

## CHAPTER 3

### THE LOMAIVUNA DEVELOPMENT SCHEME

#### 3.1 Introduction

This chapter discusses settlement and farming development in Lomaivuna to exemplify the LDA programme. As the most important project, its development affected the LDA's credibility, reputation and future. Its probable motive was to expose the inadequacies of previous agricultural development efforts and a path to be followed for greater productivity. Prior to the scheme, agricultural landuse had been severely constrained by insecure tenancy, lack of productive capital and essential infrastructure. Furthermore, the Fijians' communal land ownership system and ways of life were seen as disincentives to development. The Fijians' traditional practices, which were enforced and protected by the government, conflicted with the modern changes that came with land settlement.

The main areas to be discussed to recount the scheme's development are given below.

#### 3.2 Geographical Background

#### 3.3 Initial Plan, Proposals and Projections

#### 3.4 The Scheme in the 1960s

#### 3.5 Management under the Agriculture Department

#### 3.6 The Present State of the Scheme.

This presentation may help to clarify the scheme's management aspects. Although historical in nature, the aim is to show the LDA's inexperience and its mismanagement of capital resources. In the absence of the much-needed active government support after the decline of banana production, the scheme lost direction and all sense of purpose. Evidence points to lack of organizational expertise, innovation and creativity, over-ambitious planning and the inability to handle the settler-population.

### **3.2 Geographical Background**

Lomaivuna, though just a small area in a small country, has its own geographical character differentiating it from the rest of Fiji. This may explain (partly) why it was chosen for commercial banana production ahead of other possible sites.

#### 3.2.1 Location and Site

The Lomaivuna project is located in the district of the same name in Naitasiri Province (see Figure 2.1 and 3.1). It commands a central position in a hill-country province that extends from the central interior of Viti Levu eastward to the coast at a point about seven kilometres north of Suva. Economically, the site is strategic in terms of the nearby urban markets or the export-port of Suva. The leaseholders have to contend with the vigorous competition on the domestic markets from Rewa Valley farmers and those of neighbouring cash-cropping regions.

Government and other urban services or facilities are accessible due to improved telephone, road and transport links.

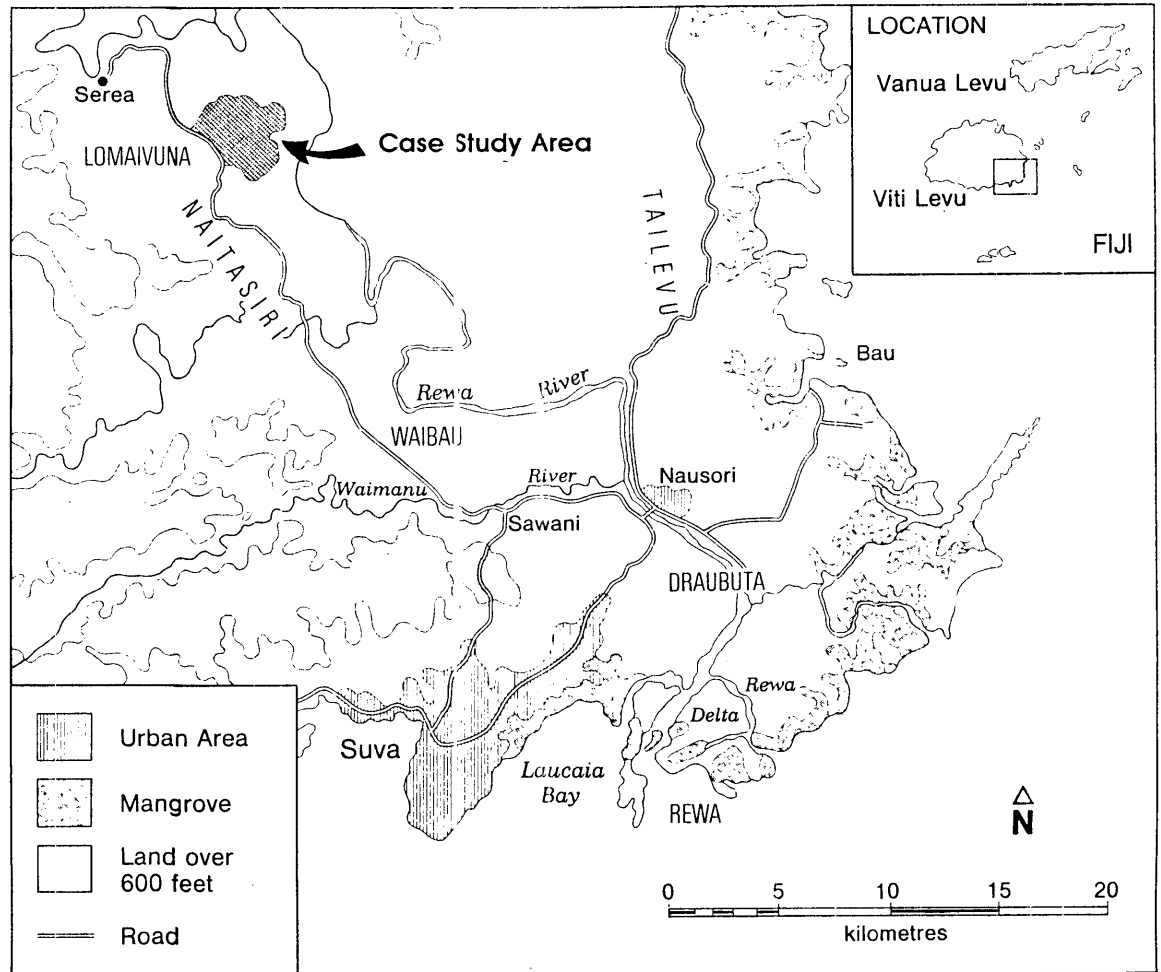


Figure 3.1 : Lomaivuna in South East Viti Levu

### 3.2.2 Geology, Relief and Slope

Geologically, Lomaivuna lies immediately east of the intermediate volcanic zone (tuff and marl sediments) in the inland mountainous country. Probably this parent-rock base was the product of accumulated volcanic deposits from the upper regions. Acidity is an influential feature which can be

attributed to its chemical composition. The effect of erosion and removal of soluble minerals by heavy rainfall contributes to the acidic nature of the soil too.

On a ridge extending eastward from the mountainous interior, Lomaivuna is a rolling hill-country about 180 - 310 metres above sea level. It is characterized by slopes of between 12 - 30 degrees. The ridge edges, where the area begins to descend to the river valley are not within the boundary of the scheme. To the east and north, the ridge slopes to the Rewa River but to the Waidina River in the south.

### 3.2.3 Climate and Weather Pattern

A weak dry season, high rainfall in the wet season, high relative humidity and long sunshine hours characterize the climatic pattern in Eastern Viti Levu. Based on data collected in Suva (Laucala Bay station), the wet zone of Fiji has over 3,000 mm. of rainfall per annum with a weak seasonal distribution (Chandra 1983, 4). About 61% of the annual rainfall is received in the wet season (November to April) during 237 rain days approximately. The intensity of rainfall is high while the annual and monthly variations are low. Its mean monthly rainfall of 300 mm. is far less than that of the mountainous interior. It is common for an average of 1 - 2 mid-year months to experience less than 100 mm. rain.

The wet zone experiences between 1,800 - 1,900 sunshine hours annually, about 46% is received in the dry season (ibid, 7). The

mean monthly sunshine is about 157 hours. Chandra states that rainfall is the basic climatic parameter that affects the distribution and extent of agriculture in Fiji. The thermal growing season extends throughout the year so it is possible for most crops to be cultivated at any time.

The high temperature and rainfall make the weather very humid, particularly in the wet season. Intermittent short heavy rainfall (around mid-day) during hot sunny humid days can be debilitating. This influences a farmer's plan or schedule, performance and productivity. Nights in the hill-country areas are cool (or cold by Fiji standard), especially during the mid-year months. Most farmers use the cooler morning or late afternoon hours to work on their farms.

#### 3.2.4 Land and Soil Types

In Lomaivuna most of the land is owned by Fijians. Some of it, in Native Reserves, are not used in the scheme. Crown land is also found (refer to Figure 3.2). Much of the land is of the Class B type (soil which is suitable for commercial farming only if major improvement is undertaken). Typical of hill-country areas of eastern Viti Levu, humic latosolic (volcanic-based) soil is found. The land has deep soil, probably about two metres or more. Erosion is not as serious as in the Waibau settlement (Overton, 1987). Probably high rainfall and deforestation for farming could have caused greater acidity and infertility. Over-utilization and intensification can be damaging. The long-term

suitability of ginger farming should be reconsidered because it is a high-nutrient consumption crop (refer to Chapter 5).

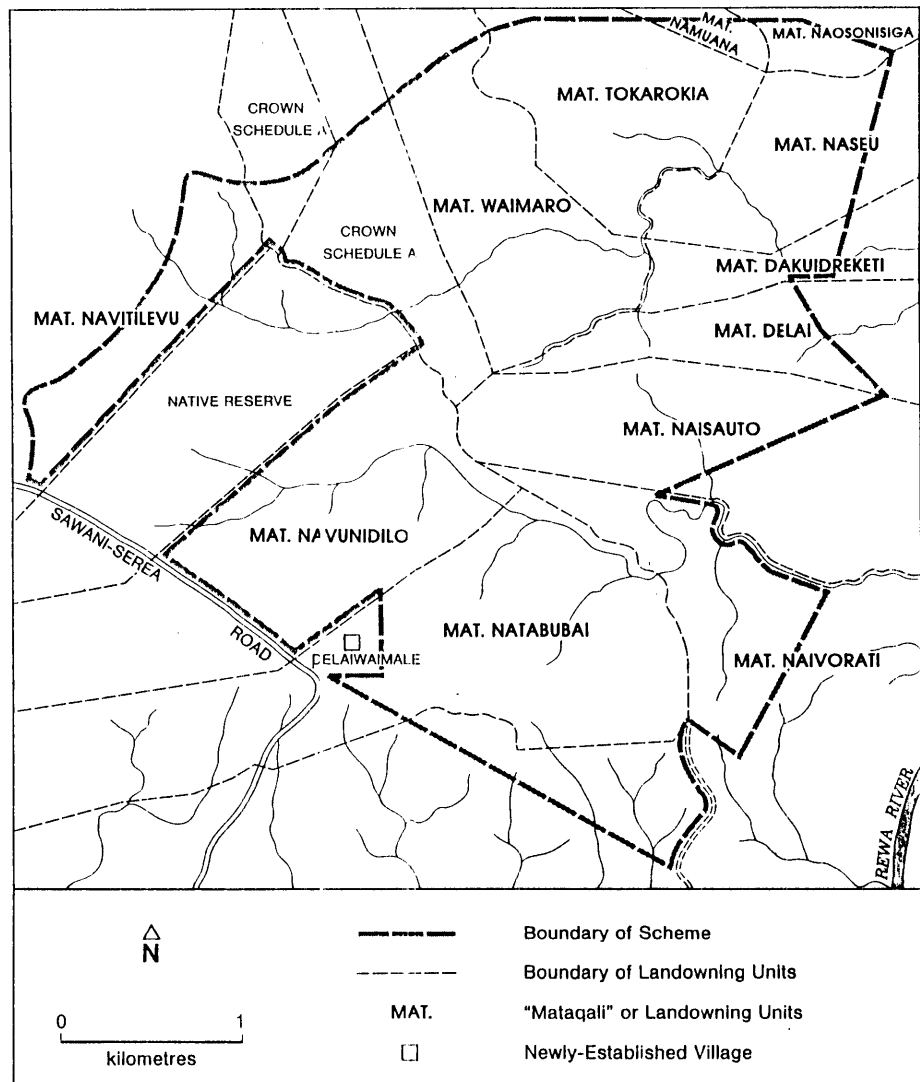


Figure 3.2 : Landownership Patterns in Lomaivuna Before the Scheme

### 3.2.5 Population, Employment and Income

Until the post-war years, the inland half of the province was inhabited mainly by Fijians. The Indo-Fijians moved in and

established small businesses, (mostly retail stores), or took up small blocks of land for farming. None moved further up the valley than Vunidawa, the administrative centre. The province used to experience a high rate of Fijian out-migration to Vatukoula Gold Mine, Nadi Airport and the major urban centres. Before the 1960s, few people came back to the villages because of inaccessibility. The only road (Waidevāra to Suva via Korovou and Nausori) is about 10 - 12 kilometres west of Lomaivuna on the opposite side of the Wainimala-Wainibuka River confluence. It is nearly thrice the distance of the Suva-Sawani-Serea Road with an irregular and inefficient bus service. For Lomaivuna people, the use of that road for urban marketing was difficult and expensive.

The province's economy was stagnant until after the construction of the Suva-Sawani-Serea Road. The people relied on banana production as the major source of income. Subsistence crop (taro and other root crops) surpluses were sold in the nearby urban markets too. A few in the province had gained some income from logging and timber royalties. These generated about \$5,000.00 a year during the 1950s (NLTB, 1989). The establishment of transport infrastructure and the Lomaivuna Scheme have since boosted cash-cropping, commercialization and semi-subsistence agriculture. Fijians with land along the Sawani-Serea Road and its other feeder roads have migrated out of the villages to become 'galala'.

### 3.3 Initial Plan, Proposals and Projections

The scheme signifies the start of the government's plan to expand commercial farming into areas of under-utilized Fijian land. This was aimed at creating ways and means for rural Fijians to participate more actively in the country's economy and gained a source of income. In the process, more Fijians, particularly those with large areas of land, could be motivated to open it up for development. Probably, there was a real need for haste to provide a liberal approach to Fijian rural development. The Fijian land ownership system, conservative as it was, had to be tackled before any move for self-government was made. The assumption could be that the conservatism of the Fijian aristocracy would be hard to over-ride after the country gained independence.

#### 3.3.1 Objectives

Although very little about project objectives was mentioned in participant-agency files, the LDA and the LDO (1961) extract (refer to Appendix B) gave the following:

- a) provision of land for settlement and farming to the landless;
- b) introduction and experimentation of new crops such as tea or rubber;
- c) application of better farming techniques for increased production;



- d) application of modern commercial estate management practices insofar as these could be applied to a settlement scheme;
- e) gearing of production towards exports;
- f) negotiations for and provision of the best available land; and,
- g) the production of premier-quality bananas for export (included in 1962 after it replaced rubber as the primary crop).

### 3.3.2 Land and Lease Arrangement

The LDA's initial plan was to lease approximately 1,620 hectares of Fijian land. Negotiations with the landowning units were done with the cooperation of the NLTB. If there was not enough land, the intention was for the NLTB to negotiate with the Lands Department for some Crown Schedule A Land. For any village near the site, sufficient land was to be put aside for communal amenities. Any farmer or squatter on 'vakavanua' (traditional) tenancy was to be advised not to make any further extension of his farm. Incorporation into the scheme was another option but the size of all farms had to be standardized. If necessary, some 'galala' farmers were to be relocated elsewhere.

The tenure proposal was to apply for a 'head lease' of 66 years. LDA officials had even contemplated applying for 99 years. If either had been approved, it would have revolutionized the native land and lease policy system paving the way for greater changes. That proposal, although ambitious, showed that the LDA

was only exercising its power provided by the LDO. In advising against it, the NLTB stressed that it could not grant anything beyond 30 years, the then prevailing maximum tenure of the annually-renewed Licence to Farm. However, the NLTB would look into means of securing a better tenure. Once land was approved, the LDA was to inform the NLTB regularly on all development activities, especially in Native Reserves. Furthermore, all previous arrangements (or agreements) involving the approved land, including logging licences, would be null and void.

### 3.3.3 Lease Agreement

The head lease was to be held by the LDA as the applicant. Each type of land applied for was to have a separate head lease. The settlers would have to apply for an Annual Agricultural Licence to Occupy from the Agriculture Department as the LDA's sub-tenants. This was the normal procedure but special arrangements for a 30-year retention of the lease could have been made for the settlers. The lease agreement with the LDA required the observance of its conditions particularly that concerning the purpose of the lease. The LDA also had to agree to the completion of the scheme within a specified period (eight years proposed). The payment of royalties for all felled commercial timber trees during the clearing operation was required too.

The settlers had to sign a sub-tenancy agreement detailing the following conditions:

- a) the attainment of an individual leasehold title once the loan advanced by the LDA had been paid off;

- b) the provision of similar rights and conditions as the LDA had had;
- c) in relation to (a) and (b), the possibility of renewal or extension of the lease but subject to rent re-assessment;
- d) the reversion of any land to the landowners at the end of the 30 years provided they were prepared to pay full compensation;
- e) cultivation of crops as instructed by the LDA; and,
- f) maintenance of prompt rental payment to enable efficient distribution to the landowners.

#### 3.3.4 Land Rental

The negotiations over rent between the NLTB and LDA were not easy. Compromises were difficult to reach because of their conflicting interests, the NLTB for the landowners as opposed to the LDA for the scheme and settlers. The NLTB had required that rents were to be paid when land was brought into the scheme. The LDA's proposals to the NLTB, designed for three settlement phases, were very low:

- a) \$0.12 per hectare per year for 405 hectares effective from 01/01/1963;
- b) \$0.12 per hectare per year for 810 hectares effective from 01/01/1964; and,
- c) \$0.12 per hectare per year for the whole scheme effective from 01/01/1965.

However, the above proposals were subject to the following re-assessments (to be finalised later), as counter-proposed by the NLTB:

- a) the rate of \$3.70 per hectare per year of the cultivated area and \$0.12 per hectare per year of the uncultivated area for 405 hectares over a period of 10 years. This was to be raised to the rates of;
- b) \$4.94 per hectare per year on all land or 6% of the Unimproved Capital Value (UCV) of each block, whichever was the lesser for the following 10 years;
- c) re-assessment of rent in the twentieth year at 6% of the UCV; and,
- d) the application of all these adjustments to every phase of the scheme.

The LDA requested the NLTB to reconsider its stand in 1962 seeking further reduction of the proposed rents, at least for the first four years of settlement. This was turned down because the NLTB had already considered them too low. No land in the country, even for residential lease, was rated at less than \$14.80 per hectare per year. There was no need for further assistance because the LDA could not even subsidize the scheme to help the farmers. Furthermore, the NLTB was committed to the Fijian landowners whose interests it had to protect. It stressed that rents should not be assessed on the basis of purpose or use but in accordance with the land's value. Although the land was to be used for settling people without much finance or resources, it did not justify further subsidization.

### 3.3.5 Land Survey

The surveying of the land was to be arranged by the LDA and the NLTB. The LDA was to initiate the work and had to consult the NLTB about the survey details. However, the actual field surveying was to be implemented by the Lands Department (for the NLTB). This work was carried out in 1962 and later in 1964-65.

### 3.3.6 Settler Application

As provided in the Ordinance of 1961 and without reference to any particular group, application for resettlement was open to all interested individuals. On the other hand, priority would be given to those who really needed land. All applications were to be lodged to the LDA either directly or via the offices of the Agriculture Department and the District Administration. One can assume that no one single race was supposed to be given priority in the selection process.

### 3.3.7 Settlement and Farming Plan

The LDA's proposal was to resettle 350 leaseholders over three years, each on a 4.05 hectare block of land. Settlement was to be implemented in three phases:

- a) 100 settlers in the first phase;
- b) the same number in the second phase; and,
- c) 150 settlers in the third phase.

The planned farming pattern was the immediate use or cultivation of 1.62 hectares (1.22 ha for bananas, 0.40 hectare for the household garden and home site). The rest, about 2.43 hectares, was to be in rubber or left as bush reserve).

#### 3.3.8 Production, Earnings and Repayment

The LDA had projected that the scheme could produce over 200,000 cases of bananas annually once the first crop started bearing fruit. It also forecasted that an average farmer could earn an annual net income of \$500.00. All deductions such as payment to loans, capital cost or farm supplies were to be made prior to the farmers getting their money.

#### 3.3.9 Implementation

Both the LDA and the Government wanted the scheme to be implemented at the earliest possible. This put added pressure on the other participant-agencies. The NLTB, before any lease had been approved, was forced to permit the LDA to begin site preparation and other essential work on the land in 1962. This approval only applied to unreserved Native Land.

### **3.4 The Scheme in the 1960s**

The development and progress of the scheme can be best illustrated by comparing and contrasting its organizational and management changes.

#### 3.4.1 The Plan in Practice

The LDA managed the scheme from 1963 to 1969. Within that period, it had directed most of the programme's development fund to the Lomaivuna Scheme. Some of the major components of its plans could not be implemented, being judged as unacceptable by one or the other participant-agency. Only 1,232.07 hectares, well short of the target of 1,620 hectares of land, were approved by the NLTB for a thirty-year lease. This was open to extension provided the landowners agreed.

On 01/10/1965, the LDA managed to get another head lease of 44.6 hectares of Native Reserves from the NLTB. Soon afterwards, over 9.0 hectares of Crown Schedule A Land were obtained from the Lands Department in a separate head lease. All types of land were considered equally in terms of rent assessments and reassessments (every ten years). These were set to be done in 1973 and 1975, then 1983 and 1985.

The three-year settlement plan (1963 - 1965) could not be met in terms of land, so the LDA had to settle on a two-phase approach of 100 farmers each for 1963 and 1965. In the end, the LDA had available about 500 hectares of unsurveyed and unused land. Farm size standardization was maintained until 1969. Due to the LDA's farming plan, the leaseholders were able to cultivate only a small proportion of their land. Large areas were left unused as bush reserves. This was later appreciated when farmers reverted to the traditional system of farming.

The initial approved rental rate was \$3.70 per hectare per year for the first 2.025 hectares of the farm block and \$0.12 per hectare per year or 6% of the UCV of the balance. It was anticipated that when the main crop started producing, the NLTB would monitor farmers' net returns. This was a condition of the rental concession to help in the revision of future reassessments. Unfortunately, the farmers' economic returns were not as good as expected to be of assistance. In fact this problem was a hindrance and in direct conflict with a condition of the agreement in which rent had been pre-determined for application in the tenth year of settlement (\$4.94 per hectare per year or 6% of the UCV of the land).

The capital cost of the scheme was about \$700,000.00, of which 39% was used for road-building and upgrading, site preparation, housing and other central services. The balance (61%) was used to finance the LDA organisation and the 'farmer-loans programme'. An interest rate of 6.5% was charged repayable over a period of 15 years. Most loans, which should have been paid off by 1980, remained outstanding for years afterwards. The farmers were also required to repay a small proportion of the scheme's capital cost, between \$2,000.00 - \$2,600.00, which was 25% greater than the projected figure.

Those farmers who started with the scheme maintained that they had been misled and over-burdened financially by the LDA, for instance, capital-cost repayments. That and minimal farmer incentives put added pressure on the leaseholders leading to frustration and despair. The LDA loan assistance had helped but



it only got them into greater difficulties which they found hard to get out of.

#### 3.4.2 Production

Based on banana production for export, the venture was, initially, a success but after three years, started to decline. The ambitious projected output per year only pressurized those involved in the scheme including the farmers. The highest output ever produced was over 100,000 cases in the 1963 - 64 season (Bayliss-Smith et al. 1988, 131), only half of the LDA's projection. In 1966, the output fell to 64,000 and declined further to 20,000 cases in 1968 (LDA and DAF Files). Inevitably, this aggravated the downfall of the LDA and the whole programme.

A series of problems starting with damages caused by the 1965 hurricanes ruined the early good progress of banana production (see 3.4.5). Bayliss-Smith et al. (1988, 131) doubted the appropriateness of the landuse planning strategy adopted by the LDA. No record indicated any pre-implementation study of the area. It seems the suitability of bananas was assumed because it was a traditional crop of the province. This could be the reason the rubber plan was dropped since no mention was made of any rubber planting trial. Trial costs and the delay that these would impose on the immediate implementation of the scheme might be other reasons.

By the mid 1960s, the scheme could not maintain the quality of bananas required to be able to compete with other exporters on

the New Zealand markets. Production continued but it was directed towards the lower-priced domestic markets. Most leaseholders, especially those from the out-lying islands, were inexperienced in banana growing as they were not used to it. They also did not like the regimented treatment by the LDA, which involved working to a fixed routine. The sudden change from traditional village life was probably an important determining factor.

It was inevitable that such an innovative but ambitious programme that aimed to expand with greater rapidity would face a lot of difficulties. The worst blow to the farmers was to see their efforts being wasted through uncontrollable circumstances. Most banana trees damaged by hurricanes and strong winds had to be removed to make way for the young suckers. Diseased trees were uprooted and replaced. Some farmers, not eager to replace them, allowed such trees to bear fruit for domestic use and the urban market. Policy changes saw the abandonment of bananas and on the advice of the DAF Extension Service, the concentration on a form of mixed-crop production. Into the farming pattern came taro and pineapples as the major crops.

#### 3.4.3 Rental and Other Debts

For a scheme that was heavily capital intensive with farmer inexperience in budgeting and without a reliable source of income, it was obvious that the enterprise was risky. Extraction of loan repayments from farmers by the participant-agencies was a difficult exercise. However, the leaseholders should not be

totally blamed in view of the problems and hardships they had faced. It was also obvious (and common knowledge amongst farmers) that the LDA could not enforce its policies on capital or other financial recovery. Its initial strict and tough regimented stand was ineffective against farmers' evasion of their financial responsibilities. Debts continued to accumulate and by 1969 these, not including capital costs, had reached over \$64,000.00 (see Table 3.1). This laid the foundation of the debts carried forward to recent years.

Table 3.1 : Estimated Accumulated Debts, 1969

<u>Particulars</u>	<u>Number of Farmers</u>	<u>Total (\$)</u>
Housing	164	42,697
Land Rents	180	13,500
Suspense		
Account	88	2,091
Banana Scheme	30	840
Vet Charges	23	74
Agro-chemicals	200	5,200
Miscellaneous	4	46

(DAF and LDA Files)

The housing debt was for wooden residences built by the LDA during 1962 - 1964. Many of them, through the years, had deteriorated without much maintenance. This should be expected because the farmers either regarded living in Lomaivuna as temporary because the village is the home to return to or they

could not afford to make the necessary repair and improvement. Debts for Suspense Account and banana production were incurred in the early 1960s. The Agro-chemicals are left-over supplies from the banana days. Deteriorating, unable to be gainfully used and required to be accounted for every year, these are an increasing embarrassment to the management. Considering the concession and the low rental rates, it can be assumed that the farmers should have been able to meet their payments. In 1969 the Government wrote off (bad debts) approximately \$500,000.00, mostly made up of the scheme's capital costs.

#### 3.4.4 Other Developments

Since the decline of banana production in 1966, indifferent changes occurred. The most common have been temporary absences, sale of farms, farmer-dropout, absentee-leaseholding and land consolidation. A NLTB survey in 1967 confirmed the occurrence of these practices. A few dual-leaseholders usually occupied the block under individual lease title but share-cropped or leased out that under licence. Payment was normally made in the form of produce rather than cash. In fact, this problem had arisen out of the confusion over land between the NLTB, LDA and the Department of Agriculture.

The sale of farms saw the start of a land market system within the scheme. This practice involved those who had obtained direct lease titles from the NLTB particularly. However, farmers with Annual Licences were also selling out (DAF File). Farms and houses were sold for just \$1,000.00. A few sold their properties

while still in debt to the LDA and the FDB. These events resulted in the changing racial composition of the scheme with Indo-Fijians taking up some blocks. Direct individual tenancy was hard to get, as by 1969, only 12 farmers had managed to obtain it after paying off their debts.

Coinciding with the decline of banana production, absenteeism became very common. Some farmers began to rely on off-farm employment and to a lesser extent, non-farm activities. Water-front labour work in Suva, cane-cutting or sugar-loading in Western Viti Levu were the major temporary sources of income. A few farmers, especially those of Lauan descent, relied on handicraft-making at home. These played a more important role in the household economy of the Lomaivuna Scheme in the late 1960s and early 1970s.

#### 3.4.5 The End of the LDA

Although the LDA had an innovative programme in Lomaivuna, it might have been too rushed with its rapid expansion and monoculture production policies. In the late 1960s, it suffered from a number of problems which contributed to the management's financial disaster (see 3.4.2). The most commonly quoted were the black leaf-streak disease, production decline, hurricanes and strong wind, farmer inexperience, lack of incentives, unstable marketing, increased debts and regimented treatment of farmers (Sofer 1987, 3). Lasaga (1984, 105) suggests the importance of a strong professional organization, detailed soil survey, research and proper testing of crops as essential to

land settlement anywhere. None of them seemed to have been done in Lomaivuna.

The LDA came to an end in December 1969, two years after the FDC, terminating all organised land settlement in Fiji. Many observers, including those associated with the scheme, believed that the LDA tried to do too much in too short a time without adequate preparation. Its officials were not sufficiently aware and prepared for what they were getting themselves into. Theoretically, the LDA had unlimited powers and funding, courtesy of the LDO. When put to the test in the late 1960s, the Government could not deliver the needed support (withdrawn in 1969). Most of the LDA personnels were transferred to Rural Development Offices (District Administration) and the Agriculture Department.

After the LDA's bankruptcy, some difficulties were experienced over the payment of land rents and debts.' The Secretary of the Ministry of Natural Resources corresponding to the Departments of Lands and Agriculture in 1970 (NLTB File) stated;

...a difficulty has arisen, however, as there is no expenditure head from which Government may make payment either by way of grant to the LDA, which exists in name only, or to the NLTB on behalf of the LDA...

The short term solution that followed could only cater for \$2,000.00. Since 1970, it has not been possible to do much about

the debts. Furthermore, the Government has not made any appropriate expenditure allocation in its Budget Estimates.

### 3.5 The Department of Agriculture

The DAF's take-over of the scheme in January 1970 meant inheriting all the problems which have outlived the previous management. Under the transfer agreement, the DAF was responsible for payment of annual rentals to the NLTB at the start of each year. It was to make its own reimbursement arrangement with the leaseholders. Although it enabled prompt rental payment to the NLTB, the arrangement was probably the basic cause of rising debts. Presumably, the DAF had been too flexible with the farmers on reimbursement. Despite its unspecified low and variable nominal rates of payment, the leaseholders were unable to pay up fully and promptly.

To revive the scheme's economy, the DAF encouraged diversification already begun by the LDA in the late 1960s by introducing ginger. The farmers were encouraged to cultivate other crops such as cassava, taro and sweet potatoes, or even 'yaqona' (*Piper methysticum*) to boost crop supplies for marketing. Unlike under the LDA, they were also free to cultivate crops of their own choice. The National Marketing Authority (NMA), since its establishment in 1971, tried to boost ginger and taro production by providing processing and marketing arrangements. However hard it tried, the NMA had little support from the FDB which had toned down its support for most scheme farmers in the late 1960s. Nevertheless, some farmers,

preferring to rely on their sales income, were reluctant to seek loans too. Many had experienced previous tough repayment commitments.

The DAF extension officers became agents of the NMA which was the principal buyer of taro and ginger. Although it gave the Lomaivuna farmers marketing priority, the NMA could not maintain this practice in the late 1970s. It had to consider the marketing of crops for farmers outside the scheme. Since then, the Lomaivuna farmers have, increasingly, become dependent on the urban municipal markets as well as other outlets like Tropical Food Products (TFP).

#### 3.5.1 Land, Lease Arrangements and Tenancy

The land area of the scheme has more or less remained the same but farm sales, absentee-tenancy, land consolidation and other changes continued. About 21 farms (20 owned by Fijians) changed hands between 1971 - 77. Some farmers were absent from their leaseholds, being away temporarily in off-farm employment. There were some notable long absences, for instance for two years in Australia (1), home place, Labasa (1), another farm in Seaqqa (1) and at home island in Lau (1). Another had been away in New Zealand for more than six months. Their respective households remained at Lomaivuna in their absence.

A NLTB survey in 1975 - 76 confirmed the DAF's insufficient cooperation over land and leases. Since 1971, the DAF had been releasing land blocks, including those being vacated, for use



without notifying the NLTB. It collaborated with the Lomaivuna Farmers Committee which had a strong voice in the re-allocation. On its recommendation, some leaseholds were given to committee members, relatives and a few officials. Despite the DAF's denial of complicity, the NLTB was convinced and would not retract its findings. Furthermore, it was also disappointed with the DAF's monitoring and maintenance of records relating to individual titles. In 1976 the NLTB requested the return of 330.51 ha. (unsurveyed unreserved Native Land), some of which had been released for use contrary to the stipulated lease condition of the transfer agreement. The DAF did not charge rents on the released land.

In 1973 individual-titled tenants numbered around twenty, indicating the slow loan-repayment rate. Some of these leaseholds had changed hands more than once. It was discovered that these twenty farmers were negotiating to sell their blocks although they still owed the DAF and the FDB some debts. The number of individual-titled leaseholders rose to 53 and 56 in 1977 and 1978 respectively. When the DAF relinquished its control of the scheme in 1978, nearly 70% of the leaseholds were still held under licence. Below is an analysis of the types of leases in the scheme during 1977 - 78.

Table 3.2:Types of Leases in Lomaivuna, 1977 - 78

<u>Leases (212)</u>	<u>1977</u>	<u>1978</u>
NLTB Leases	49	53
Crown Land Leases	4	3
Pending NLTB Leases	3	3
Pending Crown Land Leases	10	11
Signed/Paid Lease Application	117	117
Unsigned Lease Application	21	17
Lots surrendered to NLTB	5	1
Lots for Offices and Residence	-	4
Schools and Cemetery	3	3

(NLTB, DAF and LDA Files)

In 1976, the scheme had a total area of 1,280.86 hectares of surveyed and unsurveyed land. The tenure composition of this land is given below.

Table 3.3: Types of Land, 1976 in Hectares (%)

Unreserved Native Land			
Surveyed	799.79	(62.4)	
Unsurveyed	330.51	(25.8)	
Reserved Native Land			
Surveyed	40.39	(3.2)	
Unsurveyed	-	-	
Crown Schedule A Land			
Surveyed	86.48	(6.8)	
Unsurveyed	4.25	(0.3)	
Access Roads	19.44	(1.5)	

(NLTB and DAF Files)

During the management tenure of the DAF, the ALTA was passed by Parliament (in 1976). Its application in the country did not affect Lomaivuna which was still bound by a separate agreement concerning the application for individual titles after the payment of all individual debts. Many of the blocks were still held under the Annual Agricultural Licence system which had been abolished for the rest of Fiji after 1976.

### 3.5.2 Land Rentals and Debts

The rental rate by 1971 was either a flat rate of \$7.75 per block or \$3.70 per hectare per year for the first 2.05 hectares and 6% of the UCV of the rest. The planned re-assessments in

1973 and 1975 were not carried out. Finally completed in 1976, it only increased the rates to the already pegged \$4.94 per hectare per year on the whole block. The UCV-based rental rating was abandoned. Backdated to 1973, the re-assessed rents, excluding the rental arrears of \$2,725.00 for that year, totalled approximately \$17,913.00.

Since these re-assessments were made within the year after annual payments had been made by the DAF (for the farmers) to the NLTB, the leaseholders were asked to meet the newly re-assessed rents before the end of the year. A three-month grace period from the receipt of their notifications was given by the NLTB. Legal action would follow to force farmers to pay up but practically, nothing was done. Although some payments were made, the landowners' frustration led to the road-blocks of December 1976. By 1977, the re-assessed rent was \$9,000.00. In 1978, the second re-assessment, which only worsened the lease-holders' debt position, was made. Below is an analysis of the accumulated rents and debts of farmers in Lomaivuna for six years between 1975 and 1988.

Table 3.4: Estimated Accumulated Debts (\$000), 1975 - 1988

Particulars	Number/	1975	1976	1977	1978	1980	1988
<u>Farmers</u>							
Housing	164	44.6	45.0	43.6	42.9	42.9	42.2
Land Rent	180	3.6	3.6	13.8	13.5	13.5	13.5
Suspense Acc.	88	2.1	2.1	2.1	2.0	2.0	2.0
Banana Scheme	30	0.9	0.9	0.8	0.8	0.8	0.8
Vet Charges	23	0.07	0.07	0.07	0.07	0.07	0.07
Agro Chemicals	All	5.2	5.2	5.2	5.2	5.1	5.1
Miscellaneous	4	0.04	0.04	0.04	0.04	0.04	0.04

(NLTB, DAF and LDA Files)

The annual reports in the agency files, especially that of the DAF provided unreliable explanation of the debt. It is strange that the figures given seemed to change very little. The debts had remained more or less static throughout and the farmers were unable to meet repayments. The table indicates the leaseholders' indifference and the participant agencies' negative attitude towards repayments.

The farmers had concentrated on current rent repayments and were not servicing their debts. Most of the rental arrears were monies farmers had not reimbursed the DAF. The DAF made a presentation to Government for the write-off of the debts in 1978. In 1980 the Minister of Agriculture raised the matter to Cabinet as the Government had already created a precedent over the LDA's debts.

The Finance Minister was requested to use the power vested in that position by the Finance Act of that year. Some had been written off in 1984 (see 5.1). The NLTB had started issuing individual titles since late 1978.

### **3.6 The Scheme Today**

From 1979, the DAF no longer managed the scheme actively. The head leases were returned to the NLTB. The farmers' situation has not changed as they are still struggling under the supervision of the DAF extension officers who have remained to assist them. All the farmers now hold individual titles which have given them security of tenure. The scheme resembles a moderately thriving community. The farmers are involved in a busy market-gardening trade with the nearby urban areas. Despite the limited income and the competition on the available small domestic market outlets, there seemed to be an air of satisfaction amongst the people. The farmers also show stronger attachment to their blocks. Land settlement has motivated the change from shifting semi-subsistence farming to a more stable cash-cropping smallholding.

#### 3.6.1 The Major Changes Since the 1970s

As in the past decade, absenteeism and sale of farms persist but at a slower pace. Sale of farms are not due to disappointment and inability to cope with farming but the better and faster returns they could get from it. The in-flow of people with enough

capital and those who have retired from the civil service or other paid-employment is a recent trend. A few, including well-paid civil servants still in employment, become absentee-leaseholders. However, most longer-serving farmers are reluctant to sell out preferring to pass on their titles to someone in the household. A few of them retired to their home villages soon after.

The land market system which had arisen out of the expanding commercial farming can also be attributed to the following:

- a) the desire to own a farming property
- b) reasonable prices on the domestic markets
- c) expansion of the profitable ginger farming
- d) government promotion and assistance

The demand for land particularly by well-to-do urban dwellers arises not only for economic reasons but as a retreat to escape the bustling urban life also. Land rent is still low and it is possible for farmers to rely on traditional subsistence production to meet that and other expenses. Farm, non-farm and off-farm incomes are sufficient to satisfy farmers' needs. Off-farm employment has become more important with farmers' children entering the employment sector.

Socio-culturally, new forms of organisation (school, community, church, etc) have been established. The eight sectors, once used to ease the scheme's organisation and administration, now represent separate small communities. These are often used as the basis of social organisation and activities. Each has set up its own meeting place (community hall, church and shops). Former banana storage sheds are the most-commonly used buildings for

such purposes. There is a bigger church for the whole community near the administration centre. These community groupings have brought the people closer together, providing the foundation of cooperation occasionally used in farm work (ginger harvesting, washing and packing). It also provides the basis of fund-raising projects for the schools, churches and other obligations.

Socio-cultural hierarchy is unimportant and only the pastors, elderly, successful farmers, extension officers and civil servants command the people's respect. Communal daily life includes 'kava' drinking in the late afternoon or evening. This national pastime is financially draining and time consuming. Important traditional ceremonies are very much observed, more so now with the closer relationships that have been forged amongst the people.

### 3.6.2 Future of Farming

Land capability, soil fertility, crop productivity and the support services have to be considered when assessing the future of leaseholders in Lomaivuna. Just as important is security of tenure which in the long term, depends on the landowners' feelings and plans for their land. Most leaseholds have been in use since 1963, a period of over 25 years. Most of the lease titles may expire by the turn of the century. The farmers should be concerned about their renewal considering their households' future.



Many years of cultivation might be overtaxing the land's capability and soil fertility. Chandra (1983, 11) mentions that the hill soil of wet eastern Viti Levu, where leaching has occurred over a long period of time, is now in a steady state of low fertility. Fertilizer application is not the answer since it is only a short-term catalyst for better productivity. Farmers have experienced that in the long run, it promotes infertility and makes the land dependent on its usage. Today it is used sparingly, mainly for ginger farming. Fertilizers are rarely applied to the familiar traditional crops which are cheaper to produce but not as profitable.

Ginger, the current prestigious crop, has different requirements. Its cultivation has brought about major changes in the farming pattern and the physical structure of the area, affecting both carrying capacity and probably, the farmers' future prosperity. The declining productivity of land grown in ginger has been experienced. Overton (1988, 73) states that much of the environmental degradation in Lomaivuna today is attributed to the ginger ecology. With tight ecological requirements, ginger needs high rainfall, good drainage and fertile soil. Lomaivuna soil is moderately fertile and is susceptible to nematode attack if a site is used continuously for more than two seasons. The Lomaivuna farmers, as low cost producers, cannot afford to fertilize or sterilize the soil every season or on a large scale. In a modified form of shifting cultivation, ginger is grown in newly cleared sites where natural fertility is assumably high. It is rotated with other crops every season, leading to the clearing of new or fallowed areas for its cultivation.

The ginger frontier has advanced to remove whatever thick vegetation is left from past clearing and cropping. The continued cultivation of ginger has meant increasing use of fertilizers and other agro-chemicals (more capital intensive). It is highly likely that this could influence the below average farmers to sell out, providing richer individuals the chance to take up land. The other alternative is to concentrate on the low-return traditional crops.

## CHAPTER 4

### METHODOLOGY

#### 4.1 Introduction

The study and evaluation of any development programme is a means of obtaining information on progress and achievement, handicaps and failures. Research evaluation can determine a scheme's contribution and impact on the target population's development with the flow-on effect to the nearby communities. It is used not only as an aid to management but to add interesting case study materials to an expanding literature on land settlement. Research can expose existing problem areas and assess the appropriateness of programme changes by identifying ways of improving them.

The normal trend is the evaluation of programmes to determine whether capital investment has been utilized effectively or whether objectives have been met. This is usually a pre-condition of most overseas funding or capital assistance to Third World development programmes. It is carried out internally by the programme's own monitoring and evaluation unit, or externally. The effectiveness of the approach may be analysed to determine its usefulness or utility on a wider scale.

Most evaluations are economically oriented. Since the post-war years, economists and planners have emphasized economic and

infrastructural output as the primary indicators of growth. Such impact assessments often attempt to arrive at gross outcomes through which the net effects on the target population are evaluated. Other impacts (social, cultural, educational, environmental or otherwise) are secondary and less important.

This particular evaluation on the Lomaivuna Scheme is unusual because it is being done after 26 years of operation. It has taken a wider and more long term view. The key issue is how far the target population's quality of life has been improved and to assess the total impact of the scheme on the affected people and environment.

#### **4.2 Research Design**

Study options included the 'experimental' designs (Campbell, 1972 and Scriven, 1972) or, as the best possible alternatives, the 'quasi experimental' designs (Campbell, 1972). The latter include such models as the 'interrupted time series', 'control series' and the 'regression discontinuity' design (Kidder 1981, 45 - 57). However, the application of these quantitative designs are restricted because of their costliness, political sensitivity and sometimes impracticality (Franklin and Thrasher 1976, 54). Quasi experimental designs, particularly the 'time series' model, are the most practical for assessing the effects of full coverage programmes.

Social researchers have also suggested other appropriate alternatives which are effective for qualitative evaluation.

These include the 'bargain basement' design (Franklin and Thrasher, 1976), 'causal modelling' system (Bentler and Woodward, 1979), 'simulation' model (Cooper and Huss, 1981) and the 'ethnographic' approach (Britain, 1981). Qualitative researchers encourage the use of a field-based approach for data collection through closer observation, in-depth interviews and field surveys. Participants' judgement plays an important role since only the local people can be the best judges of development programmes implemented for their benefit. Without their assessment, no satisfactory project evaluation can be achieved. This approach also helps to present the people's perception of a project, its advantages, handicaps and problems. Analysis requires rational unbiased evaluation by the researcher when using views and opinions of informants.

As is explained later in this chapter, this research is more qualitative in nature using a field-based approach (interviews and field surveys). The time factor makes it difficult for the researcher to employ such models as those put forward by Campbell, Scriven and Kidder. It is also rather unfortunate that the researcher had anticipated some problems relating to the availability of the best possible data and essential information. Finally one has to be familiar with the selected approach(es) for competent application, reliable evaluation, analysis and conclusion.

The primary issue of any research is to find and determine the degree of development progress made by a programme, implying improvement on the target population's life. However, neither the implementation of a programme nor the achievement of some

physical targets alone means the improvement of the people's standard of living. Even if the economic returns are satisfactory, much depends on other factors as continued sustainability, productivity, utilization of resources, enough capital and a supportive management. The participants' financial management and budgeting skills are also vital to an entrepreneur's success.

### **4.3 Sampling Design**

Random sampling serves to make whatever group under study representative of the larger population. It is a procedure whereby all subjects have an equal chance of being included. It reduces bias in selection and gives the researcher confidence in making generalisation from the research results. The researcher can specify the sample size that is required to allow a given degree of certainty that findings would not differ from those of the total population.

In this study, stratified random sampling was not used although initial scheme planning used the stratified settler-selection approach as qualified by sex and race criteria. Sampling selection was made with the use of a standardized random number system provided by the Department of Geography and Planning, University Of New England. The leaseholders in the NLTB list were numbered after it had been cross-checked with that from the DAF. The list was also scrutinized for dual-leaseholders and those of other races. Numbering was done according to the order in the list and selection depended on presence or occurrence and

correlation of numbers in the system and list. The numbers in the system were used in the order they occurred. On the advice of the study supervisor, the sample consisted of seventy five leaseholders. However, it was later increased in the field to eighty, to raise the sample size to about 48% of the Fijian leaseholders (38% of the scheme total).

#### **4.4 Methodology**

For a research which poses a number of questions, it is essential to utilize a variety of methodological approaches for data collection. The study's first task was to review land settlement policies and programmes in other developing countries. This was followed by field research in Lomaivuna, of nearby individual farms owned by traditional landowners and in offices of participant-agencies (Suva and Nausori) using a number of different approaches.

##### **4.4.1 Questionnaire Survey and Interviews**

The leaseholders were surveyed by means of a questionnaire administered by the researcher and helped by a field assistant (refer to Sampling Design for selection). It provided the basis for the formal interview with the respondents to counter the possibility of any problem arising from the leaseholders' semi-literacy. The combination of these approaches reduced this problem and removed that of self-selection by respondents. It also catered for in-depth interviews to be carried out. The

questionnaire was structured around a set of related items reflecting the problems under study. Questions were both structured and unstructured with multiple answers for scaling and ranking. The 'questionnaire schedule' is provided in Appendix C.

Allowances were made in the questionnaire for volunteered information relative to specific questions. It was an attempt to make the questionnaire as comprehensive as possible. The most reliable and senior member of the household was interviewed if the leaseholder was not available. Generally, members of individual household proved to be very cooperative assisting the respondents with useful data. Only households living on their blocks were surveyed. The field assistant who also drove the vehicle that was used, was very familiar with and well known to the whole Lomaivuna farming community. This and the fact that he was raised there proved very important as his presence was assumed to have kept the respondents honest.

Formal Interviews were also used with the surveying of personnels of participant-agencies (NLTB, DAF, FDB and FAB) and officials of other less important offices. This is one of the most commonly-used techniques. Kidder (1981, 150) states that it can be employed with almost all groups in the population and is able to yield good responses. The interviewer, by talking directly to the respondents can extract satisfactory information. The method is flexible, allowing the possibility of repeating or rephrasing questions not clearly understood by the interviewees. The interviewer has the opportunity to appraise the validity of data or analyse views and opinions. In



circumstances of ambiguous responses, probing questions can be asked to clarify the issues.

Although semi-structured interviews were also employed, the open-ended way of questioning was the main discussion tool. Kidder (1981, 187) states that its... 'flexibility, if properly used, helps to bring out the affective and value-laden aspects of respondents' responses and to determine the personal significance of their attitudes.' The approach is most commonly used for a more intense study of perceptions, attitudes and motivations.

Kerlinger (1970, 56) mentions that very often, the format is reserved for questions calling for reasons and explanations. Usually, the interviewer must ask more than one free-answer question in order to get a better grasp of the informant's views and attitudes. However, an easier way is the 'funnel approach' of open-ended questioning recommended by Gorden (1969, 267) and, Cohen and Manion (1984). The crux of this method is to ask the broadest possible questions. More often than not, it eliminates the need to ask probing questions and reduce possible bias by the interviewer. It also gives the informant the chance to open up.

A 'frame of reference' for the formal interview is provided in Appendix D. The interviewees were, in general, cooperative but a few had to refer the researcher to office files to boost their information. These interviews had helped to complement other sources, particularly archival records and library research.

#### 4.4.2 Field Observation

This was used as a supportive approach to the questionnaire survey. The aim was to observe and gain some information and knowledge of the respondents' farms, households, ways of life and even their personality. It was a simple exercise, not as detailed as the field studies proposed by Kidder (1981, 264) and was also different from participant observation (ibid, 101 and 280). The intention was to support and supplement other data and to point to contradictions given in the questionnaire or interviews.

Hulme (1984, 15) states that questions relating to perceptions tend to induce rather negative responses. Respondants exaggerate problems, perceiving the interviewer as someone who might be able to communicate their views or grievances to the proper authority. Every possible aspect of the farms was assessed.

#### 4.4.3 Review of Archival Records and Agency Files

The use of these sources was essential to the research as the scheme was technically judged unproductive in 1969. Since the late 1970s, very little monitoring or evaluation had been done after the DAF's withdrawal from direct involvement. The lack of detailed publication on land settlement for farming development in Fiji enhanced the importance of these sources. Most of the files on the scheme had been closed and were gathering dust on office shelves. The National Archives of Fiji (NAF), where the

files were well kept had little to offer and no mention was made of Legislative Council transcripts on the scheme. NLTB, DAF and FAB files were scrutinized, of which the first two proved very useful. The FDB and NAF could only release information provided the researcher signed an 'oath of secrecy'. The other possible sources (NMA and Naitasiri Provincial Council) did not keep records on the scheme. Other information was also gathered from printed and anecdotal materials of the Lomaivuna Scheme, land settlement and agricultural development in Fiji.

#### 4.4.4 Informal Opinion Survey and Discussion

This was intended at finding views and perceptions of individuals associated with but indirectly involved with the scheme. Notable examples were the landowners, civil servants particularly teachers working in the community and other nearby residents. The teachers who are generally well educated, relatively unbiased and possibly impartial were useful sources of information. They are in constant contact with the leaseholders and their households, especially their children. Information on performance, productivity and participation in community affairs by leaseholders from these sources was surprisingly fruitful. Informants were carefully chosen and discussion was made when and where one was found. This type of approach is flexible, providing a permissive atmosphere for free and easy expression. It serves as a catalyst for comprehensive exposure of feelings, beliefs and opinions. However, the data had to be vetted carefully to eliminate interviewer or interviewee-bias and exaggeration.

#### 4.5 Arrangement and Procedure

Prior to the field work and while making all the necessary preparation, permission and request for assistance were sought by telephone from the FAB Education Unit, Fiji (sponsor). It also agreed to the topic, provided this was acceptable to the University. Arrangements with the various offices to be visited in Fiji were also made with its assistance. Correspondence related to the trip and field work are given in Appendix E and F. These include a letter of introduction from the University and an accompanying correspondence from FABEU. For the Lomaivuna survey, the arrangement was organised through the field assistant. The instructions were to circulate the message about the trip and its purpose. It was to be clarified that the letter of introduction would be produced on arrival. Furthermore, the importance of anonymity of respondents was to be emphasized. The field trip itinerary in Appendix G showed the pressure of time in conducting the field work.

Although the farmers were busy harvesting and the transport was tied up in moving ginger (February - March), the respondents were very cooperative. The urban interviews were carried out first, particularly during the week-days of those months. This routine continued until April when leaseholders were somewhat less busy. Unavoidably, the field work in Lomaivuna was left to the field assistant, to carry out on a few occasions. Twenty years experience in Lomaivuna and his secondary education made him very reliable (in the researcher's view). Survey progress was

satisfactory but slow with three to five interviews being completed daily.

#### **4.6 Problems and Limitations**

Research is both educational and excitingly fulfilling but problems usually arise. This section reviews this unavoidable research aspect and the ensuing implications. The first problem was the timing of the field work. The Lomaivuna exercise was rescheduled because respondents were occupied with urgent farm activities. The itinerary was changed to fit the farmers' routines. It was rather unfortunate that the field work could not be done in October, 1988 as planned. That would have been the most appropriate time when the Lomaivuna farmers do not have a busy schedule.

Finance, another obstacle, had caused about five months delay to the field trip to Fiji. Subsequently, all previous arrangements had to be re-arranged. A correspondence was sent to FABEU clarifying and confirming the problem (see Appendix H).

Some difficulties were also faced over the visits to Government offices, for instance the indifference of officials. In a few offices, it took a lot of time (longer than expected) waiting for service. Another was the unnecessary inadequacy of the letters of introduction to admit the researcher to interviews with accessibility to records. In most cases, the visit had to be reconfirmed by the FAB Scholarship Officer.

Another limitation was the respondents' 'recall' method of providing information. This applied especially to matters of farming outputs, returns, incomes and expenses. However, it should be noted that the majority of Fiji small farmers, not used to the practice, are not satisfactorily equipped to handle such matters.

There was also the problem relating to the collated value-laden information. Personal views are important but unreliable and variable. This can arise from the leaseholders' belief that certain responses are an admission of personal inadequacy and incompetence. Nevertheless, the combination of the methods used should have helped enhance data reliability.

The lack of exhaustive data sources on the scheme and land settlement for commercial farming in Fiji was also of concern. Very little had been written on the subject due probably to the lack of interest in the LDA and its work. Worse still, individuals who had worked under the LDA were hard to trace.

#### **4.7 Summary**

During the field survey, every possible care was taken in the application of the research methods to prevent the occurrence of any undesirable practice. The participants and informants were made fully aware of the nature of the research that they needed to know. No one was involved without their knowledge or consent and no coercion was done to make them participate. Finally, the

importance of confidentiality of information, views, opinions and beliefs was stressed to all.