prior to the commencement of the usufruct belong to the usufructuary (Civil Code, Art. 482). The fruits available at the end of the usufruct belong to the owner without making him responsible to pay for them and without prejudice to the farmer who may have existed at the end of the usufruct. However, if the usufructuary wishes to prevent any fruits from reverting to the owner, he can always take the fruits of the land prior to the termination of the usufruct.

Civil fruits include any farm rents that may be received by the usufructuary. They accrue on a day-to-day basis and belong to the usufructuary for the duration of the usufruct. In general, if the usufructuary has the usufruct for life, he has a right to receive the income from the property without any obligation to repay the owner. When the usufruct includes movables that can depreciate, the usufructuary is not responsible for any costs if he returns the property in a condition representing what ordinary wear and tear would have done during the course of the usufruct.

The usufructuary has the right to any wood that grows on the property unless there is an agreement to the contrary (Art. 487). The usufructuary is also responsible for following the provisions governing cultivation in the Civil Code and the 1962 Rural Code. The rights of the usufruct are assignable. Thus, the usufructuary can transfer to a third person, with or without cost, the interests he has received (Art. 489). The transferee takes the usufructuary right with all terms and conditions contained in the original agreement.

If the usufructuary has made improvements to the property, he is obligated to return the property in at least the same condition as when he received it. However, he can remove any nonfixtures that he has added to the property as long as their removal does not change the nature of the property such that it is in worse condition than when he received it. Fixtures must be left behind when the usufructuary vacates and he cannot claim payment for improvements. Article 33 of the Rural Code of 1962 provides an alternative in the case where the usufructuary makes improvements necessary for production. The usufructuary can submit the costs of improvement to the owner for reimbursement unless the original agreement calls for a usufruct of less than twenty years. In the latter case, the usufructuary is entitled to be reimbursed for production-improvement expenses he has made during the last five years of the usufruct. The usufructuary must notify the owner before making any improvements. It is unknown how this "notice" provision has been interpreted: it is possible that

actual notice could be required, but, on the other hand, a constructive notice could be sufficient. Without seeing the jurisprudence, this question cannot be answered.

2) The Obligations of the Usufructuary. The usufructuary has certain obligations. He takes things as they are when he goes into possession, but he cannot commence enjoyment of the usufruct until he has prepared an inventory of the movables and a description of the immovables, either in the presence of the owner or after having summoned him to participate in the inventory (Art. 492). Unless the usufruct agreement exempts the usufructuary from giving security, security is required. However, a security is not required if parents set up a usufruct for their children or if a seller of property retains the usufruct for himself.

The Civil Code contains provisions dealing with the numerous possibilities of a person entering into a usufruct and not having assets available for the security. The goal of the code is to ensure that the person setting up the usufruct is able to receive security for the property made available to the usufructuary. When it requires the sale of furniture that will depreciate during the course of the interest, an order of the appropriate court is made ensuring that the owner of the property is protected from losing his movable or immovable property subject to the usufruct.

If a third person enters the property and damages it during the course of the usufruct, the usufructuary is obligated to notify the owner of the damage. If he fails to notify the owner properly, he becomes responsible for the cost of repairs (Art. 503). If the usufruct includes animals and they are all destroyed without fault of the usufructuary, he is not responsible to the owner. However, if only a part of the herd is destroyed, the usufructuary is responsible for replacing the lost livestock and their offspring.

3) The Termination of the Usufruct. A usufruct is extinguished under the following conditions: by the natural death (or civil death) of the usufructuary; by the expiration of the usufruct period; by the consolidation in the same person of the two capacities of usufructuary and owner; by nonuse of the usufruct right for twenty years; by the total loss of the thing upon which the usufruct was established (Civil Code, Art. 506).

The usufruct can also be terminated by a court order if the usufructuary does not maintain the property or perform certain obligations in accordance with the contract terms. Sale of the thing subject to usufruct does not in any way alter the right of the usufructuary. The usufructuary has the right to continue enjoying his usufruct unless he formally renounces it.

If the thing subject to the usufruct is destroyed, the usufruct is terminated. However, if the usufruct is on a building and the building is destroyed, the usufruct does not attach to the soil or other materials. Also, if the usufruct encompasses both the building and surroundings, the destruction of the building does not terminate the usufruct (Civil Code, Art. 510).

It is unknown how often the provisions on usufruct are used. The literature on land tenure and land relations in Haiti frequently mentions relationships where the owner of the land gives up an interest to a person who takes

possession. Given the reports of frequent incidence of usufruct, it would be useful to investigate the practice further in light of the provisions of the Civil Code. The purpose of such an investigation would be to assess the degree of legal security in such arrangements as customarily practiced.

d. Servitudes. A servitude in Haitian or French law is closely analogous to an easement in the Anglo-American law. It creates a general right, a right in rem, which attaches to one immovable, the dominant interest, and imposes a burden on another, the subservient interest. The Haitian Civil Code, Article 517, states that a servitude is a burden imposed on property for the use and benefit of property belonging to another. The servitude does not establish a land superiority of one property over the other. The servitude arises because of the natural situation of the land or from obligations imposed by the law or from agreements between the owners.

1) Servitudes that Arise Because of the Location of the Premise. Both natural and legal servitudes are relevant in the context of Haitian law. A natural servitude is one which results from a natural necessity dictated by the location of the dominant and subservient interests. There is usually only one example of this kind of a servitude: "water flow," which consists of the right of the higher or upstream landowner to require the owner of the adjacent or downstream land to permit water to flow unhindered from the upstream to the downstream properties. The downstream property owner is also entitled to receive water which flows naturally to him (Civil Code, Art. 518). Thus, the upstream owner may not build a barrier blocking the flow of water to the downstream owners (Art. 518). It is interesting to note that, according to Civil Code, Articles 519 and 520, the right of downstream users to water from a spring rising on an upstream owner's property can be acquired by prescription if the downstream owner has had uninterrupted enjoyment of the water for twenty years. This is apparently an exception to the law that makes water part of the national domain (see infra, Section B.5, "Water Use and Regulation"). If the property in question borders running water other than that coming from a canal, the user has a right to use the water for irrigation, but he cannot change the course of the water or impede its use from either an upstream or a downstream user (Civil Code, Art. 522).

Legislation dealing with water brought onto a person's land for purposes of irrigation or resulting from drainage also exists. These legislative enactments give rise to what are known as legal servitudes which in turn can lead to a right of compensation. The Rural Code of 1962 has provisions relating to servitudes in Articles 35 to 40. Article 40, which deals specifically with irrigation, simply says that the servitudes concerning the use of water from irrigation systems are controlled by Articles 132 through 181 of the Rural Code of 1962. In addition, the Rural Code deals with servitudes that arise when a landowner undertakes work to facilitate water flow. If the water affects the upstream owner, there are provisions for submitting the dispute to the Juge de Paix for informal reconciliation. If necessary, either an upstream or a downstream owner can require the other owner to provide a border enclosure on his land. A common enclosure can also be built to protect the persons' land from any destructive activity. Each of the owners involved in the servitude may take steps to enclose his land, but he may not do anything to disrupt the flow of the water. The Rural Code also specifies that the dimensions of any enclosing structure be no more than 2 meters high and 75 centimeters wide (Art. 38).

2) Legal Servitudes. Although the Civil Code contains elaborate provisions on legal servitudes, most of them apply to urban situations. Two classes of legal servitude are recognized: those created in the public interest, and those created in the private interest of the owners concerned. Servitudes in the public interest usually concern "rights of way" of necessity which allow persons access to roads with a potential right of way over a neighbor's land. This type of servitude is likely to be encountered in rural areas.

It is possible to establish that public rights of way give rise to servitudes. There is a presumption that all roads, lanes, or paths belong to the local section or habitation unless the contrary is proved. In fact, when the various parties fail to agree, the servitudes that might exist operate by force of the law. Servitude rights can also be acquired by prescription. Generally such rights are acquired over rights of way. There are code restrictions, Article 550, wherein the servitude exists on the shortest route from enclosed land. However, if a person has maintained possession of a right of way in an open and continuous manner for twenty years, he has a legal right to that right of way.

e. Water Use and Regulation. According to Haitian law, water is part of the public domain. It belongs to the state whether its source is a river, stream, spring, lake, pond, swamp, or aquifer (Law of National Domain, 5 September 1934, Art. 2). As part of the public domain, water cannot be alienated by the government. Thus ownership cannot be transferred to private persons. Also, since water is part of the public domain, a private party cannot acquire ownership by prescription.

The right to use water is attached to the land. The right is automatically transferred to a new owner when legal transfer of land takes place. If a landowner allows a third party to use his land, the right to use the water passes with the land and the owner does not retain use rights as long as the third party has possession (Rural Code 1962, Art. 136). Although not a settled proposition of law, water-use rights most likely do not attach to a sharecropper since a sharecropper does not acquire legal status with the land. Thus one could conclude that the right to use water passes only to an owner or a renter. The right to use water is not severable from the use or ownership of the land in question. The use of water is controlled by the general provisions governing rural areas. In short, the use is expected to conform to the general principles involved in the interests of agriculture (Civil Code, Art. 523).

1) Surface Water. A farmer has the right to use spring water rising on his property subject only to superior rights held by someone else (Civil Code, Arts. 519, 520). The Rural Code of 1962 has a more limited provision, but it is subservient to the Civil Code. The Civil Code also controls the use of water that flows naturally (without the intervention of man) onto a farmer's land (Civil Code, Art. 518). The Rural Code of 1962 contradicts this, allowing the use of surface water other than that arising on one's property only with permission of the government. In cases where there is a conflict like this, the Civil Code governs. It should be noted that in practice government intervention is not allowed in the allocation of water except within a government-supervised, irrigated sector.

If a spring does rise on his property, a farmer has the obligation to prevent contamination or pollution. If he needs help in maintaining the spring (or pond or other natural source), he can request aid from the appropriate administrative agency. If the surface water on the property is a lagoon or pond, the possessor can use the water for either his domestic or cultivation needs. However, he may not breed fish or any other kind of aquatic animals in the water body (Rural Code 1962, Art. 133). When the surface water on a piece of property is the only water source in the area, the possessor is required to share the water with others in the locale. It is likewise forbidden for an owner of land with a surfacewater source to construct a dam or anything else that obstructs the natural water flow without written authorization from the Department of Agriculture or other competent authority. Such authorization cannot be given without a proper visit and survey of the land in question. It is impossible to get an authorization for an alternate use for the water if the full amount is already being utilized in accordance with the provisions of the Rural Code (Arts. 133-139).

A landowner does not have the right to use river waters which pass the border or traverse his property without taking into consideration the limitations imposed by law. This restriction prohibits the possessor from damming a river or utilizing its water to the exclusion of his neighbors. If opposite banks of a river are owned by different people, each owner has the right to utilize one-half of the river bed and its silt, sand, or stones as long as he does not change the course of the bed or does not maintain the bed improperly. Maintenance of the depth and breadth of river beds comes under the authority of Article 462 of the Civil Code.

2) Subterranean Water. Written authorization from the proper authority (the Department of Agriculture or any other competent authority that works in the local jurisdiction area) is required to dig a well. The authorities can limit the number of wells in a local area (Rural Code, Art. 148) and can set general conditions to control the manner in which wells are dug and maintained. Authority to dig wells is also given to the department that controls irrigation systems (Rural Code, Art. 149). It can dig wells on private land without cost to the owner of such land as long as the land benefits from the work that is performed.

Thus, both private individuals and state authorities can dig wells. Although the rural code requires only private individuals to meet standards set by the governmental authorities, it is clear that if the state authority digs a well on private land the same standards must be maintained. If the government does not meet the standards set for privately dug wells, the landowner would be authorized under the extracontractual obligation section of the Civil Code to proceed against the state for its malfeasance.

Article 150 of the Rural Code requires all persons who dug wells prior to 1962 to register the well with the proper department of the Ministry of Agriculture or "any other competent organization." The person has to "give all information to the relevant department that is required." This provision assumes that there has been an attempt to develop standards concerning the proper exploitation of subterranean waters. As of the time of this writing, no standards for well digging were known to exist. Since Article 150 allows one to

register a well with either the proper department of the Department of Agriculture or another competent organization, it is possible that persons could register wells at a number of different places. It is not known whether any regulations other than the general articles of the 1962 Rural Code spell out conditions under which wells can be dug in local areas.

3) Irrigated Systems. Haitian law gives a farmer the right to water made available or distributed by the government in direct proportion to the area of his land's surface (Irrigation Law of 26 August 1913, Art. 5). The 1962 Rural Code (Arts. 154-161), however, provides a more complex formula, allotting priority to farmers who use their lands most productively, intensively, and in accordance with good conservation practices. Informants indicate that the Law of 1913 is used rather than the later provisions of the 1962 Rural Code because the earlier provisions are easier to apply. Without further investigation of the manner in which water is distributed, it is unclear that the earlier law is preferred. The 1913 law applies only to areas within government-determined irrigation perimeters, but, since no research appears to have been conducted on this topic, it is difficult to make a statement other than that the two laws conflict. It should also be noted that the law does not appear to require the government to provide water to persons located outside the governmentally determined perimeter who wish to make use of the water.

Article 171 of the 1962 Rural Code provides farmers the right to the water of an irrigation system crossing their land if they contribute to the maintenance and improvement of the system. It is assumed that this provision applies only for community or private irrigation systems. In fact, landowners or renters do not have a right to tap into a system built by the government which crosses their land without permission. People do tap into systems, but it seems that the law is simply not enforced on this point.

The farmer must accept the government's imposition of easements on his land to allow for the construction and maintenance of canals and other irrigation structures (Rural Code 1962, Art. 166). He also is responsible for cleaning, weeding, and otherwise maintaining the secondary and tertiary canals that water his land (Rural Code 1962, Art. 163). This responsibility appears to apply to both state and privately funded canals.

The farmer must pay an annual tax on irrigated land controlled by the government and to which it distributes water (see discussion below, Section 4). The annual tax is levied in proportion to the surface area of the farmer's land (Law of 20 September 1952). However, the government does not appear to have the authority to levy or collect taxes on irrigation systems that it did not at least partially finance. One report indicates that the government does in fact collect taxes on privately financed irrigation systems but gives a period of grace before it commences its collection (Hauge 1984). The government can demand to see deeds, affidavits of survey, or any other relevant documents to help it assess the proper tax contribution due from each property (Irrigation Law of 26 August 1913). It is unclear whether the government enforces this provision. Under the 1913 law, the government must also use the tax monies collected for the administration, maintenance, and improvement of irrigation systems and can spend no more than 10 percent of the revenue for collection expenses.

The government can impose easements on private land to provide for irrigation canals or gates (Rural Code, Art. 166). It can also drill a well for irrigation purposes on an individual's land (Rural Code, Art. 149). The government has the responsibility to allocate water from an irrigation system funded either entirely by the government or by user contributions (Rural Code, Art. 145). It also has the authority to supervise privately funded irrigation systems (Rural Code, Art. 145). In return, the government must operate and maintain the primary canals and undertake improvements of the irrigation systems (Rural Code, Art. 163). It is unclear whether this article refers to all primary canals or only to those which the government has helped construct or maintain. The same section of the Rural Code gives the individual farmer the responsibility for cleaning and weeding the secondary and tertiary canals. Since the language of Article 163 is general, one can conclude that the government has responsibility for all primary canals. An interpretation of this article should be undertaken only after careful consideration of the realities of the situation. Indeed, if an irrigation system is privately constructed and maintained, then the responsibility for maintenance should extend to the primary canal as well as the secondary and tertiary canals. Only when the government is in fact in a position to undertake control and maintenance of the system which has been privately funded should the administration pass to the government. One would hope that in due course the government would be able to undertake the maintenance of the principal canals (primary and some secondary), but the users would remain responsible for the tertiary and, where appropriate, the secondary ones as well.

According to the Presidential Decree of 16 February 1920, which established the Bureau of Irrigation, the bureau was given the authority to have a person arrested if he diverts water from a main or lateral canal without authorization. The bureau also has authority to have a person who damages an irrigation canal or structure arrested. Article 8 of the same decree gives the government the power to cut off water to properties when the person who gets the benefit of the water fails to pay his tax or to comply with water-use and system-maintenance regulations. It has been suggested that this provision is often misused. One finds frequent instances where the flow of water is cut off, reduced, or increased to specific property or groups of properties.

The Irrigation Law of 1913 gave the government the right to initiate a court action if a farmer cannot prove he has paid his water tax (Art. 9). This might be considered an alternative action to shutting off the person's access to water. Nonpayment of tax could also be dealt with at the local level by referring the matter to the Water User Committee. Failure to comply with the committee order would then potentially lead to a case in which the person is brought before a court.

4) Irrigation Taxes. Hauge (1984) provides a thorough discussion of irrigation taxes. The first irrigation tax was established in 1913. The receipts were earmarked for irrigation-system operation and maintenance. The most recent estimate indicates that current receipts equal about one-third of the amount allotted by the government to agricultural districts for irrigation system operation and maintenance. Hauge (1984) notes that funds for the operation and maintenance of irrigation systems have never come primarily from the water taxes.

An alternative method for raising funds for maintenance and operation of irrigation systems could be to give local water administrators the authority to impose and collect water-use taxes. If a system of water-user associations is to operate effectively, the associations would require oversight power for the collection of taxes and sanctioning power for nonpayment. The problems with this idea will be discussed in the next section.

The irrigation tax law currently in effect was passed on 9 September 1959. All plots of rural land benefiting from irrigation water controlled and distributed by the government are subject to this law. The tax itself varies between 6 and 17 gourdes per hectare, depending on the number of liters per second of main canal capacity. Apparently this taxation method has not been implemented due a lack of flow measuring devices. The method that apparently is used calculates the tax on the basis of the irrigated surface area and number of months per year of irrigation.

5) Water Users' Associations and Committees. In areas where government authorities are unable or unwilling to assume responsibility for the distribution of irrigation water and maintenance of irrigation systems, local water users' associations have developed to facilitate the administration of the system. Hauge (1984) provides a discussion of the history and operation of a number of Haitian water users' associations and reviews some of the issues concerning these organizations.

Most observers agree that farmers cannot be required or forced to participate in irrigation system management. Norman Uphoff (1982) has observed that "farmer capacity to circumvent water management requirements they do not agree with has proven to be almost inexhaustible." Yet both donor agencies and governments continue to attempt to organize farmer groups for the purpose of administering and maintaining irrigation systems. In creating water-user associations, the government passes over to the farmers the burden of operating and managing a system that the government either feels it cannot or has been unable to maintain. Uphoff notes that, while farmers are induced to join the association by being told that they will be given increased authority, they quickly recognize that it is their obligations and responsibilities that are actually being increased. Uphoff says that the farmers are expected to accept the new demands placed upon them as the price for getting a reliable flow of water.

The farmers still usually consider the management of the irrigation system to be a government function. However, frequently the government is unable to administer the system. Therefore, farmers who wish to participate productively in the agricultural sector may have to accept responsibility for management of the system. Water-user associations are already established in Haiti. Although they may not presently operate in an optimal fashion, they could be restructured or reorganized to function more efficiently. The most important issue is to work with the farmers to make the association and related committees function effectively. Korten provides a description of the organizing process as it took place in Sri Lanka (Uphoff 1982). In that process, the farmers had no say as to whether they wanted an association, how the organization would be structured, what the powers and duties of the association and its members would be, or even when the organizing meetings and elections would be held.

Building a successful water users' association depends upon participation from the farmers and an understanding of where the resources will come from to keep the system operating. The organizational activity must take place with participation of the farmers (or at least designated leaders in the "community"). It is likewise important to outline the source of funds for financing the system's operation. Since there is an irrigation tax imposed in Haiti, it would be important to review the manner in which the funds would be made available. With farmer participation and an increased understanding of the financial arrangements of the association, the chances for success should improve.

The Canal d'Avezac on the Cayes plain has the potential for having the largest water users' association. The irrigation system was originally constructed in 1770 in order to supply water to the colonial sugar mills and to irrigate over 2,500 hectares (Hauge 1984). As presently rehabilitated, the system should be able to irrigate an area of 3,800 hectares. A Catholic PVO, Développement Communautaire Chrétien d'Haiti (DCCH), has assumed the responsibility for the rehabilitation. The organization of a water users' association is taking place along with the rehabilitation of the canals (Jean-Noel and Nader 1984).

Hauge (1984) asserts that the recent creation of the association is not the first time such an action has been taken. In 1913, after one of the prior rehabilitations, a special administration was set up for the Canal d'Avezac under the Department of Agriculture. In fact, the Canal d'Avezac was administered independently of the government more or less continually until the late 1950s, when the system was destroyed (Hauge 1984).

In 1975, letter no. A-6, from the Minister of Agriculture, authorized "that an association of users should be created in order to attend to the administration of the irrigation system of Avezac." The association was to be called the Users Committee of the Irrigation System of Avezac. It was created on the 7 August 1975 at Laborde, the headquarters of DCCH. In conformance with the Rural Code, Article 164, the Users Committee set up bylaws clarifying the rights and obligations of the users. DCCH has a policy of involving farmers in the development and organization of the association because they feel that farmers will have more interest in maintaining the association if they are involved in its design. DCCH also required all area farmers to join the association. The association was organized on three levels, with the lowest level including persons in a habitation or a subhabitation where the tertiary canals empty into a distribution basin. To determine who should belong to each group, aerial photographs were used of the perimeter area. From the photos they determined which plots were included in a particular area. They then went to the areas to determine who the owner or the tenant was on each plot.

According to DCCH, there are one hundred ten user groups of twenty-five to thirty farmers, each at the lowest level, farming a total of 15 to 25 hectares. These groups are responsible for maintaining the water distribution systems in their areas. Each group has a president who is a member of a subcommittee. There are twenty-six of the latter, each with a president who in turn is a member of the Central Committee of Users. The Central Committee is made up of the presidents of each subcommittee and representatives from the

agricultural district, the diocese of Les Cayes, and DCCH. The committee is authorized to hire an administrator for the system who is responsible for the organization and oversight of water allocation and system maintenance.

During the organizational phase, there were some conflicts between the larger and smaller landholders. Stories are told of diversions directly from secondary canals to some of the larger landholders' plots, with persons guarding the canals at the point of the diversion with machetes. Apparently, when some of the larger landholders began to cooperate in the organization activities, the smaller landholders began to cooperate. Participation and interest in the association picked up when the actual rehabilitation of the canal began.

The bylaws of the Avezac Water Users' Association carefully recognize the issues of national law that are fundamental for any irrigation system. Section 3.1 recognizes both the fact that the dams, primary canals, and headgates are in the national domain and the consequence that any violation of the bylaws will be dealt with by the gendarmerie. The distribution of the water is organized by the subcommittees. Each property owner is entitled to receive water in proportion to the surface area of his irrigable land. To this end, the subcommittee is responsible for setting up a timetable for the distribution of the water. The timetable is then submitted to the administrator of the association. When the system of allocation is agreed upon, the record is then deposited with all of the appropriate persons.

The bylaws state clearly that a farmer cannot take water unless he is scheduled to take it; in like manner, it states clearly that after a person's scheduled time has elapsed he has to relinquish the water to the next person listed on the schedule. The bylaws note that it is the duty of the president of the group and the subcommittees to inform the gendarmerie of violations. One would hope that a chance would exist to give the association, through its group presidents, subcommittees, and committees, the opportunity to impose sanctions on members who violate the bylaws. Under Section 3.2 there is a provision which gives each user the right to petition the administration of the association if the president does not carry out his duties. Thus there is a form of internal sanctioning which can be used. One would hope that transgressions of the system could be dealt with internally by providing the proper individuals and groups authority to hear the disputes themselves.

There are some potential problems that could arise within this association. It is important to include an analysis of those matters that need attention in any future legal-anthropological research that might be carried out as a follow-up to this report. There are also questions concerning the legal authority of the association. The letter authorizing its existence was issued by the Minister of Agriculture. In normal times, such authorization would bind the government, for the minister is the spokesperson for the governmental department with authority over irrigation. With a new regime in power, there is at least a question concerning the authorization for the creation of the association. The second potential legal question concerns the sanctioning power that the Central Committee, the subcommittees, or the user groups themselves have to deal with violations of the association's bylaws. It would make sense for the committees, led by the president at the appropriate level, to be able to resolve the disputes that are generated within the association.

This mandate must be developed in a way so that the decision-making body can back up its opinions with action. The third problem, which may be inevitable, is that taxes must be imposed on the farmers. A general problem in water-user associations is nonpayment of obligations. In order to make the system work, power both to make and to execute decisions concerning members' obligations must exist.

Hauge (1984) makes a series of general observations about the management of irrigation systems which she has gleaned from the literature:

- (1) To be effective, water-user associations must be comprehensive and membership cannot be voluntary.
- (2) Water users are the most satisfied with irrigation management when the systems are run by quick-acting, authoritative individuals, whose decisions they perceive as fair.
- (3) Water-user organizations cannot be effectively structured without:
 - (a) knowing the number of farmers per secondary or tertiary canal and the relations between them;
 - (b) knowing what size unit is most efficient for organizing farmers on their terms and what units generate an attachment to the organization that permits internal enforcement;
 - (c) understanding the kind of participatory structure farmers believe would be suitable for given tasks and what formal organizational structures the farmers already have had bad experiences with and why;
 - (d) getting pertinent suggestions from farmers on how to reinforce--if necessary--the power of tailenders in decision-making about water management.
- (4) It can be unrealistic to expect headenders to do much ditch maintenance as they will not benefit from it. Thus most of the ditch cleaning is left to the tailenders.
- (5) Drainage is particularly difficult to get water-user associations to maintain as its utility is often not apparent for years.
- (6) Water users do not consider relying on courts to provide punishments for offenders a satisfactory sanction as courts are rarely able to give swift and appropriate results. Fines are relatively rarely imposed and are often ineffective. Controls or forms of dispute resolution, such as arbitration, that stem from the social structure tend to be more effective.
- (7) User fees rarely reflect the full cost of all water used and generally do not amortize the infrastructure investments.
- (8) Efforts to expand water-user groups to include other functions besides irrigation have usually failed.
- (9) Too much government help with irrigation management can generate dependency which makes self-sufficient user groups less likely. Thus irrigation systems built in considerable part with user funds are recommended.

- (10) Generally there is little indigenous water management institutional capacity to start with and most of the work gets done by expatriates.

As can be seen from the foregoing discussion, there are a number of issues which must be addressed when considering the appropriateness of water-user associations and committees. In a sense the basic decision has already been made in Haiti. The government does not appear to have the ability to provide the services needed to maintain an irrigation system. Consequently, water-user associations already exist in various parts of the country. Thus it becomes important to heed the warnings from the literature when trying to institutionalize workable water-user associations.

B. State Lands

The Civil Code, Article 442, states that property belonging to the state is administered or leased and cannot be alienated unless there are special rules. Article 443 says that all property in Haiti which is not capable of being private property is considered part of the public domain. Thus, unoccupied and unowned land as well as lands that belong to people who die without heirs are part of the public domain. Land-law problems do not arise from the fact that land is classified as state land but rather stem from the distribution of state lands. For example, if a private person leases state lands, he is supposed to have an option to buy after a period of years. However, a cursory review of some of the records at the Bureau de Contributions in both Les Cayes and Camp Perrin did not indicate that any persons leasing state lands were able to exercise the option to buy. The reason why options to buy are not generally exercised on state lands is unknown.

Many informants claimed that a state lands problem exists, particularly in the Artibonite Valley. In fact, in 1975 a law was passed setting up a special status for the lands in the Artibonite. It was alleged that this law was necessary because of the instability in the Artibonite. However, the president of the Land Court informed us that implementation of the controversial law stopped on 7 February 1986.

The 1975 law authorizes the administrator-general of the Bureau de Contributions to take possession in the name of the Haitian state, without the prior fulfillment of each formality, of all the land in the Artibonite Valley that is reputed to be or has been property of the state irregularly taken out of an estate. The Bureau de Contributions was authorized to call upon licensed state surveyors to determine which land would be repossessed. The armed forces of Haiti were to be available in case order broke down. The law was clearly controversial, particularly among individuals who were not considered supporters of the persons or organizations that had power to dispossess a person.

Aside from the Artibonite, where specific action has been taken in relation to the state lands "question," there is question as to the extent of state lands and the manner in which they are held in the rest of Haiti. Murray (1978b) comments that the entire issue of state lands is one of the greatest mysteries of contemporary Haiti. It is a black box to which access is impeded by a complex of apparently powerful interests.

Murray (1978a) claims the predominant method of dealing with state lands is for one person to receive an allocation of a large area and then sublet it to a number of persons at a considerable profit. He claims this brings into existence a group of "intermediary landlords" who have wedged themselves into the state land system. It is difficult to challenge this proposition, since there has been no opportunity to examine the records that exist at the Bureau de Contributions in detail. However, if we go to the literature, it is clear that peasants farm state lands under a variety of arrangements. Yet, on the offshore islands, including La Gonave, and in the northwest, Smucker found that there were thousands of peasant leaseholders who deal directly with the Bureau de Contributions. Our cursory review of the state-lands records in both Les Cayes and Camp Perrin indicated that the vast majority of landholders of record were persons whose holding was recorded at 1 carreau. For example, in the rural habitation of La Besse Deuxième, one hundred eighteen persons were listed as paying the annual property tax. Of these, one hundred ten held only 1 carreau; six held 2 carreaux; and two held 3 carreaux. No holdings exceeding 3 carreaux were recorded. Without surveying a sample of rural habitations to determine how much land each person is actually holding, it is not possible to assess the accuracy of the land records. Until such a survey is made, the state-land question will continue to remain a mystery.

C. The Court System and Disputes

The land-court system and dispute-resolution mechanisms in Haiti are in a state of flux. The rural system used to be under the authority of the Chefs de Section. Apparently they no longer retain authority but it is unclear who, if anyone, has taken over their former functions. The Tribunal Terrien was originally given jurisdiction over land disputes in Artibonite Valley. The court was originally located in St. Marc just south of the irrigated plain but was moved to Port-au-Prince in 1961. The jurisdiction was not changed, but there is some question concerning the effectiveness of the court. In late 1986 the court was moved back to St. Marc but, at the time of our visit in October 1986, it had not yet begun to hear cases. It is in this light that we turn to the institutional framework and the dispute-settling mechanisms of rural Haiti.

1. Tribunal Terrien

A special court was created by decree on 23 November 1986 to sit at St. Marc for the district in which the cadaster of the Artibonite plain applies. The court is called the "Tribunal Terrien de la plaine de l'Artibonite" (Land Court of the Artibonite Plain). The decree stated that all difficulties, disputes, or litigations arising in the area in which the cadaster had been carried out on the Artibonite plain involving claims of ownership or possession would be heard before the land court rather than before a court of general jurisdiction. The land court was also given the authority to hear disputes arising directly from within the project area of L'Organisme de Développement de la Vallée de l'Artibonite (ODVA) as it was defined in the decree of 17 March 1950. The court was given jurisdiction to hear all disputes relating to the demarcation of lands which arise because of the establishment or recognition of property rights on land subject to the cadaster, including questions relating to prescription, land acquisition, and questions of status, capacity, or identity of the persons brought before it.

The law emphasized that the director of the ODVA Cadastral Office had direct access to the court. The purpose of the court was to deal swiftly with matters that arose concerning land issues. For example, Article 6 says that, in matters concerning the cadaster, the period between the summons and the appearance before the court is to be five days. A party who does not appear in person or by agent is judged in default. According to the law, judgments by the land court are to be subject to execution in accordance with the provisions of the Civil Procedure Code. One can challenge a default judgment by petitioning the court registrar within three days of notification with an explanation of why the default judgment was given.

The court was set up to expedite land matters. Thus each matter brought before the land court is considered as an "urgent" matter. Cases are usually judged without exchanging written documents, relying on simple memory. However, all means of defense employed in a normal legal case can be used. The judgments are rendered publicly as soon as possible after the case is presented, but no longer than eight days after the hearing for a possession case and no longer than fifteen days for a case involving ownership. Except where morality requires a hearing in camera, all hearings are to be public.

The decisions of the land court cannot be appealed. If a party wants the judgment rescinded, he has fifteen days from the time he has received notice of the judgment to come back to the court. The declaration for rescission is made to the registry of the land court by the petitioner or the bearer of his special mandate. In the eight days from the lodging of the petition for rescission, the petitioner presents all his papers justifying the rescission of the judgment to the registry at the court of cassation. The respondent has eight additional days to present his papers. A hearing is then held on the issue in a special division before five judges, who treat the matter urgently.

A decree issued by F. Duvalier on 18 October 1961 changed the nature of the Tribunal Terrien de la plaine de l'Artibonite. A new land court, called the "Tribunal Terrien d'Haiti," was created in Port-au-Prince. The court was set up as a special chamber of the civil court of Port-au-Prince in July 1961. The decree does not confer any specific jurisdiction on the court but simply authorizes the personnel for the land court of Haiti. However, it appears that the court was set up to continue hearing disputes from the Artibonite. It is not known how the court functioned between 1961 and 1986, when the court was returned to St. Marc. As of October 1986, the court has been reinstated using the same format as was used when it was in St. Marc between 1950 and 1961. No other information is available about the newly reinstated court. It would be useful to clarify how the court works, what kind of issues it hears, and how effective landowners or possessors feel it can be in dealing with their disputes.

2. The Permanent Presidential Agrarian Commission

The Permanent Commission which was originally set up in 1971 was modified by a decree on 4 March 1974. Its original purpose was to protect the property of farmers, principally in the Artibonite Valley, to assure their security and to help them reach their production potential. The 1974 decree attempts to define more clearly the character of the commission and the methods by which it works.

The Permanent Commission is a consultative commission which can be called upon to give advice on agrarian questions to the Minister of Justice. The minister in turn passes the advice on to the president. The commission is primarily responsible for matters involving land distribution, the transfer of ownership to tenants on state lands, the establishment of agricultural works on unused state lands, and the setting up of agreements for large areas of land. It has the power to investigate the reasons for forceful or deceitful dispossessions in order to determine if the victim can repossess his land. The commission can hear matters of dispossession or threats of dispossession presented to the commission through a complaint.

Even if the president accepted the recommendations of the commission, the order was not binding on existing courts and did not end litigation. The decree says the decisions are enforceable by police force, as with all decisions of justice. However, the decisions do not have as much force as a judgment and do not produce the same effects. The commentary to the decree states that, even though the commission is composed of judges from the court of cassation, it is not a court and does not give decisions. The 4 March 1974 decree also states that the fact that the commission cannot give a judgment should not deter persons from referring cases to it which it is authorized to hear.

On 28 July 1975 the Loi d'Exception was adopted. This law, also applicable only in the Artibonite, established another extrajudicial procedure for government repossession of state lands whose sale or transfer to private parties had been considered questionable. This law has been abrogated by the Constitution of 1987 (Art. 297).

3. Dispute Settlement

Prior to 7 February 1986, the Chef de Section acted as the mechanism by which disputes could be settled informally. Since then, the rural administrative system has been in a state of flux, but no new institution has as yet developed to replace the Chef de Section.

Important research has been carried out on the role of the Chef de Section. In 1972, Lahav spent some time observing both a Chef de Section and a Juge de Paix. She notes (Lahav 1975b) that the Chef de Section represents the more traditional, more familiar, and more popular dispute-settling institution when contrasted with the Juge de Paix. However, the Juge de Paix is favored in two kinds of situations: (1) where the person is from the upper social stratum, and (2) in some land disputes which fall largely within the jurisdiction of the Juge de Paix.

It was not unusual for the Chef de Section to have been a local notable with some wealth, but not necessarily education. Lahav (1975b) reports that the Chef de Section where she did her research had limited ability to read and write, did not speak French, and was more a member of the rural masses than of the urban, educated elite. He dressed informally and did not look radically different from his constituency.

The Juge de Paix was different. He was also a local person but was educated, having graduated from the School of Law at the University of Haiti. He

spoke fluent French as well as Creole. He dressed in a dark suit with tie and was careful to differentiate himself from the rural masses.

The procedures of the Chef de Section and the Juge de Paix also differ. The Chef de Section is available any time of the day to hear disputes. When a hearing takes place, it is naturally conducted in Creole, with little emphasis on the formalities one would find in the court. The parties are allowed to tell their version of the dispute, repeating if necessary. Any person present can state an opinion as to what he thinks transpired and how he would terminate the dispute. Lawyers are not part of the process, but a party may bring a person, usually a relative, to speak for him and support his case. Witnesses make their presentations informally and anything they say is admitted, unless it is necessary to have an eyewitness account.

The procedure in the courts contrasts with that before the Chef de Section. It takes place in a courtroom by appointment. There is usually counsel present to represent the parties. The counsel is generally not a trained lawyer but a person who has learned law through experience. If counsel is employed, the process is handled in French and translated for the parties. The observers do not participate and the Juge de Paix often makes reference to "what the law says" (Lahav 1975b).

The Chef de Section attempts to resolve the dispute by simply trying to get the parties to agree to end their fight so that order in the community can be restored. In contrast, the resolution in the court is formal. Because there is counsel present, there is a much more elevated consciousness of the "rules of government law." Since it is likely that counsel will attempt to maneuver the process in light of the rules as they understand them, especially the procedural ones, all involved expect a more formal proceeding.

The Chef de Section has the power to appoint unsalaried assistants (adjoints) in the neighborhoods under his control. According to Lahav (1975b), this assistant has the power to gather a team of subordinates who wear badges to signify their authority. All of these rural assistants can be retained by local people, for a fee, to perform services. Apparently it is not unusual for a person who has become a Chef de Section to have worked his way up through the ranks. It appears to be important for the Chef de Section to have had some dispute-settling experience. His assistants often hear local disputes. Smucker indicates that for a fee of 2 gourdes (US\$0.40) an assistant would attempt to conciliate disputes. If the dispute were settled in this manner, it went no further.

If a dispute is not resolved at the initial point of contact, a variety of events can take place. Other members of the "team" can intervene either individually or together to hear the dispute. Lacking empirical data, we assume that the importance of the dispute within the local community would dictate whether another of the team would come to hear it or if a panel would be formed. In any case, if this second step fails, the dispute is then referred to the adjoint of the Chef de Section. Failure at this level would take the case directly to the Chef de Section. Alternatively, the case can be taken to the Juge de Paix and from there to a higher court at the prefectural seat.

The Tribunal de Paix is supposedly a court in which conciliation is the dominant mode of resolution. We were unable to verify whether this is indeed the case, since the courts we visited were not in formal session.

Needless to say, it is imperative to develop the lower end of the legal system in order that rural Haitians can be better served. With the Chef de Section no longer in authority and with his subordinates presumably nonfunctional as well, now may be the proper time to explore alternatives. If one considers the comments made about water-user committees and the possibilities of experimenting with erosion-control committees, there might be potential for introducing dispute-settling mechanisms within the actual institutions that are dominant in the rural social structure. If it is important to have an institution function properly, utilizing the existing structures and institutions may enhance the possibilities for success.

Both Lahav (1975b) and Comhaire (1955) observe that conciliation is the dominant mode of dispute resolution. They also note that it is extremely important that rules for resolving disputes fit in with the local value system. These rules do not necessarily follow the rules in the Civil Code or the 1962 Rural Code. In fact, Comhaire points out that the Chef de Section would often seek out local elders for advice on local rules when trying to resolve disputes. As in many other places, the local ethic is to resolve disputes without reference to the authorities and the law when possible. Therefore, the creation of an informal system of dispute resolution utilizing the existing social structure could be a key to improving social relations at the local level. One has to aim for a system which is acceptable to the local population. Once that goal has been reached, the substantive laws which are applied become of secondary importance as long as they are not too foreign to the system.

4. Assessment of the Land Law System

It is very difficult to assess the land law system of Haiti in a meaningful way without very specific data on exactly how the system operates. It is not, however, difficult to point out areas where problems exist. For example, the issue of tenure security is cited by virtually everyone who has made observations on land tenure. The insecurity is brought about both because of and in spite of the laws on the books. The main area of concern centers around sharecropping and short-term tenancies. It is imperative that the law provide security for persons entering into these relationships. In fact, if one reads the provisions of both the Civil Code and the Rural Code of 1962, it is apparent that the intention of the drafters was to provide both security and stability to landholders. The failure of these laws to provide the desired tenure security and stability may be due to administrative shortcomings rather than to shortcomings in the law itself.

Problems arising in successions also seem to be particularly acute, primarily because of the difficulties encountered when partitioning property. It is possible to circumvent the high costs of partitioning by utilizing the Civil Code to keep the property undivided until it can be partitioned without recourse to a notary or surveyor. The high cost of legal and surveying services also impedes the free transfer of freehold interests. In this instance, it is more difficult to make the system work by finding alternatives within the code structure itself. The answer may be to make the title registration

process cheaper, faster, and simpler by establishing a system of legal services for the rural poor. In Jamaica a system of rural legal services has been effective in introducing many of the formal laws to a population previously dependent on informal procedures.

The Haitian land-law system is operating with sketchy information, hearsay, and a general attitude that the administration is failing to function. The key to a more meaningful assessment of what is needed to correct some of the obvious inequities in the system is to encourage the systematic gathering of information that can provide an understanding of the nature of the problems and how the system operates. Members of the legal profession almost unanimously comment that the law on the books is adequate. Most claim that a program of public education has to be introduced to clarify the rights and responsibilities of persons in a variety of situations. The specifics of such a campaign will have to be worked out at a later date.

The key to making the land law system relevant to the Haitian people is first to find out what parts of the present system can actually be implemented in an effective and productive manner. To make the kind of recommendations necessary, it is imperative that observations at the grass-roots level be made without further delay. As far as the important policy decisions relating to law are concerned, this may be the most crucial point of Haiti's history. An organized effort to determine exactly how the system works (or doesn't work) should be mounted without further delay.

D. The Constitution of 1987

With the fall of the Duvalier regime on 7 February 1986, Haiti entered a new political era, beginning with a transitional government. The interim ruling body, the Conseil National du Gouvernement, abolished the Duvalierist constitution and subsequently established a plan for drafting a new constitution and holding elections. The new constitution was in place following acceptance by the electorate in a national referendum on 29 March 1987. Certain provisions in the Constitution of 1987 have implications for Haitian land law. These include the following:*

Section H: Property. Article 36-2 prohibits nationalization or confiscation of property for political reasons. It further protects legitimate property rights except in the context of agrarian reform. Article 36-4 requires landowners to protect the land against erosion. Article 39 gives residents of rural sections (sections communales) rights of pre-emption over local agricultural land falling within the private domain of the state.

Section I: Right to Information. Article 40 obliges the state to publicize laws in both Creole and French (Art. 5 having established both Creole and French as official languages).

* This section was based on a preliminary reading of the constitution and was written by Glenn Smucker, who notes that a much deeper analysis of the constitution's impact on Haitian land law is sorely needed.

Article 55 grants property rights to resident foreigners for purposes of residence and workplace.

Title IX, Chapter I: Economy and Agriculture. Article 248 creates an agency called the Institut National de la Réforme Agraire (National Institute of Agrarian Reform) to reform the structure of land tenure and put in place a program of agrarian reform to benefit the tiller of the soil ("au bénéfice des réels exploitants de la terre"). The institute is to elaborate an agrarian policy geared toward the safeguarding of production by creating an infrastructure for the proper protection and management of the land. Article 248-1 provides for the establishment of minimum and maximum land-unit sizes for the purposes of agriculture.

Article 293 annuls certain decrees of land expropriation from the last two (Duvalierist) governments.

Article 297 abrogates certain laws violating citizens' rights, including the Law of Exception of 28 July 1975 regarding government repossession of state lands in the Artibonite Valley.

III. IMPLICATIONS OF TENURE STRUCTURE FOR SOIL CONSERVATION AND AGRICULTURAL INTENSIFICATION IN RURAL HAITI

This section defines the three characteristics (security, stability, and uncertainty) of land tenure which are likely to affect and be affected by soil conservation and agricultural intensification efforts. We then discuss the need for taking regional diversity into account when formulating agricultural development policy. The potential advantages and disadvantages of introducing measures to decrease rural land-transaction costs are also presented. The information summarized in the literature review in Sections I and II is then used to address policy issues related specifically to watershed management.

There are three characteristics of the land tenure structure that determine its impact on project interventions. These three characteristics, which we have labeled security, stability, and uncertainty, are not always adequately differentiated in the literature, but each has its own importance.

Security as used here is a formal definition based on the legal status of the plot of land, but it is viewed from the perspective of the person who farms the land. Land tenure is relatively secure if it is relatively difficult or costly for the farmer to be removed from the land. Security of tenure is important for watershed-management strategies because farmers may not be willing to invest in improvements on land which they are not certain of controlling in the future.

Stability is a statistical concept viewed from the perspective of the plot of land itself: the degree of turnover in land use and tenure status. Land tenure is relatively stable if a parcel's tenure status is unlikely to change from year to year. The importance of stability is that it may influence the owner's interest in investing in long-term improvements or maintenance, regardless of a plot's tenure status during the current year. The owner may be reluctant to invest on a plot which he farms now but which he may rent out in subsequent years or on a plot which he has purchased in order to resell when a sudden need for cash arises.

Uncertainty is a psychological concept which ties the individual farmer's perceptions of tenure security to the wider world of political and economic forces which may influence land use and call local understandings into question. Uncertainty should be contrasted with ambiguity, which we use elsewhere in this report to mean the lack of clarity of tenure arrangements which farmers may promote with outsiders for self-protection. The importance of uncertainty is that it may lead to a defensive reaction by farmers to project activities: farmers who feel that cooperating will call into question agreements about land which are acceptable locally but which have little legal backing may choose not to cooperate rather than risk losing their land.

These three concepts will likely all play a part in determining the success of interventions like the Targeted Watershed Management Project (TWMP). In exploring the issues below, they should be kept in mind, because they sometimes have conflicting effects on the reactions of farmers to land-use and land-tenure changes and therefore we must anticipate their impact.

A. General Issues of Rural Development Policy

1. Diversity

The literature shows very clearly that there are noteworthy regional and ecological differences in the structure of land tenure within Haiti. This variation makes it dangerous to generalize about "typical" patterns. One can make statements such as: (1) the problem of landless farmers is much more severe in some regions than others and on the well-watered plains than elsewhere; (2) the state lands seem to be primarily located in the hillside zones, with the Artibonite being a major exception; (3) undivided family lands are much less prevalent on the plains than on the hillsides; (4) in some areas (notably in irrigated farming), sharecropping is more prevalent than renting; in others (notably extensive hillsides with a lot of state lands), the reverse is true; (5) the share of smallholdings in the total land area varies substantially by region. The regional diversity is, at least in part, a function of ecology: both the plains and the mountains are drier in the north than the south and therefore are (a) less productive and (b) more likely to exhibit extensive production patterns in the absence of irrigation. As the ADS-II data become more refined and eventually cover the entire country, they will permit researchers to study the economic and social implications of this diversity; for the moment, however, we cannot go very far beyond these blanket statements.

2. Transactions Costs

One of the principal themes in the literature about land transfers is that high transactions costs are a major constraint to the modernization or formalization of land purchases, sales, inheritance, and titling. There is little evidence given (either qualitative or quantitative) to support this idea, however. Instead, the point is made through the delineation of general patterns such as: "the farmer who wants to sell his land goes to the notary, who charges x gourdes per transaction (or per carreau); this tends to amount to one-third of the value of the land; this is prohibitive given the low productivity of the land, and thus there is little use of the formal system." The conclusion to be drawn if such a story is correct is that farmers would in fact use the formal system if it were cheaper to do so. In that case, the policy implications would be: (1) introduce measures to reduce the cost of land transactions such as increasing the number of notaries (the law restricts their number amazingly, presumably to guarantee them adequate incomes), subsidizing the surveying process in some way, reducing the number of steps required to achieve a recognizable title, providing low-cost rural legal services; (2) educate farmers to apprise them of the newly facilitated land-transfer process, perhaps with mobile extension crews.

The assumption underlying this kind of analysis is that farmers in fact want to formalize their transactions. On the other hand, the literature also suggests that many rural residents perceive ambiguity of tenure to be an advantage--a factor protecting them from interference from outside forces such as government and speculators. The history of the marrons is the history of people who wanted to have as little as possible to do with officials and officialdom, and the hillsides are redolent with that history. Farmers appear to have adapted to the present informal situation, and there is no reason to expect them to move voluntarily to a more formal system unless the socioeconomic

environment changes in such a way as to force them to do so to defend their land rights. We feel that the research to date has not given us sufficient insight into likely farmer reactions to policy changes such as the ones suggested above. Therefore, we would propose that such tests be an important part of the fieldwork LTC is hoping to undertake as preparation for the TWMP baseline survey.

B. Specific Watershed Management Issues

1. Tree-Planting and Tenure

The operational assumption of the Targeted Watershed Management Project appears to be that farmers will plant trees only on owned land.* PADP, in fact, has thus far dealt only with landowners and suggests planting trees only on owned land that is not rented out or sharecropped.** This assumption needs to be tested by observing the actual pattern of tree-planting in the region for the different projects which have attempted to persuade people to plant trees.

The work that has been done thus far (see Conway 1986) suggests that tree-planting on unsurveyed, inherited land is quite common, in spite of the frequent conflicts caused by other heirs' attempts to use the land or the trees. On rented or sharecropped land, tree-planting also occurs, undertaken sometimes by the landlord and sometimes by the tenant, but usually under special circumstances of landlord-tenant relations. These studies should be followed up to learn what made farmers willing to plant trees in spite of the apparent absence of tenure security. Conway (1986) summarizes this point well:

Project participants are planting their seedlings under a wider variety of tenure conditions than might have been expected, for a variety of reasons. Farmers are planting their seedlings on land which they feel secure about, regardless of its land tenure category. . . . When they were planting on "insecure" land they were often using the seedlings as a strategy to acquire that land (Conway 1986:37).

There is a difficulty with this conclusion, however. We are still assuming that tree-planting occurs only on land which farmers perceive to be securely held, even if we no longer associate security with any particular land tenure status. This is tautological: we are implicitly saying that if a farmer plants trees on a certain piece of ground he or she must consider it to be secure, because otherwise he or she would not plant trees there. Clearly we must

* Although the "Social Soundness Analysis Summary" in the draft project paper suggests that the project should let farmers decide for themselves where to place their project-related efforts.

** Other PVOs deal with groups of farmers: UNICORS, for example, has been rather successful at organizing (or stimulating the organization of) cooperatives, and DRI apparently works with small groups of farmers rather than individuals (USAID 1986a).

learn more about farmers' feelings of security than we know now and also investigate acceptance patterns in other projects and in other regions of Haiti.

2. Cooperation among Farmers

Erosion control and soil conservation are issues which require that individuals work together if viable, durable solutions are to be achieved. The literature is not sanguine about the prospects for cooperation in areas such as these. Murray, for example, argues that Haitian farmers have little real experience with cooperation in the sense of conceding some of their individual freedom of action for the purpose of the larger group. Traditional groups such as *escouads* are not relevant models because their purpose, collective labor in the field, is limited and immediate, whereas erosion control is a slow and continuous process. Murray (1978b) does recommend that whatever groups are organized (which he calls hillside units) be small and composed of farmers whose plots are contiguous.

There is one form of cooperation among farmers in Haiti that has the characteristic of requiring farmers to sacrifice freedom: the water users' groups on irrigation schemes. Could these groups serve as a model for erosion control groups on the hillsides? The similarity between the two situations is only partial, because water users' groups control a resource (water) that has a direct and rapid impact on production, whereas erosion control groups have no readily apparent and appropriate sanctions to apply against noncompliers.*

A further major constraint to cooperation in erosion control, which was frequently mentioned to the LTC team in the field, is the large number of absentee landlords, without whose agreement the other people on the land (whether renters or sharecroppers on private land or relatives on undivided family land) refuse to cooperate. In the case of renters and sharecroppers, the problem is relatively straightforward: a mechanism must be developed to give both landlord

* Water users' groups regulate water flow in tertiary and quaternary canals by establishing water rotation schedules, and they police themselves. It is clearly in the interests of each farmer to be vigilant about the compliance of others. Threats of cutoff of water as a punishment for cheating work very well as deterrents. In the case of erosion control, farmers who refuse to cooperate in building or maintaining physical structures, or in planting or caring for trees and shrubs, cannot easily be punished from outside--there is no analogue to denial of water--without trespassing on their land. It should be noted, however, that the new spirit of cooperation among irrigation farmers does not extend infinitely far. In a meeting with several presidents of water users' groups of the Avezac system, we asked them if they were aware of the relationship between erosion in the watersheds and their own difficulties in obtaining a sufficient and stable supply of water. They said they were aware of it and thought that something should be done. We then asked if they were willing to help out in some way toward the solution of the erosion problem, either by financial contributions or by ceding some land to people who would move off the hillsides to reduce pressure on hillside lands. They appeared shocked and refused categorically to consider either possibility.

and tenant the long-term perspective required for the acceptance of erosion control. In the case of undivided family lands, the situation is more complicated. It may well be that absent relatives do wield sufficient potential authority over land use to make the owners who remain on the land unwilling to commit themselves to permanent changes. On the other hand, our brief time in the field led us to wonder if this is not simply an excuse, given by people whose reflex reaction to all interventions is to avoid participation.

C. Summary Assessment of the Literature

The major gap in the existing literature on land tenure in Haiti is that few reports have asked one the most important questions of all--what is the impact of the existing tenure structure on socioeconomic performance of agriculture?--and even fewer (perhaps none) have answered it. There are a large number of excellent anthropological case studies--Murray, Smucker, the Institut Français study--which give us a good deal of information about tenure structure in small communities. Most of the socioeconomic studies, whether based on surveys or small village-level cases, describe the various tenure categories and structures but do not relate tenure to any other aspects of the society. Unfortunately, therefore, all the effort that has gone into understanding the objective land tenure situation has not contributed sufficiently to the understanding of the development issues surrounding tenure: willingness to invest, willingness to adopt new techniques or different crops, willingness to cooperate with others, etc.

IV. CONCLUSIONS AND RECOMMENDATIONS

Our interviews with Haitians and expatriates working in Haiti revealed that land tenure issues are currently the focus of a great deal of heated debate. Although most people stress the need for change, the kinds, extent, and rapidity of change advocated vary considerably. To help clarify the issues, we have developed a preliminary set of issues which need to be addressed in any attempt to formulate land tenure policy in Haiti.

In discussing the alternative solutions, we draw upon the knowledge gained through our recent research to identify areas where caution is advised and where additional information is required before action can be taken. We have found that the absence of good information is one of the primary obstacles to the formulation of appropriate and coherent policy; there are, to be sure, a large number of excellent micro-studies conducted by social scientists, but their findings are site specific. What we do not have is a national database on land ownership and land use which can be used to determine the quantitative importance, and therefore the ordinal priority, of the myriad problems identified in this report. This recommendation for more research and more data should not, however, be construed as a recommendation for inaction: many of the problems are obvious and can be tackled simultaneously with the research. Our emphasis on the inadequacy of the information base is partly aimed at challenging the unjustified confidence of some of the participants in the tenure debate that their knowledge can be universally applied.

A. Policy Issues

1. Is a Cadaster Justified?

The present decentralized, informal arrangements which regulate land transfers and cope with land disputes are adequate for a basically subsistence, low-technology type of agriculture. There is no need for interaction with the larger community; land sales and intrafamily transfers can be accomplished with a minimum of paper and risk. The situation will change as (if?) agricultural development takes place. The reasons for this are clear: intensification of agriculture requires inputs, which require cash or credit; the rise in land values may induce farmers to attempt to protect their assets via formalized records of transactions; and the increased commercialization of production which usually is a concomitant of intensification may integrate farmers more closely into a completely monetized system. In such a situation, the arguments in favor of cadasters are stronger.

It is no accident that the principal attempts to conduct cadasters have come in the most productive agricultural regions of the country, the Artibonite and the Gonaïves plain. Even there, however, success has been far from complete, and it is not possible to say that the existing cadasters have made a positive contribution to the land market in the region. There are several reasons for this. First, a cadaster is not a one-shot event but requires continual updating; the administrative and recurrent cost implications of this are far from negligible. Second, cadasters are not universally welcomed: while

there is some controversy over why the land records offices were a target of popular political action during the events of early 1986 in Gonaïves, there is no doubt that they were indeed a target. Third, cadasters are expensive, especially if both physical and legal sides of the cadaster are to be accomplished (a physical cadaster could, possibly, be done using existing aerial photographs). On balance, we feel that it is premature to envision the expenditure of large amounts of money on cadastral activities, even in the most agriculturally advanced regions such as the Artibonite. Rather, we suggest that ONACA sponsor socioeconomic research on the cadasters that have already been done in an effort to understand their effects on farmers and farming.

2. What Should Be Done about the State Lands?

One of the most astonishing aspects of the Haitian land tenure situation is the general lack of readily available information about state lands. It is thought that the state is the largest landowner in the country, but there is little information about how much land it holds. It is thought that the state could earn a lot more than it now does from this potentially valuable asset, either by increasing rents or by selling part of it at market prices, but there is no information about how much rent is now collected (from subletters at least) or about how much it might be worth. It is thought that the *fermiers d'état* are gaining *rentes de situation* from the subletters far in excess of what is justified, but there is no information about what rents would be justified. It is thought that the state lands are among the most eroded in the country, but there is little information about the location of state lands which could be used to document this. It is difficult to elaborate a framework for policy dialogue on the state-lands issue in the absence of practically any information on questions of this degree of importance.

We believe that it is premature to envisage a dramatic change in the government's policy toward the use and tenure status of the state lands, although we do believe that such change is necessary. The most appropriate way to proceed would be by a series of pilot programs, tailored to the specific types of state landholding problems which exist in different parts of the country. For example, in remote areas, where verification of leasehold size and effective use is difficult, one could suggest modest increases in the annual rental fee, but this has been done approximately once per decade in the past and there are legal provisions that ensure that it will continue to be done. One could suggest annual rather than decennial reassessments of the land values upon which rents are based, but, given the present system of assessment (by "volunteers" who report to the Contributions Office), it is unclear how workable the change would be. One could suggest that renewal of leases be made less automatic, with an added requirement that *fermiers d'état* prove the accuracy of their claims about the area of their rented land, but this would be either prohibitively expensive--if licensed surveyors are used--or highly dubious--if the "volunteers" are used. Given that only the Contributions Office has any administrative responsibility for state lands and that this office has no resources to fulfill its responsibility, there is no apparent means to enforce any changes in regulations about state land management at the present time.

One idea we heard being discussed during our stay in Haiti in September 1986 was the distribution of state lands to farmers. We are concerned that

such a program may worsen the size distribution of land if it is done without careful preparation. In some areas, such as the Ile de la Gonave, most state leaseholders are small farmers and there is little subletting, but in other areas this is not true. It is clearly not advisable on equity grounds to give title to leaseholders where some of them have managed to gain access to large amounts of state land. It is also not necessarily advisable to adopt a straightforward land-to-the-tiller program on such lands, even though it would circumvent the inequities of granting the land to the leaseholder. The reason is that we cannot be certain that the subdivisions which have evolved under a subletting situation would be appropriate under individual management. In addition, of course, public debate on such a policy would be the surest way to set off a wave of evictions of subletters.

In the past, the state lands have served as a means of rewarding loyal supporters of governments--in the nineteenth century through land grants and more recently through the granting of quasi-permanent leaseholds. While this has been a great benefit to governments, it has not necessarily been the best possible solution for the nation as a whole. Once the nation learns how much land the state possesses, of what quality, it will be able to formulate coherent policy with clear knowledge of its socioeconomic consequences. If it has not already done so, the Government of Haiti should pursue donor funding for an inventory of holdings. In the interim, the World Bank's interest in determining ways of enhancing revenue from state lands can be pursued, along with experimental programs of titling and registration in areas where direct renting predominates.

3. Should Formal Legal Procedures Be Strengthened?

There are two aspects of this issue: the degree of legal tenure security stemming from the possession of titles or from the formal terms of rental and sharecropping contracts, and the degree of subjective security felt by farmers. Most of the literature seems to equate the two, although we cannot find any research results which justify this assumption. Even if farmers would respond in the affirmative when asked if they felt more secure on, for example, land they owned outright than land they rented from an absentee landlord, the situation is more complex than this. Increased formal security may in fact increase the potential for loss of land by small farmers when intensification of irrigation or other modernization occurs. Policy interventions such as titling may therefore lead to more land sales (a point which also has worried Murray) and hence less measured stability of ownership of parcels. Not only is it easier for farmers to alienate well-documented land, such land is also more attractive and more accessible to outside buyers. Thus there may be negative, unintended consequences of a securitization program.

On the other hand, it appears that thus far small farmers have little to fear on the latter point. There does not seem to be much evidence of a trend toward concentration of landholdings due to accumulation of land by speculators or by other relatively well-off people, although that may change once a stable government creates conditions which reduce the uncertainty of agriculture. In most irrigated areas, the literature shows, average holding size has been decreasing; inheritance and other sources of fragmentation have outweighed any possible accumulation.

Some of the anthropological evidence adds weight to our caution about programs that increase alienability of land. If Murray, Plotkin, and others are correct, many land sales are motivated by ritual requirements, especially burial expenses, rather than by strictly economic concerns. This implies that many land purchases are made with a view toward the eventual sale of land for ritual purposes. In other words, an explanation of the amazingly active land market is that one of its primary purposes is to serve as a Christmas-club-type savings bank, a store of value which people use with the full knowledge that they will resell the land when the need arises. A possible outcome of increasing legal security brought about by the acquisition of individual titles might be that farmers then find it more difficult to resist family pressures to respond ostentatiously to ritual demands.

A further corollary is that increasing tenure security may not help projects such as USAID's Targeted Watershed Management Project. First, if farmers perceive owned land to be more readily salable, they may not consider it worth upgrading or maintaining. Certainly there is less reason to make erosion-control investments on land which has been earmarked for sale to cover burial expenses than on land held with the intention of keeping it as a family income-producing asset for the foreseeable future. This is another case where security and stability have different impacts: it may be misleading to focus attention of the project on owned land, i.e., land that is held securely, rather than on land which is held stably.

4. Can Improved Access to Credit Enhance Tenure Stability?

The rural credit problem is almost universal in developing countries. Farmers need intra-annual credit to finance input purchases and inter-annual credit to purchase farm implements and land. In Haiti, there is no formal-sector credit available to smallholder farmers (below 5 carreaux for the BCA) outside of specific project areas. The literature presents strong evidence that there is a strong demand for credit, which currently is supplied by speculators and other informal lenders at terms much less favorable than formal institutions generally set. This suggests that it would be desirable to extend the reach of such institutions as BCA to smaller holdings.

The question of the relationship between credit and land tenure stability is complex, however. On the one hand, improved access to credit should reduce the number of distress sales of land by farmers in temporary need of cash due to crop failure or (if the credit is available for uses beyond agriculture) a family death with its often substantial burial expenses. On the other hand, sustainable improved access to credit will occur only if land is used as collateral for loans. International experience has shown that unsecured credit is perceived by farmers as a grant rather than a loan, and thus credit programs suffer from low repayment rates and quickly become insolvent. Once land is mortgageable, land may be forfeited if farmers find repayment on schedule impossible. Thus increased access to credit has two possible impacts on the stability of tenure, one positive and the other negative. It is an empirical question whether the overall net effect will be one or the other.

5. Should One Modify the Size Distribution of Landholdings?

One of the most pressing issues in the land tenure field is agrarian reform. As it has been implemented in many Latin American countries, land reform has two basic elements: first, redistributing land from large landowners to small farmers--who may or may not have been tilling the land before the reform; and second, increasing the security of tenure of those farming the land. In this section we discuss changes in the size of holdings--both the breakup of large landholdings as has been done in many land reforms and the consolidation of holdings that are considered too small for one reason or another. Then, in the next section, we address the issue of increasing the security of tenure of the tiller of land.

There is no good empirical evidence that indicates a strong relationship between farm size and farm productivity in Haiti. While the international research literature* appears to show a negative relationship, i.e., that smaller farms are more productive than larger farms, the "larger" farms to which this literature refers are often substantially larger than anything Haiti possesses (other than the few agribusiness plantations).** On the other end of the spectrum, the evidence is much less clear in showing that the negative relationship extends down to the "microfundia" size, which constitutes a substantial proportion of Haitian farms. Also, the international evidence does not take adequate account of the ecological diversity of farms--irrigated farms are smaller on average than rain-fed farms; since the former are (or ought to be) more productive, there is a built-in bias towards a negative relationship if both types of farms are studied.

Similarly, there is no evidence that farm management in Haiti is any easier or harder on large farms than on small. Neither the arguments in favor of consolidation--better coordination of soil conservation initiatives, fewer boundaries on which to install fences or which impede the application of new technologies such as tractors--nor those in favor of the subdivision of larger units (undivided family lands or the few estates) to permit easier management by operators with few management skills are backed by research findings. Well-reasoned arguments about this set of concerns, which are based on pure logic or on experience from other countries, are insufficient for the purpose of implementing significant policy changes.

There are other reasons for envisioning a change in the distribution of landholdings which do not require research evidence. The political arguments in favor of the breakup of large estates are well known and stand or fall by themselves. Social-justice arguments for redistribution are based primarily

* As summarized by Berry and Cline (1979).

** Plantations constitute a different type of farming system, which cannot be readily analyzed in the same framework as other types of farms in the Haitian context. In their modern form, plantations sell all their production off-farm, employ all wage labor and no "family labor," and usually have professional management and a corporate structure.

on moral criteria which data cannot influence. Ideological arguments that oppose redistribution because it is interference in private affairs, or those that favor it because it is a prerequisite to a certain type of society, also do not depend on evidence, but only on the rhetoric of their proponents. As researchers, we have chosen not to address these arguments in a forum such as this, even though we recognize that they are frequently paramount during discussions of land policy. As researchers, we must argue instead in favor of increasing the knowledge base upon which to build a rational and productive land distribution policy. We should state, however, that we do not oppose redistribution in cases where knowledge about both efficiency and equity is adequate, for example, on the now disused sisal plantation. Even there, however, we would argue for the careful preparation of the redistribution program rather than a superficial and simplistic solution to what is always a complex problem with long-run implications.

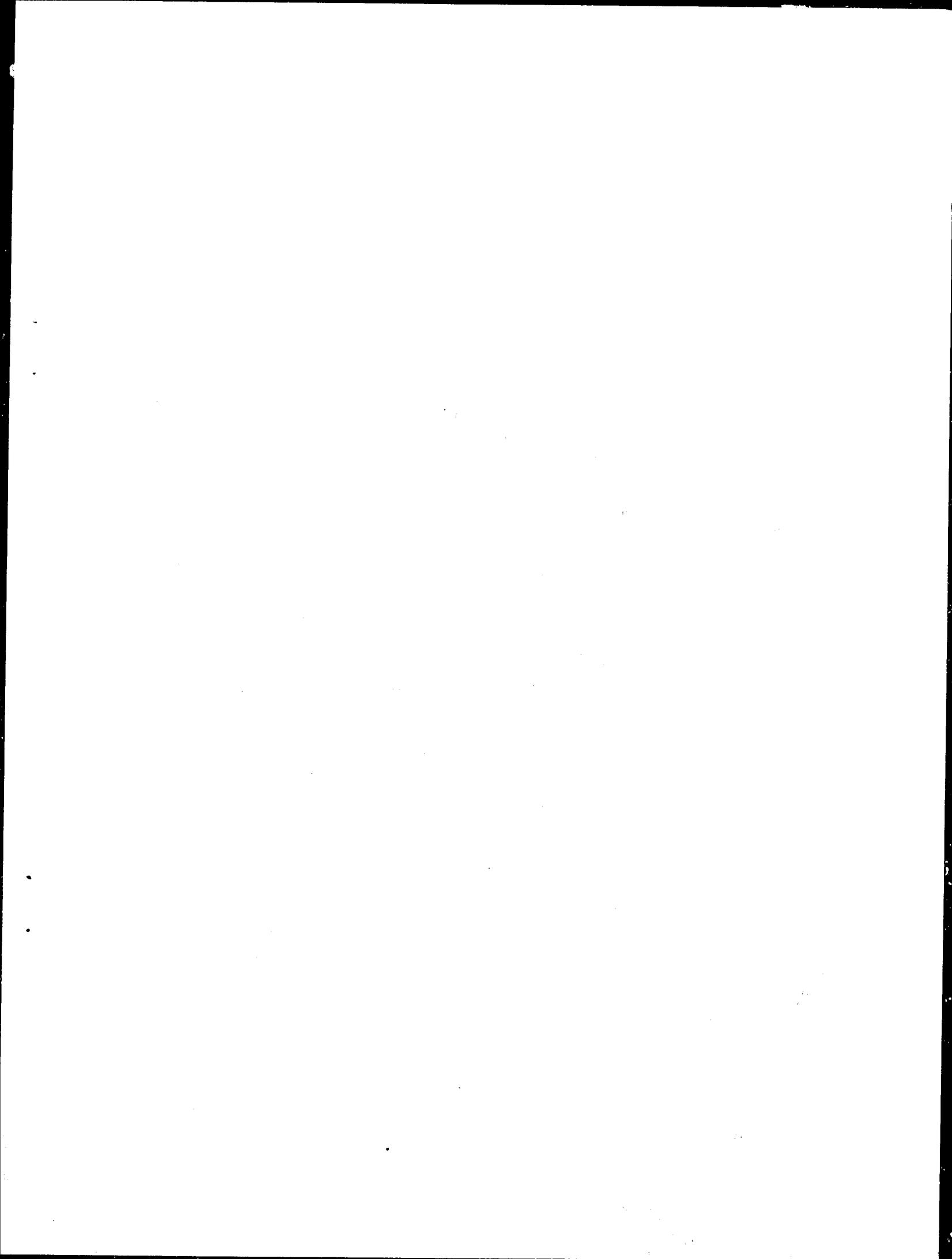
6. Should Policies to Increase Farmers' Security of Tenure Be Implemented?

Here we address the second question with which land reforms deal: the legal security of tenure of those farming the land. Again, the arguments can be divided into those for which research can help to guide policymakers and those for which it cannot. In the former category, it is frequently hypothesized that farmers will not be willing to make investments in land improvements or protection unless they have security of tenure. This is frequently assimilated with fee-simple ownership documented by title deeds, and, as we have seen, many USAID-financed projects make this assumption. If this is correct, the appropriate land reform activity to undertake would be a titling and/or a registration program to increase farmers' feelings of security and hence their willingness to invest. One should also recall Murray's worries about the impact of titling each plot of land--that plot-specific deeds make farmers vulnerable to selling off their land to outsiders.

But there are other possible ways to increase the security of farmers without titling. Murray's counterproposals for undivided family lands are to verify and validate familial master deeds and to reinstitute prescription rights for families whose master deeds have disappeared. On state lands, the tenure security of the *fermier d'état* is virtually absolute--requiring only annual trips to the Contributions Office to pay the rent; the subletter, on the other hand, has no more security than if he were renting private land. It is conceivable that subletters on state lands and renters and sharecroppers on private lands could be given more tenure security in the form of longer-term contracts with substantial penalties for early termination by landlords. The enforcement problem is, however, severe.

7. Should Policies Be Regionally Differentiated?

The literature shows that there are substantial differences among regions, whether they are site specific or ecologically determined. Clearly, policies designed to work in one region--for example, the Artibonite, with its highly commercialized, monocrop agriculture and history of land disputes--may be totally inappropriate elsewhere in Haiti, even in other irrigated farming areas with diversified farms and less tension over ownership and access to land, such as the Cayes plain.



V. AGENDA FOR RESEARCH

A. The Extent of Large Landholdings and of State Lands

1. Assessment and Analysis of Existing Official Records

Our initial work in the Cayes region demonstrated that it will be feasible to make a good deal of progress toward estimating the quantity of state lands. The principal mechanism for this work will be a detailed examination of the records held by the local Contributions offices, which serve as collectors of rents paid by renters of state lands (*fermiers d'état*). The ease with which we gained initial access to the records may, however, prove deceptive if we try to be systematic. In September 1986, the district agronome, M. Banatte, introduced us to the head of the Cayes office of the Bureau des Contributions, who in turn introduced us to the head of the Camp Perrin office. The head of the Cayes office gave us the general idea of the records kept there and of the registration procedures followed. He said that we would need authorization from Port-au-Prince (the Direction Générale des Impôts) before being able actually to consult the records. In Camp Perrin, however, we were able to leaf through the registry of state lands for a few minutes and realized both the potential and the limitations of this kind of data source. Nearly everyone who pays rent at that office reports that they are renting 1 carreau, the minimum permissible under the laws governing the use of state lands. The stories we hear from outside sources suggest, however, that in fact most of the *fermiers d'état* rent many *carreaux*. Thus at the Contributions Office we will be able to get reliable data only on the number of *fermiers*, not necessarily on the area they have rented. The only apparent means to get the information on area is to interview a sample of the *fermiers*, armed perhaps with enlargements of aerial photos, to learn their true holdings. This is likely to be a very sensitive issue with the *fermiers*, given that it will be obvious to them why we are looking for the information; therefore, we will need to proceed very carefully.

The Contributions Office also serves as a land registry office. Most of the state land has been transferred to private hands over the years, and such transfers are still taking place. Every time the state transfers land to someone, a record of the transaction is established and money is paid. We did not get a good picture of how complete these records are, nor how far back in time they go. If the condition of thirty-year-old land-rent records is any indication, however, deterioration of paper due to climate and frequent handling has probably erased most records any older than that. Still, there are few better centralized sources of information on land ownership, so we propose to seek authorization to study these records.

2. Assessment and Analysis of Census and Survey Data

Our understanding is that the most recent census of population (from 1982) has little useful information about agriculture and none about land tenure. This means that for recent information one is limited to broad-gauged surveys, such as ADS-II, and whatever one can learn by communicating with the authors

of published reports on studies and development projects. The problem with published data is that it only presents what the authors had in mind, which frequently is inadequate for our purposes. Nothing illustrates this better than the UNDP Artibonite report, which has a section entitled "rendements, propension à la vente et mode de tenure," which proceeds to present tables of the three topics separately rather than showing the effect of one (e.g., tenure) on the other two. Even then, however, one can do something, as is illustrated by the statistical exercise attached as Annex I. Clearly the Land Tenure Center's proposed research could benefit from the ADS-II data, as, of course, could local researchers, especially social scientists. We do have concerns about the usefulness of that data for purposes other than the direct one for which it was intended.

B. Analysis of the Operation of Legal Institutions

One of the elements of any policy dialogue on land tenure in Haiti will be the capacity of existing Haitian institutions to respond to the pressing needs of the new political order. When the LTC team was in country in September-October 1986, it was evident that there was very little information available to USAID about the manner in which the legal system could adapt to new social policies, and Norman Singer of the team devoted a good deal of his time to this question.

We attach a copy of a proposal developed by the team, which has been submitted to USAID/Haiti for consideration under the Administration of Justice program. It derives from discussions Dr. Singer and other members of the team held with USAID and Haitian government officials, notably officials of the new Tribunal Terrien in St. Marc. The proposed research has four goals:

- (1) to understand the operation of the present system of land law and land dispute resolution institutions, especially the Tribunal Terrien;
- (2) to determine the contents of a proposed public education program dealing with land law and institutions;
- (3) to develop a system for the delivery of rural legal services;
- (4) to examine alternative dispute resolution institutions, such as water users' associations and their hillside analogues, erosion control committees.

C. Studies Conducted in Anticipation of the Targeted Watershed Management Project

One of the original goals of the request to LTC by USAID/Haiti was to conduct case studies of tenure structure within the project area as a precursor to the design of a land tenure baseline survey for the project. This activity was conducted during 1987, and the report on its accomplishments is issued as a companion to the present document, as LTC Research Paper no. 94.

ANNEX A

GENERATING RESULTS FROM PREVIOUSLY TABULATED DATA

Sometimes the inadequacy of analysis one finds in statistical reports on crucial issues is dismaying. Often, the most frustrating thing is that the author is the only person who has access to the data to be analyzed, so that the use that she or he makes of them is their only use. A particular example of this is the UNDP report series on the Artibonite, one of the most important areas for the future of agricultural development in Haiti. One of the research reports in the UNDP series is entitled, "Rendements, propension à la vente et mode de tenure d'après l'enquête ODVA-DARNDR de 1977." With a title like that, one would expect some discussion of the relationship between yield and sales propensity, on one hand, and tenure, on the other. But there is not such a discussion: there are tables showing all three separately, and the only hint that there should be some relationship between tenure and production is a one-paragraph discussion of attempts to correlate yields and farm size. But all is not lost: by making some rather strong assumptions, one can combine the information from the separate tables to create a relationship where none existed before. This annex explains how it is possible to do this in the case discussed above.

One table presented by UNDP gives, for thirty-four habitations in the Artibonite, data on number of farms, total area, production, and commercial sales of rice. Another table gives, for ten **sections rurales** which encompass the habitations covered in the other table, data on tenure status: whether the farmer is a proprietor, sharecropper, renter, or a combination of the three. Over 90 percent are in a single-status category, which, by the way, is a result quite different from that found elsewhere in Haiti. For each **section rurale**, one therefore can know (a) the proportion of farmers in each tenure category and (b) output and sales data. One can then investigate the relationship between tenure and output or sales. For example, one could test the hypothesis that in sections where there is a larger proportion of farm owner-operators, there are higher (or lower) yields per hectare. The statistical assumptions required to conduct this kind of hypothesis testing are rather stringent but not very important in practice. The real-world, explainable assumption which is important is that, in using the total for a zone as the individual observation, we are ignoring all diversity within zones and investigating only inter-section variation. Having recognized this problem, we can use standard statistical techniques to handle the test of this sort of hypothesis.

To be specific: one of the important variables to explain is the output per hectare or **carreau**, i.e., the yield. If one can design a tenure system which improves yields, other things being equal, that would be an argument in its favor. There are two possible dimensions of tenure which the UNDP data permit us to investigate: holdings size, and tenancy status. One can run a multiple regression of yield on average holdings size and, for example, the percentage of proprietors.

One can also investigate the relationship between commercial sales and tenure. It is interesting to do so because frequently the increase in agricultural production occurring as the result of a project, be it tenure reform or technical change, is entirely consumed by the farm family. While nobody would dispute the argument that this improves the national welfare, projects frequently have the additional goals of increasing marketed surplus and generating sources of money to repay the costs of the project (or at the very least to maintain and renew equipment and inputs). If self-consumption absorbs much of the increase in output, therefore, the project may not be either financially viable or socially desirable.

The basic data needed for this analysis are shown in Tables A1 and A2, and the results of the regression, in Table A3. The inadequacy of the data is obvious--we have only ten observations, thus seven degrees of freedom for the three-variable multiple regression. With this weakness in mind, we can still state that there is a positive relationship between yield and holding size, and also a positive relationship between yield and the share of owner-operated farms. The same results hold for the relationships between sales and the two explanatory variables. The coefficients are not significantly different from zero by the standard statistical measure, but the fact that they are twice as large as their standard errors suggests that they probably would be significant if we had a larger sample.

The interpretation of the coefficients should be as follows: as the share of proprietors in total farmers increases by one percentage point, the yield increases by about 0.145 **barils** and sales per **carreau** increase by about 0.175 **barils**; an increase in average farm size of 0.1 **carreau** would lead to a yield increase of about 1.01 **barils** and a sales increase of 1.08 **barils**. In other words, a ten percentage point increase in the share of proprietors will raise yields by approximately 6 percent, and sales, by approximately 11 percent; or (although this is pushing it a bit) going from the current average of about 60 percent proprietors to 100 percent would raise yields by nearly one-fourth and commercial sales by 40 percent. The results suggest that access to the original individual data, or even the data at the habitation level, would be likely to provide results which could be used with confidence as inputs into planning.

TABLE A1

Modes of Tenure in the Artibonite, 1975/76
(# of farmers, by Section Rurale)

SECTION RURALE	TENURE TYPE				
	Total	Propriétaire	Fermier	Métayer	Other (mixed)*
Bocozelle	97	65	23	9	0
Liancourt	95	60	24	5	6
Belanger	100	39	26	9	26
Villard	100	77	9	0	14
Duvallon	80	59	15	0	6
Bac Coursaint I	151	114	21	2	14
Bac Coursaint II	109	51	38	7	13
Pothenot	104	68	21	6	9
Desdunes	102	52	40	3	7
Pont-l'Estere	113	82	24	1	6

SOURCE: UNDP/ODVA, Haiti: Aménagement Hydro-Agricole de l'Artibonite, Etudes Agro-Socio-Economiques, Document no. 19 (Port-au-Prince, 1984).

* Farmers who worked land under several tenure modes (e.g., propriétaire/métayer). Unfortunately, in this case the area farmed under each tenure mode was not given. Otherwise, one could have used the much more sensible measure of land area in each tenure type--rather than number of farmers in each tenure type--as the explanatory variable.

TABLE A2

Area, Production, and Sales:
Rice Cultivation in the Artibonite,
1975/76

	JUNE-JULY 1976 HARVEST				NOV-DEC 1976 HARVEST			
	Farms (#)	Area (cx)	Output (tons)	Sales (tons)	Farms (#)	Area (cx)	Output (tons)	Sales (tons)
Bocozelle	86	33	789	488	86	33	817	503
Liancourt	117	27.9	512	256	139	31.8	634	340
Belanger	50	11	189	81	83	23.7	450	220
Villard	169	73.6	1991	1248	171	74.1	1746	1143
Duvalon	145	33.1	600	374	145	33.1	610	377
Bac Coursaint I	135	59.8	1889	1389	135	59.9	1791	1331
Bac Coursaint II	227	55	1036	592	267	67	1354	792
Pothenot	203	86.2	1937	1044	194	79.2	1671	839
Desdunes	53	41.6	1030	642	53	41.6	930	613
Pont-l'Estère	169	113.5	2873	2062	172	116.1	2820	1939

SOURCE: UNDP/ODVA, "Haiti: Aménagement Hydro-Agricole de l'Artibonite: Etudes Agro-Socio-Economiques," Document no. 19 (Port-au-Prince, 1984).

TABLE A3

Artibonite: Regression Results

DEPENDENT VARIABLE	COEFFICIENTS ON INDEPENDENT VARIABLES			
	% Proprietors	Average Farm Size	Constant	R ²
Yield	0.14496 (.0776)	1.0148 (.538)	9.287	.536
Sales	0.17091 (.0779)	1.0847 (.540)	-1.323	.592

NOTES: (1) Yield measured in barrels per carreau; (2) % proprietors measured as the share of farmers who farmed their own property exclusively; (3) farm size measured in tenths of a carreau; (4) standard errors in parentheses below coefficients.

In larger samples (say, $n = 20$ or more) a value of the t -ratio (the regression coefficient divided by its standard error) of greater than 2 would indicate statistical significance of the coefficients at a 95 percent confidence level. Here, with $n = 10$ and hence only 7 degrees of freedom, a t -ratio of 2.365 is required for significance, so the test falls short everywhere, but not by very much.

ANNEX B

DISCUSSION OF TORBECK LAND DISTRIBUTIONS

The attached table supports our contention that it is not possible to make quantitative generalizations about land distribution patterns, even within small areas. Table B1 presents the data from Torbeck, a small zone within the Cayes plain and shows how much variety the size distribution can exhibit within a few kilometers. The 391 plots whose ownership is detailed in the project document (totaling 235 *carreaux* or 3,761 *seizièmes*, that is, 303 hectares) are not of equal sizes under any definition of equality, nor is there any close resemblance among the four subareas for which the data are presented. In the area labeled Rive Droite, less than one-fourth of the land (but 71% of the holdings) is in plots of 8 *seizièmes* or less, compared to nearly half the land (and 81% of the holdings) in the area labeled Rive Gauche. This demonstrates that there are three very different types of distribution among the four areas: Maillard has a relatively equal distribution, with a relatively small number of micro-parcels (7.8% of 1/16 or less) and a fairly substantial number of middle-sized plots (37% of parcels between 4 and 16 *seizièmes*). Rive Gauche has the most equal distribution of all, but with a much greater proportion of micro-parcels (13.3%) and no plots greater than 2 *carreaux*. Rive Droite, at the opposite extreme, has nearly half of its land in plots greater than 2 *carreaux*, and consequently has an average plot size twice as large as the other areas. Maillard I is something of a hybrid, with a low-end distribution similar to that of Rive Droite but without as large an amount of land held in large parcels.

We have no information on the tenure status of the plots, as they are listed in the owner's name (and the same owner may have more than one parcel listed, so we cannot even use these data to describe a distribution of ownership). This is in contrast with the information from most other sources, which gives data by family ownership or family access, not by plot. One cannot simply compare these different measures with one another, because equality of access, for example, may have little to do with equality of ownership or with uniformity of plot size. Still, one is struck by the wide variation among the distributions: even for the small area and agro-ecologically uniform Torbeck plain, the Gini coefficients range from .487 to .644. These figures are low in comparison to those one gets for other Latin American countries, most of which have Ginis above 0.7 and more than half above 0.8, but it is not really justifiable to compare a small region of one country with the entire farm sector of another (Thiesenhusen 1986).

TABLE B1

Cumulative Distribution of Plot Sizes:
Torbeck Irrigable Area (Cayes Plain), 1980s

RANGE OF PLOT SIZES (in seizièmes de carreaux)	MAILLARD		MAILLARD I		RIVE GAUCHE		RIVE DROITE	
	% of Area Plots		% of Area Plots		% of Area Plots		% of Area Plots	
Up to 1	1.0	7.8	1.9	15.9	2.3	13.3	0.7	10.3
> 1 - 2	5.2	24.5	6.2	33.5	8.5	31.7	1.5	16.1
> 2 - 4	18.5	54.9	15.5	55.5	23.0	58.3	6.1	34.5
> 4 - 8	38.0	78.4	32.5	76.2	46.3	81.7	24.3	71.3
> 8 -16	60.4	92.1	53.9	90.2	63.1	90.0	37.6	85.1
> 16-32	76.4	97.0	70.3	95.1	100.0	100.0	55.2	96.6
Average plot size (in seizièmes)	8.0		8.2		6.8		17.1	
Gini coefficient	0.547		0.581		0.487		0.644 (0.445)*	

SOURCE: Calculated from individual data in IRACO project document, "Projet d'Irrigation de la Plaine de Torbec (Maillard): Mémoire Explicatif" (n.p., n.d.).

* Gini coefficient calculated on area excluding the largest single plot, amounting to 450 seizièmes, which is held in the name of the Contributions Office, i.e., is probably state land which in fact is farmed by many individuals under a system of *fermage d'état*.

GLOSSARY OF TERMS AND ACRONYMS USED IN THE REPORT

<u>Term</u>	<u>Definition</u>
ADS-II	Agricultural Data Systems-II Project, funded by USAID 1982-87
agronome	professional title of holders of degrees from the Faculty of Agronomy, State University of Haiti
BCA	Banque de Crédit Agricole (Agricultural Credit Bank)
carreau	Haitian measure of area, equaling 1.29 hectares or 3.19 acres
cession	Creole term for a lease on state lands
colonne	labor group
DCCH	Développement Communautaire Chrétien d'Haiti (Christian Community Development of Haiti), a PVO associated with the Roman Catholic Church
DRI	Développement Rural Intégré (Integrated Rural Development), a PVO associated with the Baptist Church
escouad	exchange labor group, usually consisting of 4 to 9 people who work together on a rotation basis on each other's land as well as on other farmers' land for a fee
fèm	Creole term for short-term rental
fermier de l'état	holder of a lease on state land
gourde	Haitian currency unit: 5 gdes = US\$1.00
habitation	administrative subdivision, roughly equivalent to U.S. township, but based on colonial-era settlements and without government structures
HASCO	Haitian-American Sugar Company
IHSI	Institut Haitien de Statistiques
jeran	Creole term for (land) manager
LTC	Land Tenure Center, University of Wisconsin-Madison
métayage	sharecropping

mèt bitasyon	landowner of a large farm or plantation who rents out or share-crops much or all of his land
morne	hill, or mountain
ODVA	Office de Développement de la Vallée de l'Artibonite (Artibonite Valley Development Office)
ONACA	Office National du Cadastre (National Cadaster Office)
ONG	organisation non-gouvernementale (nongovernmental organization)
PADf	Pan American Development Foundation, a PVO
potèk	long-term rental of private land
PVO	private voluntary organization, synonym for ONG
section	the smallest administrative subdivision with a local governmental structure (the Chef de Section)
SHADA	Société Haïtlo-Americaine pour le Développement Agricole (Haitian-American Agricultural Development Corporation), a sisal plantation
tè	Creole word for land
tè mine	undivided family land; it is possible that an outsider may purchase the "right and claim" to one of several heirs' share of such land
tè tit	land sold with a notarized title
tè héritage	inherited land
tè honoré	a portion of an undivided family parcel purchased by an outsider, with all heirs agreeing to the sale
TWMP	Targeted Watershed Management Project of USAID, 1987-92
UNDP	United Nations Development Programme
UNICORS	Union des Coopératives de la Région du Sud, a PVO responsible for coffee cooperatives on the west coast of the southern peninsula, associated with the Roman Catholic Oblate Brotherhood
USAID	U.S. Agency for International Development

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