UNCLASSIFIED ISN 36527
CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) — PART I

Report Control Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
Small Farmer Development New Lands Settlement Component	520-0233	Guatemala 000093

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 84-06

☐ REGULAR EVALUATION ☒ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES	6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY 74 B. Final Obligation Expected FY ____ C. Final Input Delivery FY 84	A. Total $ ____ B. U.S. $ 5,000,000	From (month/yr.) ____ To (month/yr.) ____ Date of Evaluation Review ------

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
Recommendations for the Project Area: A. Better health services and safe drinking water B. Improved education C. Improved agriculture research and diversification D. Support local marketing E. Coordination of activities Recommendations for future colonization projects: A. Better planning B. Additional research C. Less expensive infrastructure D. More self-help measures E. Provisions for spontaneous settlers F. Better interchange of information G. Better publicity		

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) ____
- ☐ Other (Specify) ____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or ☐ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Cecil McFarland

12. Mission/AID/W Office Director Approval

Signature

Typed Name

Date 10-11-84

AID 1330-15 (3-78)

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

AGENCIA PARA EL DESARROLLO INTERNACIONAL (E.U.A.)

USAID/GUATEMALA

XD-AAP-925-A

ISN 36528

This Report, edited by the AID Mission in Guatemala, is based on a preliminary report prepared for AID/Guatemala under the Technical Support to Mission (TSM) Work Order No. 4 with Texas Tech University by

Philip A. Dennis, Gary S. Elbow and Peter L. Heller

Office of Rural Development
Report No. 9

060093

EVALUATION OF THE IXCAN COLONIZATION PROJECT (520-T-026) GUATEMALA

January 1984

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LIST OF ACRONYMS

ACDI	=	Agricultural Cooperative Development International
AID	=	Agency for International Development
BANDESA	=	Banco Nacional de Desarrollo Agricola
CARE	=	Cooperative for American Relief Everywhere
DICA	=	Desarrollo Integral de Comunidades Agrarias of INTA
DIGESA	=	Direccion General de Servicios Agricolas
DIGESEPE	=	Direccion General de Servicios Pecuarios
FECOAR	=	Federacion de Cooperativas Agricolas Regionales
FENACOAC	=	Federacion Nacional de Cooperativas de Ahorro y Credito
FTN	=	Franja Transversal del Norte
GOG	=	Government of Guatemala
ICTA	=	Instituto de Ciencias y Tecnologia Agricola
INACOP	=	Instituto Nacional de Cooperativas
INAFOR	=	Instituto Nacional Forestal
INDECA	=	Instituto Nacional de Comercializacion Agricola
INTA	=	Instituto Nacional de Transformacion Agraria

A. RESEARCH METHODS

The Texas Tech University research team's assignment was to evaluate the "New Lands Settlement" component of the AID Small Farmer Development Project (520-T-026). The evaluation was to follow the outline in Work Order No. 4 and to provide recommendations for future colonization projects in the Northern Transversal Strip (FTN).

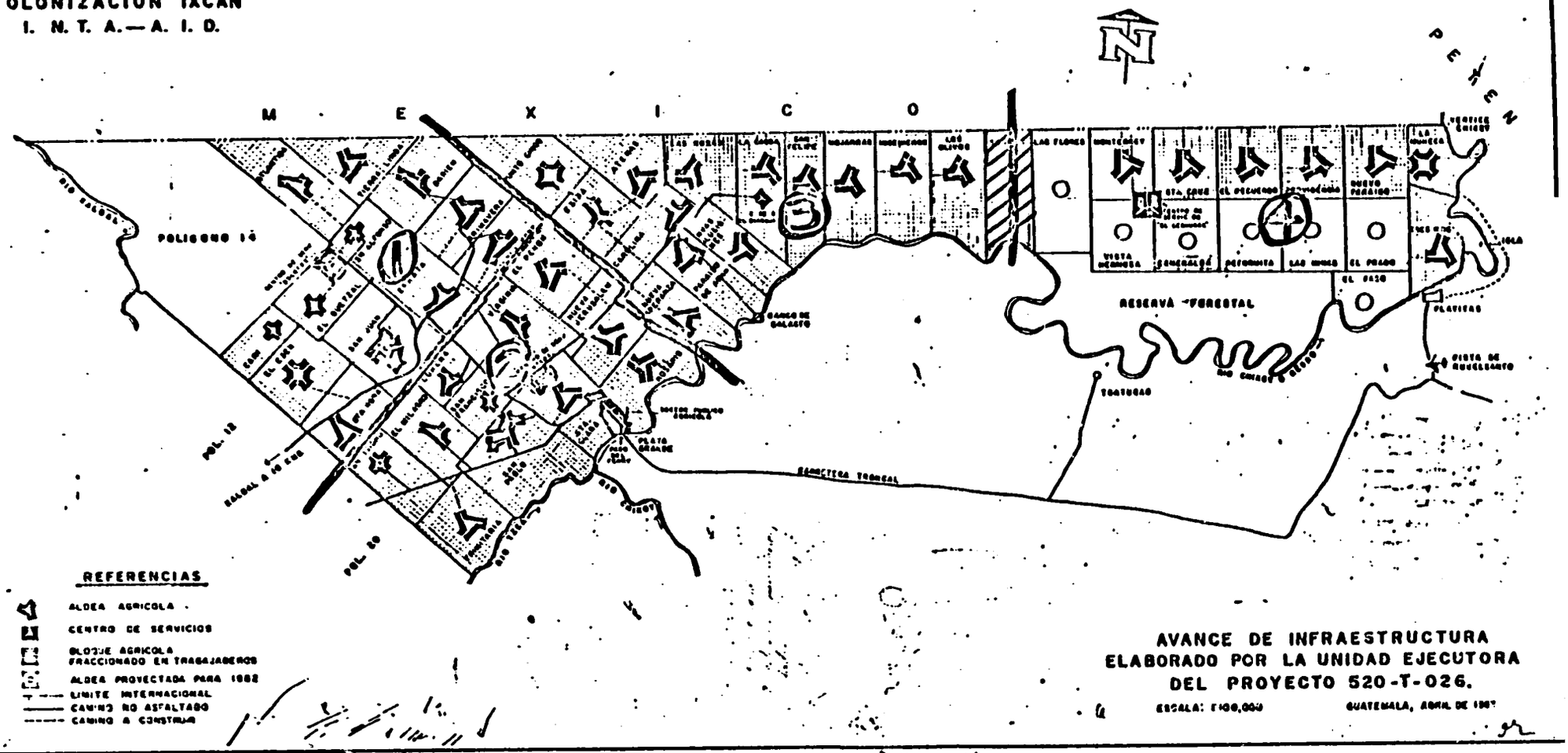
The original project plan called for the settlement of 5,000 families in two stages: the first for 2,000 families on 19,000 hectares of land to which INTA already had title and the second for 3,000 families on a 30,000 hectare adjacent tract through the creation of 50 settlements with 60 families in each settlement (See Map 1). A number of problems described later in this report prevented the Project from attaining this goal. As of January 1984, 32 of the proposed 50 settlements in the second stage were inhabited. Three of the uninhabited 18 settlements (Trinitaria, Santa Clara, El Quetzal) no longer have settlers. The remaining 15 settlement sites are either unsettled or have relatively few families.

In all, 19 of the 32 inhabited communities were surveyed in the Ixcan project area; three of these settlements were too isolated to be visited. In selecting the 19 villages an attempt was made to obtain a good cross-section of communities in terms of cultural and regional background differences, degree of isolation from the project center, and different population sizes. Villages visited were: Cari, Santa Rosa, San Juan, San Alfonso, Efrata, Darien, Primavera, Monte Alegre, San Isidro, El Milagro, San Pablo, Lorena, San Francisco, Virginia, El Penon, Punto Chico, Carolina and Nuevo Paraiso (See Map 2).

ROYECTO 520-T-026
OLONIZACION IXCAN
I. N. T. A. — A. I. D.

MAP I

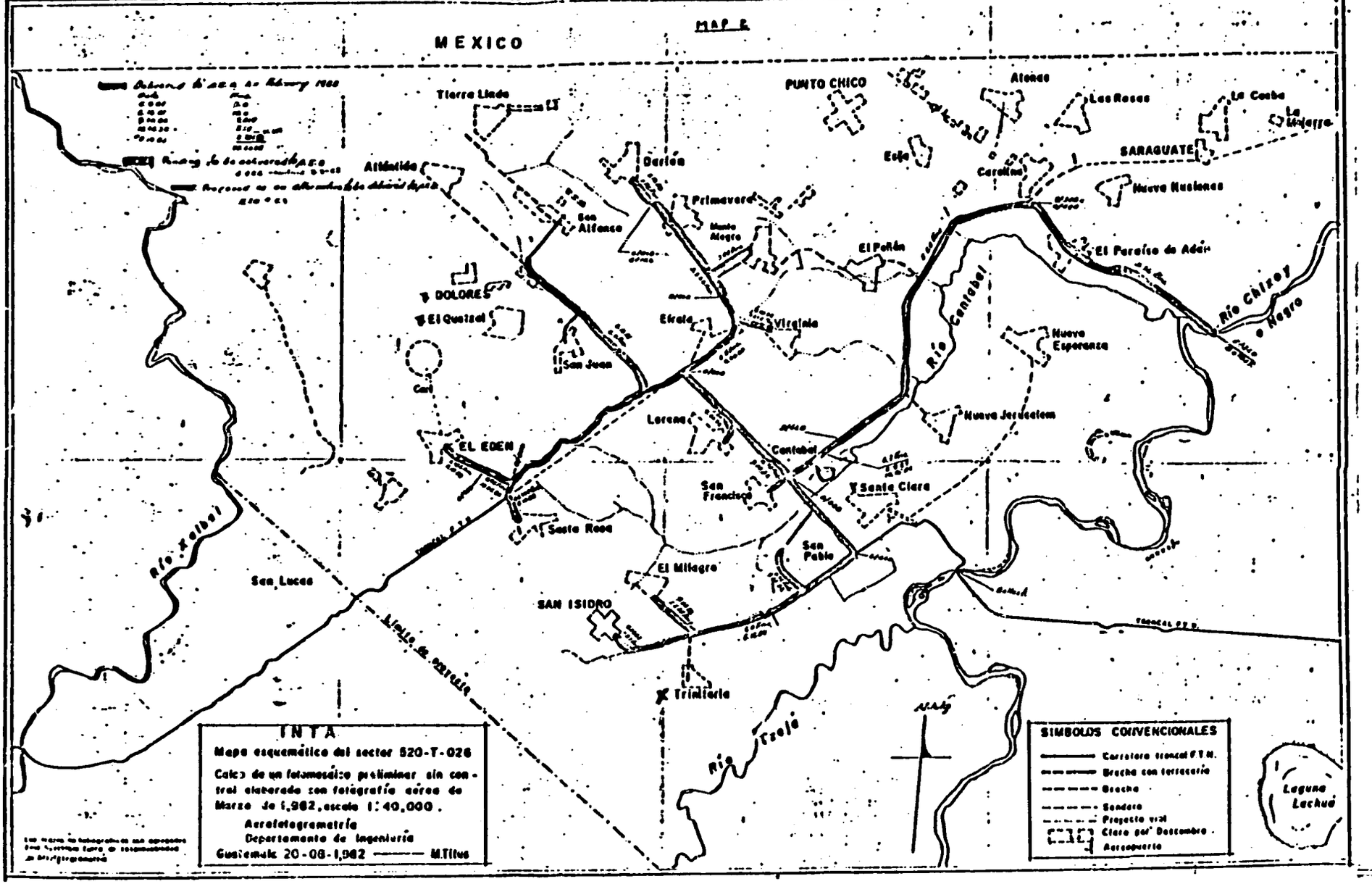
UNIDAD EJECUTORA



AVANCE DE INFRAESTRUCTURA
ELABORADO POR LA UNIDAD EJECUTORA
DEL PROYECTO 520-T-026.

ESCALA: 1:100,000 GUATEMALA, ABRIL DE 1967

MAP E


MEXICO
Tierra Linda
PUNTO CHICO
Alonso
Las Rosas
La Ceiba
La Milagro
SARAGUATE
Nueva Nuelonas
Carolina
Esfe
Darión
Altadida
Primavera
San Alfonso
Monte Alegre
El Peñón
El Paraíso de Adán
DOLORES
El Quetzal
Ekala
Virginia
San Juan
Río Cantabal
Río Chixoy o Negro
Nueva Esperanza
Nueva Jerusalem
Lorena
EL EDEN
Cantabal
San Francisco
Santa Clara
Santa Rosa
San Pablo
El Milagro
San Lucas
SAN ISIDRO
Trinitaria
Río Xalbal
Río Tzalá
Laguna Lachuá
INTA
Mapa esquemático del sector 520-T-026
Calco de un fotomosaico preliminar sin control elaborado con fotografía aérea de Marzo de 1,982, escala 1:40,000.
Aerofotogrametría
Departamento de Ingeniería
Guatemala 20-08-1,982 ——— M.Tilus
SIMBOLOS CONVENCIONALES
Carretera troncal F.T.N.
Brecha con terracería
Brecha
Sendero
Proyecto vial
Claro por Descombro
Aeropuerto

The team spent eight days at Playa Grande, five of those observing settlement life in the Ixcan area and directly interviewing settlers. Two days were spent talking with local agency representatives from INTA, BANDESA, DIGESEPE, DIGESA, ICTA, INACOP and CARE, while the eighth day was spent at the nearby Rio Negro Cooperative, organized and run by the community of Saholom. We drove to each village and spent up to four hours talking to available colonists, walking through the settlement and observing. Sometimes village authorities were available for interviews, sometimes they were not. We tried to talk to women as well as men, and to accompany men to their fields when possible.

The first two days of the team in Guatemala were spent in briefings with AID Mission and INTA personnel in Guatemala City, as well as reviewing all available documentation on the Project (See Appendix). The most useful documents were the ACDI report by David Fledderjohn and David Thompson, and a detailed socio-economic study of the project area conducted by the DICA office of INTA. The last four days of the Mission were devoted to writing this report and reviewing the experiences and recommendations with AID Mission and INTA personnel.

B. APPROPRIATENESS OF PROJECT DESIGN

The original design of the Ixcan Project called for the relocation of landless Guatemalan families on approximately 10 hectare parcels of land in a previously undeveloped sector of northern Guatemala. A loan signed on April 8, 1976 provided $5,600,000 to the GOG for cadaster and land use studies of the FTN ($1,100,000), secondary road construction ($790,000), economic infrastructure for cooperatives ($915,000), social infrastructure ($240,000), short and medium-term credit through BANDESA to small farmers ($2,000,000), and selection and relocation of settlers by cooperative federations ($555,000). These two federations (FECOAR and FENACOAC) were also to aid in the establishment of settler cooperatives in the project area. The project design also called for a high degree of cooperation among participating Guatemalan agencies and private organizations such as INTA, BANDESA, the Ministries of Agriculture, Health, Education, the military, and the cooperative federations.

As the Project was implemented, many of the original design elements were changed because of unanticipated developments. The following provides a summary comparison of selected original project design elements with those that actually took place.

Selected Elements of Project Design and Implementation

Project Design:	Project Implementation:
1. 5,000 families from Highland Indian communities were to be resettled in the Ixcan area in two phases.	1. Approximately 2,000 families have been settled under phase two. Relatively few have come from the Indian Highlands. The main areas of recruitment were the South Coast and the Departments of Jutiapa, Alta Verapaz and Baja Verapaz. An estimated 600 to 900 additional families could still be settled in the project area.
2. A land use study was to provide a basis for establishing a land use plan for the project area and for identifying crops and livestock to be researched.	2. The entire budget for the land study was reallocated to other activities, mostly road and school construction. One result was that the considerable differences in productive potential of land within the project area were not considered when the settlements were laid out.
3. Cooperative federations were to be responsible for the selection and relocation of settlers. Operating cooperatives were to be established in each settlement.	3. FECOAR performed admirably in publicizing, recruiting and relocating settlers. No other cooperative federation was successful. As of January 1984 only one settlement in the project area had a functioning cooperative.

4. BANDESA was to channel $2,000,000 to settlers to establish their farms.	4. From $1,446,000 actually made available through BANDESA, an estimated 90% of the colonists in the project area received BANDESA loans. These loans, ranging between Q.100 and Q.3,000, covered the cost of clearing land and beginning cultivation of both annual and perennial crops.
5. Roads and schools were to be constructed in the project area. Roads and trails to settlement sites were to be constructed prior to initiation of settlement activities.	5. Roads and trails were not completed when settlement of colonists began. However, by January 1984 the road system was virtually complete in the western part of the project area. In the eastern section of the Project, however, roads have not been constructed because of the marshy nature of the terrain. Schools were begun in several communities under a contract between INTA and a private contractor. The contractor defaulted and the schools were not completed. The partially finished structures are now in litigation. INTA has assumed responsibility for building schools. Four schools were inaugurated, three more are under construction and three others are planned for construction in 1984.

6. Support services were to be provided by INTA and various other institutions.	6. Early in the Project, support services were inadequate or totally lacking. As of January 1984 the provision of support services was quite good. There was ample evidence of good cooperation among representatives of various government agencies working in the project area. The Ixcan Regional Inter-agency Coordinating Council (Coordinadora Interinstitucional Regional Ixcan) holds monthly meetings to coordinate activities and plan future developments. It appears to function well as a vehicle for coordinating the efforts of the many organizations operating in the project area.
7. Construction was to be labor intensive and utilize principles of self-help and local initiative.	7. Roads and schools have been built with machinery and skilled labor hired by INTA. However, a CARE food-for-work project has been very effective in sponsoring smaller-scale work projects within the communities.

The original project design failed to anticipate a number of important events. Some of those events probably could not have been foreseen, but others might have been anticipated and contingency plans developed to deal with them.

For example, it is hard to fault the project design for the serious problems caused by armed conflict and military activities in the project area. On the other hand, problems of cooperation on the part of INTA and other GOG agencies, and the cooperative federations, might well have been anticipated on the basis of previous experience. Lack of cooperation in the early stages very nearly caused the entire Project to be terminated, and it led to serious problems. Among these were failure to undertake the land use studies and the placement of colonists prior to development of adequate infrastructure. In the pre-1982 period, inter-agency cooperation was apparently a serious problem, but by January 1984 this problem seemed to have been resolved.

The expectation that cooperatives could be established in each settlement was probably reasonable, given the relative success of the cooperative movement elsewhere in Guatemala. It would have been difficult to anticipate the closing of the Project in 1982 by the Guatemalan military and the loss of colonists that took place during the military occupation. A factor that might have been anticipated was that some colonists' negative experience with cooperatives elsewhere would cause resistance to cooperative development in the project area.

One cooperative federation (FECOAR) performed well in its recruitment and relocation activities. It is doubtful that INTA would have performed as well if it had been in charage of recruitment and settlement activities. However, the delegation of recruitment and settlement activities to another institution caused resentment among INTA central office personnel. This may have contributed to early failures on INTA's part to cooperate fully in project development and provision of infrastructure and support services.

The main deficiency in the project design was the failure to provide mechanisms that would encourage planning and coordination of activities among participating GOG agencies. It took a Presidential Decree to get the Project under way initially and even then the ACDI final report notes problems in planning and coordination that seriously affected project performance. Those problems now seem to have been corrected. The regional coordinating group that was created during the Rios Montt presidency (1982) appears to be doing a good job and there is much evidence of cooperation and joint planning on the part of project personnel in the field. We were not able to determine if the same level of cooperation exists among participating organizations in Guatemala City. The coordinating group would be a logical organization to coordinate any future activities in the project area.

C. DEMOGRAPHICS

Of the 50 planned settlements in the second stage, 32 constitute complete communities. In the other 18 sites some settlement has taken place, but little data was available from INTA on these settlements, and the evaluation team was unable to visit them in the short time available.

Turning to the 32 settlements cited in Table 1, it can be seen that the number of families per village ranges from 26 to 105. The average number of families per village is 59.3, a number in line with that prescribed in the original project design. Actually, both the average number of families per settlement and total number of settlements would have been higher had it not been for the political problems in the area during 1982.

Table 1 - LAND AND POPULATION BY SETTLEMENT

Settlement Name	Total Area Cab.1/	Mz.2/	Total Number of Families	Total Population
Cari	9		34	132
El Eden	14	31	59	236
Santa Rosa	14	13	60	259
San Juan	24	12	86	275
Atlantida	15	17	60	288
San Alfonso	14	6	26	122
Efrata	17	49	77	360
Tierra Linda	12	32	49	237
Darien	16	41	60	295
Primavera	14	11	55	224
Monte Alegre	12	8	58	263
San Isidro	14	14	55	179
El Milagro	14	18	55	211
San Pablo	26	36	105	451
Lorena	15	10	56	243
San Francisco	14	36	59	245
Virginia	12	56	52	209
El Penon	14	58	43	280
Nueva Jerusalem	16	20	60	339
Nueva Esperanza	27	1	80	321
Punto Chico	21	11	77	454
Esija	14	25	50	198
Carolina	13	61	60	244
Nuevas Ilusiones	15	41	56	185
Atenas	15	30	57	259
Las Rosas	16	11	60	249
Mojarras	15	12	56	188
Ingenieros	15	12	57	187
Nuevo Paraiso	15	28	60	293
La Muneca	18	11	57	269
Tres Rios	16	35	60	267
Paraiso de Adan	3/	3/	60	3/
TOTAL			1,899	7,962

Source: Data were obtained from Estudio Socio-Economico del Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983.

1/ 1 Caballeria (Cab.) = 45 Hectareas (Ha.)
2/ 1 Manzana (Mz.) = 0.7 Hectarea (Ha.)
3/ Data not available

D. PROMOTION, SELECTION AND TRANSFER OF SETTLERS 1/

1. Performance of Cooperative Federations

The Ixcan Project had as a primary activity the promotion, selection and transfer of prospective colonists by Guatemalan cooperative federations. Initially, four cooperative federations expressed interest. One federation withdrew from consideration before contract negotiations had progressed far. Of the three remaining federations, two (FECOAR and FENACOAC) were finally contracted to perform this task.

FENACOAC had problems from the start. Between July 1979, when its work plan was approved by INTA, and June 1980, when INTA decided not to renew its contract, FENACOAC sponsored the migration of only 40 families to one settlement (Trinitaria). Because the settlement was not made in phase with project planning, promised services were not provided for these families. The Trinitaria colonists were understandably unhappy and, according to Fledderjohn and Thompson, the community became a trouble spot for the Project. 2/

1/ Most background information for this section is from David C. Fledderjohn and David C. Thompson, Final Report: Northern Transversal Strip Land Resettlement Project, ACDI, March, 1982.

2/ Ibid, p. 19

In contrast to FENACOAC's poor performance, FECOAR performed at a consistently high level. By the time its contract ended in early 1982, FECOAR had settled over 1,000 families in the project area. The project design called for colonist recruitment to focus on the densly populated western Highlands of Guatemala where land hunger is especially acute. For various reasons recruitment efforts in this region failed to produce the expected number of colonists. Thus, in early 1981, recruitment was shifted to three alternate regions: the South Coast, Jutiapa Department, and Alta and Baja Verapaz Departments. 3/ Most settlements in the western and southern part of the Project (Zones 1 and 2) were populated by people from the South Coast and Jutiapa. The northern and eastern areas of the Project (Zones 3 and 4) were settled mainly by Kekchi and Pokomchi speakers from the Verapaces.

Our interviews with colonists in the project area produced consistently favorable comments on the performance of FECOAR in promotion, recruitment and settlement. One might argue that dissatisfied families have left the project area, thus producing a sample biased in favor of FECOAR. Nevertheless, the absolute lack of criticism of that cooperative federation's performance seems to offer strong evidence that it performed well. One man commented, "In no way can anyone speak badly of FECOAR. On the contrary, we are grateful for the help they offered us." INTA personnel in the project area also commented favorably on FECOAR's performance.

2. Number of Colonists Settled

The project design indicated some 5,000 families would be settled in the area to be colonized. An INTA census conducted in mid-1983 found a total of 1,899 families living in the project area (See Table 1). Resettlement has continued since that time, so that the actual population as of January 1984 may be as much as 2,200 families.

3/ Ibid, p. 21-22

Several factors account for failure to meet the original project goal of settling 5,000 families. Those factors include:

a. The lands assigned to the project area are only capable of supporting an estimated 3,600 families. Large areas are marshy and one area — Polygon 14 to the northwest — which was scheduled for settlement has been left undeveloped because of military conflict.

b. A number of families were killed by conflict in early 1982. Several hundred families fled the project area due to the political violence. Many of these families have returned to the project area but some have left permanently.

c. Settlement of Zones 3 and 4 has been delayed by lack of roads. INTA has programmed completion of a road between Saraguate and Las Flores for 1984, which should open new areas for settlement (See Map 1).

3. <u>Treatment of Families Settled in Area Prior to Project Initiation</u>

A problem that is indirectly related to settling of colonists in the project area is the treatment of seven groups of settlers who came to the area before project plans were finalized. Some of these settlers were spontaneous colonists who had moved into the area looking for lands to farm. Others had been placed by INTA before it was known that their land would become a part of the Project.

In at least one case (San Juan) settlers were told by INTA that they would receive an allocation of land twice as large as that provided for in the project plan. When it became known that the Project would incorporate San Juan lands, the colonists were told that they would have to give up half their land. Furthermore, many of the families that made up the original settlement were sent to surrounding communities as their land was divided to fit the physical plan.

Spontaneous settlers have come into virtually all of the FTN so that any future resettlement projects will have to take into account existing population. Plans for such projects should be designed carefully to avoid the kind of dislocation and unkept promises that occured in San Juan.

E. INITIAL SUPPORT MECHANISMS

As the Project was conceived, support services were to be available to colonists as they settled the area. These support services were to include infrastructure (roads, schools and other facilities), agricultural credit, health services, employment opportunities, and agricultural services. As a result of problems of coordination, lack of cooperation, and failure of some institutions to meet planned goals, most of the support services that were called for were not available in early 1981 when the first colonists arrived. Clearly, the failure to provide initial support mechanisms caused problems for settlers. Our interviews uncovered many graphic accounts of the hardships experienced by colonists as they attempted to carry their belongings to settlement sites over rough trails and to carve homesites from the virgin forest. It is a tribute to the hardiness of Guatemalan campesinos that most endured the hardships and stayed to build their new homes.

As 1981 progressed, more support became available. School teachers were hired by INTA, some roads were completed, and BANDESA began to provide credit to tide farmers over until they could harvest crops. Of even greater importance, P. L. 480 food was made available to colonists through a CARE-administered food-for-work program, which not only provided settlers with food, but also allowed colonists to work on community projects such as clearing town centers, improving access paths, building bridges and constructing provisional schools.

In February 1982, work in the project area was halted for several months by the military. That event was a serious setback to efforts to improve support services. However, great progress has been made since the military permitted work on the Project to begin again in mid-1982. We were greatly impressed with the level of support services that are now being provided to colonists by government agencies such as INTA, BANDESA, DIGESA, DIGESEPE, ICTA and the Ministry of Education.

F. INTA AND ITS ROLE IN THE PROJECT

Because the project design was to use cooperative federations to recruit settlers and bring them to the area, INTA was not immediately involved in the project area. Some jealousy still exists between FECOAR and the central office of INTA where we were told that the settler is officially the client of INTA, that INTA had not been included in signing the original agreement, that FECOAR employees were overpaid and mishandled funds, that the cost of moving settlers was overstated, and that FECOAR received extra money directly from AID at the end of the Project. In any future project, the stated wish of INTA is to be included as the official implementing agency. INTA central office personnel noted that by law only INTA is allowed to manage selection of personnel for colonization projects, although in this case the activity was sub-contracted to FENACOAC and FECOAR. We have no information on INTA allegations about FECOAR's poor performance, but we do have good information from the beneficiaries themselves about FECOAR's performance at the site. All of these interviews indicated that FECOAR had done a fine job.

The present INTA encampment is the center of development activities, and much of the coordination of activities takes place around the INTA dining tables where project personnel eat. The INTA personnel on the site impressed us as hard-working and competent, and management of the Project also seemed to be very good. A distinction was observed between the effectiveness of INTA personnel at the site and some INTA administrative personnel in Guatemala City. However, at the highest level, the President of INTA and the Chief of INTA's Planning Office received us both before and after our field work, and seemed to listen attentively to our findings and suggestions.

Some central INTA personnel have pushed the idea of the Patrimonio Agrario Colectivo (PAC) for the Ixcan area, which calls for collective labor on jointly managed plots. This program was presented to the communities, who unanimously rejected it. It is very clear that these Guatemalan peasant farmers want their own piece of land, to which they can devote their own efforts. A clear distinction should be made between communal labor for community projects, which most settlements manage very well, and collective production on plots, which farmers reject. Cooperative organizations, which have worked well in some places, should also be distinguished from the PAC collective labor scheme. It seems clear to us that the PAC system should not be considered in any future colonization project in the FTN unless a plantation-type agriculture is envisioned.

The construction of roads and schools was originally undertaken by two private contractors. However, both defaulted on their obligations, and INTA was left to finish this part of the infrastructure. Most of the roads have been finished to AID specifications, although a few short stretches remain incomplete, as does the road through Zone 4 to connect with Playitas. INTA personnel were proud of the road construction job, and pointed out that cost overruns on the roads had been paid by INTA itself. Some culverts were observed to be washing out, but in general the roads seem to be very well constructed, in a difficult environment. The roads will certainly stimulate commerce in the area. One question we raised was whether such well built, expensive roads should be constructed at the beginning of a project, or whether money could more wisely be budgeted in other areas, such as planning and research. Another question is whether community members themselves could be more fully involved in building their own roads, instead of using so much heavy machinery. As noted, project design called for labor-intensive construction, which was not implemented.

Although school construction was left unfinished by the private contractor, INTA has finished several of the schools, as discussed under Support Services.

Our general conclusion about INTA's role is very positive: within the context of a paternalistic system, INTA has built roads and schools and helped coordinate general development activities.

G. LAND DISTRIBUTION AND TITLING

Land titling has caused some problems, mostly due to the cumbersome bureaucracy involved with the titling process.

Settlers were to pay a nominal cost for the land they received: Q.160/plot of 14 manzanas. The first payment of Q.16, or 10% of the cost, was due at the time of settlement. FECOAR collected these down payments and gave provisional receipts. At the same time they asked only for the birth certificate of the head of each family and, based on this document, provided a provisional title. Both of these procedures caused some problems for INTA. According to formal INTA procedures, land payments should have been collected by a regular INTA collection agent and formal receipts tendered. Also, legal land titles cannot be issued without birth certificates for all family members, and this has caused problems for settlers, who have had to return to their place of birth to obtain these documents. Both of these problems could have been corrected through better coordination between FECOAR and INTA.

Land titles issued are provisional, and complete legal title will be given only after the full price of Q.160/plot has been paid. Since the price of the land is nominal in any case, this procedure seems to provide some continuing paternalistic control by INTA. Settlers must continue to make payments over a number of years, thus guaranteeing INTA involvement. Although perhaps impractical in some ways, an alternative would be to give full legal title early in the settlement process. Maintaining continuous residence on the land for a certain period, and effecting a certain degree of improvement (clearing and farming), might serve as conditions for granting title (as in the U.S. Homestead Act).

Full legal titles will be given to individual plots but vested in a community cooperative. In other words, individuals will not be able to sell their individual plots without permission of the whole community. This procedure was adopted to avoid the experience of colonization projects on the South Coast, where individual settlers in difficult economic straits often sold their land. This resulted in a reconcentration of land in the hands of wealthier people — exactly what the Project hopes to avoid. We consider INTA's efforts to maintain a tenure system based on small-scale plots of extreme importance. Without mechanisms to insure tenancy by small farmers, the possibility of concentration of land in the hands of other, wealthier people, always exists.

H. SUPPORT SERVICES: TIMELINESS AND UTILITY

1. Schools

Schools currently exist in all but one of the communities visited. Four elegant, poured concrete structures are in operation, 3 more are under construction, and 3 more are planned. All the other schools were self-built by community members, working under the CARE food-for-work program. These self-built schools are much more rustic, of pole and thatch construction with zinc roofs. Only San Pablo has wooden desks for children, built by the community. All other schools have planks for children to sit on.

Teachers were present and working in all but one school. Four teachers were interviewed and classes were visited in two schools. Teachers were all young, recent normal school graduates employed by the Ministry of Education. Local people asked for help in soliciting another teacher for San Isidro, given the large number of students. This situation probably exists in other communities as well.

Beginning students were observed learning to read and write from words written on the blackboard and copied into their notebooks. Childrens' families must buy their notebooks and pencils, and for these poor families, school supplies are expensive.

Table 2 provides some data on school attendance by community. Data on the number of school-age children were not available, but data on total number of children is reported. A large number seemed to be in school, which is to be expected given the high priority placed by settlers on education for their children. Significantly more boys than girls attend school, and most students are in their first two years. In Monte Alegre the situation was as follows:

1st grade	23
2nd grade	18
3rd grade	6
4th grade	3
5th grade	1
6th grade	2

The high attrition rate can probably be attributed to the difficult economic circumstances under which these children attend school, rather than to any lack of interest in education.

Schools were observed to be crucial symbols of community solidarity and pride. People were all interested in having new, elegant schools. The obvious problem which should be avoided in the future is providing elegant schools for a few communities, while possibilities for providing similar schools for all remain uncertain. Schools built by INTA foremen and skilled labor also violate the principle of self-help in building community infrastructure. Rustic schools seem to serve the purpose equally well in this situation, but they are not what local people want. They want "formal", elegant school buildings, particularly since a few communities already have them.

Table 2 - SCHOOL ATTENDANCE BY SETTLEMENT

Settlement Name	Total Pop.	Total Number of Children	Number of School Children	Males in School	Females in School
Cari	132	74	16 2/	12	4
El Eden	236	135	60	35	25
Santa Rosa	259	156	60	33	27
San Juan	275	189	82	49	33
Atlantida	288	173	44	1/	1/
San Alfonso	122	72	35	1/	1/
Efrata	360	128	1/	1/	1/
Tierra Linda	237	141	46	1/	1/
Darien	295	1/	69	1/	1/
Primavera	224	1/	50	35	15
Monte Alegre	263	1/	59	30	29
San Isidro	179	92	46	21	25
El Milagro	211	122	38	26	12
San Pablo	451	296	118	59	59
Lorena	243	143	49	30	19
San Francisco	245	147	48	26	22
Virginia	209	121	47	29	18
El Penon	280	1/	48	31	17
Nueva Jerusalem	339	230	75	46	29
Nueva Esperanza	321	179	63	37	26
Punto Chico	454	308	67	1/	1/
Esija	198	111	39	23	16
Carolina	244	139	70	43	27
Nuevas Ilusiones	185	82	60	1/	1/
Atenas	259	115	61	1/	1/
Las Rosas	249	137	47	1/	1/
Mojarras	188	88	School has no teacher		
Ingenieros	187	92	43	19	24
Nuevo Paraiso	293	183	School has no teacher		
La Muneca	269	155	School has no teacher		
Tres Rios	267	156	School has no teacher		
Paraiso de Adan	1/	1/	School has no teacher		
TOTAL	7,962	3,964	1,440	584	427

Source: Data were obtained from Estudio Socio-Economico del Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983.

1/ Data not available
2/ Children attend school in El Eden

A related general problem is whether "development" means what outside experts think appropriate, or what local people want, even if community values conflict with outsiders' opinions. If people do want "formal" schools, some way of involving local people more in their construction, and of building less expensive schools, must be found. Very expensive poured concrete structures are impractical to consider for the entire FTN.

A bilingual promoter was interviewed in Punto Chico and his class visited. The idea in mostly monolingual Mayan communities is for a bilingual promoter (who has less credentials than a fully titled teacher) to prepare students in Spanish for a year (castellanizacion), so that they can begin their formal schooling with some command of Spanish. Unfortunately, the teacher interviewed had been assigned to a Kekchi area, when in fact he spoke Mam. Bureaucratic blunders such as this should be avoided.

Bilingual education is obviously important here. A number of mostly monolingual Kekchi communities were visited: Darien, Punto Chico, Monte Alegre and Primavera. All of the communities in Zones 3 and 4 (eastern end of the Project) apparently speak Kekchi as well. A community meeting in Darien was attended. It was conducted completely in Kekchi, to the frustration of the investigators, none of whom speak this language. Bilingual promotors and other methods of communicating with Mayan speakers must be considered. On the other hand, bilingual programs should not be construed in such a way as to degrade or downplay the value of local languages to those who speak them.

2. BANDESA

BANDESA began working here in 1981. Approximate numbers of loans extended to peasant farmers have been:

1981	1,560
1982	650
1983	150

Table 3 presents the number of BANDESA loans by settlement and estimates of average amounts per loan in each settlement. Data were provided by INTA and crosschecked in the villages.

Table 3 - BANDESA LOANS AND NUMBER OF BORROWERS BY SETTLEMENT

Name of Settlement	Number of Families with Loans	Average Amount of Loan per Settlement (in Q.) 1/
Cari	18	450
El Eden	49	1,433
Santa Rosa	59	1,500
San Juan	55	1,300
Atlantida	—	—
San Alfonso	—	—
Efrata	—	—
Tierra Linda	—	—
Darien	52	450
Primavera	—	—
Monte Alegre	—	—
San Isidro	—	—
El Milagro	41	1500
San Pablo	21	700
Lorena	51	750
San Francisco	46	1000
Virginia	26	600
El Penon	—	400
Nueva Jerusalem	54	600
Nueva Esperanza	—	—
Punto Chico	—	500
Esija	—	—
Carolina	—	—
Nuevas Ilusiones	34	500
Atenas	—	—
Las Rosas	58	500
Mojarras	—	—
Ingenieros	36	600
Nuevo Paraiso	—	—
La Muneca	44	475
Tres Rios	47	600
Paraiso de Adan	—	—

Source: Data were obtained from Estudio Socio-Economico del Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983.

1/ Averages were estimated from INTA data.

Two different types of loans were given -- short-term loans for planting subsistence crops (approximately Q.125/manzana), and larger medium-term loans for cardamom planting (Q.700-800/manzana). Loans were made in small amounts over several months, instead of in a lump sum. There was some complaint from farmers about this procedure, but we nevertheless consider it wise on BANDESA's part. The normal repayment period is 5 years with an 8% annual interest charge. Five BANDESA personnel work in the countryside, observing farmers' crops and judging their ability to repay.

A new program from BANDESA provides saving accounts for settlers, most of whom have never used bank service before. So far, 179 individuals have opened accounts, and BANDESA hopes to double that number this year. We found this program an interesting indication of BANDESA's interest in the small peasant farmer. The local BANDESA manager is from Coban, speaks Kekchi, and seems to work well with peasant farmers.

Interestingly, the BANDESA manager indicated that spontaneous settlers on the other side of the Chixoy River were making better use of bank services than farmers from the Ixcan area, because they have been established longer and have larger pieces of land.

Only two cooperatives in the general area are currently financed by the local BANDESA office -- El Payan Las Palmas and Rio Negro, which we visited. The manager mentioned that accounts with cooperatives are easier for the Bank to manage, and that he hoped cooperative activity would prosper.

Our general conclusion is that BANDESA has functioned very well as a mechanism for pumping money into the countryside for the use of small peasant farmers. A large majority of farmers (perhaps 90%) have BANDESA loans. Most of these people never had bank services of any kind before. The manager's expressed wish is to extend services as widely as possible, and to adapt bank procedures to the situation of local farmers. This effective functioning of BANDESA was highly gratifying to observe.

The major problem observed in BANDESA has to do with outstanding loans on abandoned plots. Approximately 10% of the families from the project area have left, and the problem of completing settlement in these communities remains. BANDESA's procedure is to require any new settler who wants a plot to assume any outstanding loan on it. We were told that settlers were willing to assume small loans of a few hundred Quetzales, but not large loans of Q.1,000 - 3,000, which exist on some plots. The BANDESA point-of-view is that the outstanding loans must somehow be paid. Local farmers commented that "The authorities should go after individuals who had defaulted on their loans and make them pay." This is obviously impractical, but interesting as an expression of the honesty and integrity of the majority of peasant farmers. People also told us that abandoned plots were a problem for them, since the burden of civil defense patrols and other communal labor falls on a smaller number of individuals who remain in the community. Thus, they would like to complete the number of families in their settlements. We suggest that attention be given to this problem. Some part of defaulted loans may have to be written off and mechanisms for partial payment, or longer terms for payment, developed.

3. DIGESA

DIGESA has a large nursery near Cantabal, from which seedlings are sold to settlers for a nominal charge of 1 cent/seedling. Table 4 presents numbers of seedlings sold by DIGESA since 1980. Farmers come to the nursery to buy seedlings; when transportation is available these seedlings are transported to the communities by DIGESA.

Our observations of DIGESA operations were less complete than for other organizations. Nevertheless, as far as we can tell, the operation does function well. It is important to note that peasant farmers also bring with them cuttings and shoots of many different plants, buy shoots from other settlers, and, in general, are very enterprising about finding their own sources of plants. Hopefully a major contribution of the DIGESA nursery will be new varieties of plants better adapted to the region.

Table 4 - PLANTS SOLD FROM DIGESA NURSERY AT PLAYA GRANDE (1980 - 1983)

Year	Cardamom	Cacao	Coffee	Allspice	Achiote	Citrus
1980	35,500	32,500	354	—	—	—
1981	102,420	9,331	154,495	80	20	—
1982	33,350	2,650	500	—	—	—
1983 1/	33,687	16,676	—	450	2,083	2,635
TOTAL	204,957	61,157	155,349	530	2,103	2,635

Source: Data provided by the Playa Grande office of DIGESA.

1/ The nursery was moved between 1982 and 1983, accounting for low sales of plants in 1983. The previous nursery was in the area expropriated by the military for the new military base.

DIGESA home extension agents also visit the communities, giving talks to groups of housewives on nutrition, clothing, and other home economics topics. These agents are young women with home economics degrees. Two sewing machines provided by DIGESA and a woman busily at work sewing a decorative blouse were also observed in one community. The sewing machines are apparently popular among local women.

4. DIGESEPE

DIGESEPE has an experiment station with a veterinary doctor and support personnel. Various kinds of grasses have been planted as potential pasture for animals in the area. Of these, the "Tanner" variety was said to be the most successful. Japanese cane was also thought to be promising.

Another project is a chicken hatchery, from which pure bred chicks are provided for a nominal charge to communities in sets of 10 females and 2 males. Again, it is important to point out that local farmers have brought their own chickens, turkeys, ducks, and other animals from their previous locations.

DIGESEPE personnel were excited about a new experiment — 10 water buffalo to be brought soon to the experiment station. Cattle in the project area are fairly uncommon (See Table 7), although some farmers, especially from the South Coast, expressed an interest in having more cattle. The small size of the plots may present a problem for development of a cattle industry in the Ixcan area itself.

5. CARE

The CARE food-for-work program began in 1979 and was scheduled to end in June 1983. A year's extension will carry the project to June 1984. Bulgar wheat, powdered milk, white flour, and cooking oil are distributed within the communities as payment for communal work projects. Activities funded include building rustic schools, weeding of town centers and soccer fields, and constructing trails and rustic bridges over streams. We observed one village's cleaning effort in progress. Local village committees organize and manage the communal work, turn in receipts of hours worked, and receive payment in foodstuffs. This program is very popular among local people, and seems to be an effective way of improving village infrastructure. The initiative and organization demonstrated by local people in these projects is remarkable. The only problem involved in the food-for-work program is the inherent paternalism. CARE personnel are aware of this problem and hope that self-organized communal efforts will continue after the food-for-work program ends.

6. INACOP

The consumer cooperative in San Pablo is the only cooperative currently functioning in the project area. All 104 family heads are members of the cooperative. They meet each month and the officers report its activities to the members. Approximately 6 times a year they bring a truckload of supplies from Guatemala to be sold in the cooperative store.

It apparently has a large volume of sales. The markup is kept to a minimum and, as a result, prices are somewhat better than in private stores in Playa Grande and Efrata. People from other communities also buy from the San Pablo cooperative to take advantage of their lower prices. An important element in the success of the cooperative is the supervision and help provided by the local INACOP representative, who seems to be doing a very good job.

At least one other settlement also had a prosperous cooperative. However, during the conflicts of 1982, a truckload of 800 quintales of cooperative supplies coming from Guatemala was stolen. Since then, the cooperative members commented that "they have not had the heart" to organize another cooperative.

INACOP activities in promoting cooperative organization in the project area have been somewhat curtailed by adverse pressure from the military. Cooperatives are apparently regarded with some suspicion as potentially "subversive".

One very successful cooperative outside the project area was visited — the Rio Negro Cooperative in Saholon. The community was founded in the late 1960's by Kekchi people from the Coban area. There were no roads and it took them 4 days on foot to reach Saholon. They began farming the area and later learned they were on private farm land. With the help of a private attorney, they arranged for a loan through a savings and credit cooperative in Coban to purchase the land. They planted cardamom, and through the profits from their cardamom sales, they have managed to repay their original loan of Q.30,000 and now have clear title to their land (15 caballerias, 12 manzanas).

Recently, the cooperative has taken out another loan, this time from BANDESA, to buy their own cardamom dryer. The cooperative produced 700 quintales of cardamom last year, when the price was about Q.700/quintal for the dried product compared to Q.140/quintal for the green product. The dryer thus produced a great increase in profits for the cooperative members this past year.

One current project of the coopereative is to buy an electric generator for the town (the Protestant church already has a generator of its own). Another project involves additional land purchase. The cooperative has been so successful that the community is trying to buy an adjoining farm to add to their land area. The owner quoted them a price of Q.95,000 two years ago for 15 caballerias. Most recently, they have not been able to find the owner, who, like other large farmers, is apparently afraid of guerrilla activity in the area. Members have now decided to finish paying off their cardamom dryer loan before taking on a new loan obligation to buy more land.

The Rio Negro Cooprative with its 32 members is obviously a model operation, which INACOP supervises and proudly points to. After a one-day visit, author Dennis suggested the possibility of making a film about the cooperative in Kekchi, to be used by INACOP in promoting cooperative organization throughout the Kekchi area.

Cooperatives such as Rio Negro apparently work better in the Indian communities than in the more ladino ones. Traditional Indian patterns of communal organization are relatively easily transferred to cooperatives, as opposed to the more individualistic patterns of ladino communities. The many Kekchi communities in Zones 3 and 4 of the Project are therefore probably better prospects for cooperative organization than the ladino communities in Zones 1 and 2.

7. Health Services

The original plan for health centers in the communities has not been implemented. Instead, a hospital has been constructed at Playa Grande and settlers must go there for serious health problems. The hospital is understaffed and undersupplied, given the large number of families both within and outside the project area.

The major health problem according to settlers was malaria. SNEM (malaria control) teams were observed at work, but we have no other information on the problem.

As far as we know, the major reason for concentrating health services in one central hospital was pressure from the military. The military base is directly opposite the hospital, and hospital services are used regularly by the military. During our stay a number of soldiers were killed and wounded in fighting some distance away from the project area, with the wounded brought to the hospital for attention.

8. Other Organizations

ICTA has experimental plots of hybrid beans, rice and corn, which we visited. We were told rice yields on the experimental plot reached 120 quintales/manzana — a very impressive figure. Local farmers are encouraged to visit the experimental plots and become interested in the more productive varieties of subsistence crops.

INDECA has one silo for crop storage. INAFOR is also present but was not visited. A volunteer fire company is also present.

Given the variety of different organizations working in the project area, it was gratifying to see the work of the Coordinating Committee in promoting inter-agency cooperation. Its montly meetings and monthly news bulletin indicate it functions well.

I. AGRICULTURAL PRODUCTION AND MARKETING

1. Agricultural Production

Farmers in the project area are still mainly using the traditional agricultural techniques they brought from their previous homes. Clearing and preparation of land is carried out using axe, machete and hoe. Large trees, especially mahogany and other valuable tropical hardwoods, are cut down using chain saws rented to settlers by itinerant lumber buyers.

All farmers are involved mainly in subsistence production focused on corn, rice, and root crops such as cassava, sweet potatoes, and a taro-like plant known locally as malanga. Corn and rice are the main crops, accounting for over 4,000 manzanas of cultivated land in the project area (See Tables 5 and 6). Some individuals are experimenting with different kinds of vegetable and fruit production on their land. The empirical knowledge gained through such experimentation may provide a basis for future changes in the food crop mix.

Farmers reported that they use insecticides to control crop damage. The cooperative at San Pablo supplies fertilizer to its members and to farmers from neighboring communities, but use is limited by high prices (up to Q.20 per quintal) and the limited cash income of most farmers.

Soils vary greatly in quality and yields reflect these variations (See Table 6). The fertility of soils in the project area declines rapidly after they are cleared, contributing to declines in subsistence crop yields. By the third year of cultivation, many soils have lost most of their productive potential.

ICTA is conducting experiments to find improved varieties of beans, rice and other subsistence crops for use in the project area. They have identified disease-tolerant and disease-resistant varieties and are also experimenting with different planting cycles. ICTA is responsible for agricultural experimentation while DIGESA is charged with diffusing improved plant varieties and cultural practices among farmers. We have no data nor obervations on how well ICTA and DIGESA share information, nor on how effective DIGESA has been at conveying that information to farmers.

Table 5 - LAND IN USE AND TOTAL AGRICULTURAL AREA

Settlement Name	Land in Manzanas		Total Area of Settlement	
	Cleared	Uncleared	(Caballerias)	(Manzanas)
Cari	93	383	9	0
El Eden	315	1/	14	31
Santa Rosa	343	1/	14	13
San Juan	632	1/	24	12
Atlantida	1/	1/	15	17
San Alfonso	158	1/	14	6
Efrata	1/	1/	17	49
Tierra Linda	1/	1/	12	32
Darien	1/	1/	16	41
Primavera	275	1/	14	11
Monte Alegre	348	1/	12	8
San Isidro	1/	644	14	14
El Milagro	1/	653	14	18
San Pablo	1/	945	26	36
Lorena	1	1/	15	10
San Francisco	182	1/	14	36
Virginia	121	701	12	56
El Penon	127	1/	14	58
Nueva Jerusalem	145	695	16	20
Nueva Esperanza	366	915	27	1
Punto Chico	296	1003	21	11
Esija	145	765	14	25
Carolina	1/	106	13	61
Nuevas Ilusiones	51	1/	15	41
Atenas	1/	730	15	30
Las Rosas	182	1/	16	11
Mojarras	117	1/	15	12
Ingenieros	110	1/	15	12
Nuevo Paraiso	127	807	15	28
La Muneca	272	838	18	11
Tres Rios	178	827	16	35
Paraiso de Adan	1/	1/	1/	1/
TOTAL	4,583	10,012	—	—

Source: Data were obtained from Estudio Socio-Economico Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983.

1/ Data not available

Table 6 - CROP PRODUCTION BY SETTLEMENT

Settlement Name	Area Planted in Manzanas			Yields (quintales/manzana)	
	Cardamom	Corn	Rice	Corn	Rice
Cari	26	20	46	11	20
El Eden	100	114	30	20	18
Santa Rosa	150	61	51	12	20
San Juan	54	195	12	12	15
Atlantida	60	180	124	20	40
San Alfonso	14	38	10	30	25
Efrata	28	165	132	20	12
Tierra Linda	196	98	98	40	60
Darien	1/	1/	1/	1/	1/
Primavera	0	110	55	20	25
Monte Alegre	0	116	116	20	25
San Isidro	131	55	28	1/	1/
El Milagro	108	24	38	1/	1/
San Pablo	25	197	33	1/	1/
Lorena	10	88	86	18	10
San Francisco	47	67	57	9	17
Virginia	33	53	35	25	28
El Penon	0	67	55	30	30
Nueva Jerusalem	33	63	49	22	29
Nueva Esperanza	144	73	14	25	30
Punto Chico	0	178	117	1/	1/
Esija	45	70	15	20	45
Carolina	4	65	25	20	40
Nuevas Ilusiones	0	22	18	20	30
Atenas	0	60	52	1/	1/
Las Rosas	0	78	64	20	25
Mojarras	0	83	34	12	16
Ingenio	3	87	20	10	16
Nuevo Paraiso	0	62	65	15	20
La Muneca	0	90	64	25	20
Tres Rios	0	79	95	25	25
Paraiso de Adan	1/	1/	1/	1/	1/
TOTAL	1,211	2,658	1,638	AVERAGE 20	26

Source: Data were obtained from Estudio Socio-Economico del Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983.

1/ Data not available.

2. Marketing

It was recognized early in the Project that the best long-term use of land in the project area would be permanent crops. Subsistence production was intended largely to support farmers until permanent commercial production could begin.

The main commercial crop in the area is cardamom, which is being planted by most farmers in Zones 1 and 2, but which is much less advanced in the eastern settlement area, much of which has been colonized only recently. This year cardamom production is virtually nil, but many plantings will be in production in 1985. All of the 1,211 manzanas indicated in Table 6 that were planted in 1984 should be producing by 1986. This should contribute greatly to the flow of cash to project's farmers.

CARE has proposed to build cardamom driers with AID funds in El Penon, Lorena, San Francisco, San Isidro, San Juan and Santa Rosa. This activity will include a production and marketing component that should contribute substantially to farmer incomes.

Marketing of cardamom in Coban is apparently in the hands of a small number of powerful buyers who control prices. Farmers report better prices for their cardamom if they can transport it to Guatemala City. Attention should be given to the marketing of cardamom in any future development work.

Other permanent commercial crops that are considered for the project area include cacao, citrus fruits, allspice, and rubber, but these crops have received little emphasis compared with cardamom. If the price of cardamom remains high, the emphasis on it as a cash crop is probably justified. However, it seems prudent to develop more diversified production in order to reduce dependence on one single crop. It might be possible to develop production of other spices such as cloves, vanilla, or nutmeg, in addition to cardamom.

The project area is very good for pineapple production, but the long trip to market over rough roads makes successful marketing doubtful. One possibility would be to install a pineapple canning plant that could process the pineapple on the project area.

Any future investment in development of the Ixcan area or other areas of the FTN should definitely include a research component to investigate alternative crops, both subsistence and commercial, suitable for production in the area.

J. QUALITY OF LIFE

Life is difficult in Ixcan and people are very poor. The CARE office in Playa Grande estimates average peasant family income at only Q.300 per year. This current lack of cash flow stifles to some degree people's aspirations for a better life. Subsistence crops had to be planted first, and most of the land is still in corn and rice. Beans only grow well in a few places, but rice does very well in most settlements. Substantial rice harvests were achieved this year, but farmers were unwilling to sell at the current low price of Q.8/quintal. For home consumption, people also buy packages of rice and beans and other essential items in the local stores at inflated prices. Items imported from Guatemala City tend to be very expensive. Nevertheless, the inevitable soft drinks and packaged corn chips were widely available.

Garden plots and domestic animals provide most of the additional food people consume. An impressive variety of garden crops are grown, among them: papaya, sweet potatoes, cassava, malanga, bananas, pineapple, tomatoes, chile, and herbs. Domestic animals are also common (See Table 7) and provide much needed protein.

Table 7 - LIVESTOCK AND FOWL

Settlement Name	Number of Cattle	Number of Pigs	Number of Chickens	Number of Turkeys	Number of Ducks
Cari	0	12	217	21	0
El Eden	36	41	759	32	0
Santa Rosa	1/	1/	1/	1/	1/
San Juan	1/	1/	1/	1/	1/
Atlantida	0	0	430	50	15
San Alfonso	26	5	267	17	0
Efrata	54	20	616	102	16
Tierra Linda	0	0	540	80	40
Darien	0	28	450	2/	2/	2/
Primavera	0	0	220	40	16
Monte Alegre	0	0	530	200	30
San Isidro	0	0	539	2/	2/	2/
El Milagro	0	0	378	2/	2/	2/
San Pablo	202	0	1,067	216	40
Lorena	7	45	1,578	24	14
San Francisco	13	18	968	18	74
Virginia	3	23	1,200	2/	2/	2/
El Penon	10	10	650	100	150
Nueva Jerusalem	6	32	2,106	2/	2/	2/
Nueva Esperanza	56	94	442	115	131
Punto Chico	6	0	470	2/	2/	2/
Esija	65	14	895	20	36
Carolina	0	31	831	0	8
Nuevas Ilusiones	0	12	723	2/	2/	2/
Atenas	0	0	492	146	77
Las Rosas	0	24	666	48	9
Mojarras	1/	1/	168	2/	2/	2/
Ingenieros	0	15	826	0	0
Nuevo Paraiso	0	0	455	40	20
La Muneca	0	38	660	78	39
Tres Rios	0	12	491	86	94
Paraiso de Adan	1/	1/	1/	1/	1/

Source: Data were obtained from Estudio Socio-Economico del Proyecto 520-T-026, DICA/INTA, mayo a septiembre de 1983

1/ Data not available
2/ No distinction was made among types of domesticated fowl.

As noted earlier, Kekchi speaking settlements have significantly less agricultural land devoted to cardamom than do other, mostly ladino communities. This is apparently due to the fact that the Kekchi people were settled in the northern and eastern areas of Ixcan, where there are no roads as yet and where government services have been slow in arriving. In other areas (for example the Rio Negro cooperative) Kekchi people are very successful cardamom farmers. Cultural differences thus cannot account for the slow adoption of cardamom cultivation among the Kekchi of the Ixcan. We do note that should these Kekchi communities remain outside the cardamom economy, an economic and quality-of-life gap may develop.

Another major problem concerns health and sanitation. Malaria rates are high and typhoid cases have been reported. Ixcan does have a functioning hospital and ambulance service. However, of the hospital's two medical practitioners, only one devotes his attention to settler clients at any given time. The two doctors rotate service and, in effect, 8,000 people are served by one doctor. No settlement has a community health center, although health workers and malaria control personnel are frequent visitors.

A number of other health problems are associated with lack of sanitation facilities. Skin diseases, dysentery, intestinal parasites and hepatitis are common maladies. No community has a safe water supply. Water is carried from local streams, or is drawn from shallow wells. Existing sources of water are thus open to contamination from human and animal excrement and insecticides. Because of the area's high rainfall, latrine construction will not solve the problem of fecal contamination. Alternative sources of safe drinking water should be promoted.

Another problem concerns the lack of infrastructure that still exists. A number of communities (Atlantida, Tierra Linda, Atenas, Las Rosas, Punto Chico, Mojarras, Nueva Jerusalem and Nueva Esperanza) are without roads. All produce and other commodities must be carried in and out by trail. INTA engineers are currently studying this problem.

Only four permanent schools have been completed, with three more scheduled for completion within the near future. Other communities have built their own rustic schools of pole and thatch. Respondents in these settlements are openly critical of the fact that permanent schools have not been constructed within their communities, but have been in others. Community pride centers around the school building, and people want their children to have an education.

On the positive side, every respondent in the 19 settlements studied said his or her quality of life had improved. Pride in ownership of a parcela was very strong. Typical comments were, "We were really downtrodden before. We worked on the farm and didn't have any place to grow crops of our own". Or, "There is more freedom here. Before, we were just workers, but now we have the liberty of planting whatever we want". And, "There is nothing in the world better than having your own land to work."

We were also impressed with community spirit and voluntary community service. Schools, soccer fields, and churches were constructed through community effort, and periodic village projects are organized with communal labor. A strong, grass-roots political organization is also evident, with elected officers and local committees taking major responsibility. We attended one community meeting and talked with many local presidents. This tradition of communal labor and strong local organization is an obvious asset on which future development efforts can build.

Concerning religious life, most of the villages visited had at least one chapel. Some villages were composed almost exclusively of "Evangelicals", while others were predominantly Roman Catholic. Some communities had both a Roman Catholic and an Evangelical chapel. Religion seems to be an important part of village life, but we have little further data.

In summary, difficult problems are associated with extreme poverty, poor health and sanitation, and lack of services. On the other hand, we found strong pride in ownership, vigorous community organization, a diversified home consumption, and great hope for future prosperity from the cash crop, cardamom.

These settlers have created positive and hopeful lives for themselves within their new communities. The Project has been relatively successful in improving their quality of life.

K. RECOMMENDATIONS FOR THE IXCAN AREA

Clearly, some resources should be committed to the consolidation of the Ixcan Project, at the same time any new colonization project is planned. In particular, now that the expensive infrastructure is in place (roads and some of the schools), relatively inexpensive support services should be provided along the following lines.

1. Health

Health services are generally poor and should be improved. Safe drinking water is not available and malaria is a serious problem.

2. Schools

Education for settlers' children is a strong goal and every effort should be made to improve the minimal services now available.

3. Agricultural research and diversification

It seems somewhat precarious to concentrate all development hopes around one product, cardamom. Continuing research should be conducted on other agricultural possibilities such as hardwood production, tree crops and fruit, other varieties of spices, and pineapple marketing and canning, among others. As regards spices, it is suggested that some contact be made with U.S. spice companies to investigate their possible collaboration in spice production, to the benefit of local colonists.

4. Marketing

Marketing of farmers' crops demands close attention. Support should be given to developing cooperatives for cardamom marketing, to building local cardamom dryers, to developing contacts with cardamom buyers and exporters, and to other aspects of marketing. Such strategies are essential for insuring a fair price for farmers' products, and a rise in farm income.

Local crops should be encouraged in Ixcan in collaboration with INACOP personnel, insofar as political realities allow it. The Kekchi speaking communities seem to be the best prospects for future cooperative organization.

A centralized consumer cooperative to provide basic necessities to all settlers in the region should also be considered. Food, boots, machetes, clothes, and other basic articles could be provided at reduced prices, following the successful example of the San Pablo cooperative.

5. Coordination of activities

The Interinstitucional Coordinating Committee should be used as a vehicle to ensure that future development work is coordinated and functions smoothly. Settler participation in the Committee should be encouraged.

L. RECOMMENDATIONS FOR FUTURE COLONIZATION PROJECTS

Given the generally successful experience at Ixcan, we recommend that additional colonization projects be funded by AID. Given the land tenure situation in the FTN, it is likely that future projects will be smaller in size, less expensive, and amenable to better planning. Specific recommendations are the following.

1. Better Planning

Settlers were moved into Ixcan before support services or infrastructure were available. Future projects should be conducted in a more carefully planned fashion. In this way, colonization can be organized more rationally, instead of rushing settlers to the area.

2. Additional research

The $1,100,000 originally budgeted for a natural resource study was rebudgeted to pay for roads and schools. As a result, badly needed research was never done. Given the delicate tropical ecology, environmental and agricultural research is crucial. Expertise in tropical research is available from various sources, given sufficient time and funding.

In addition, social science research concerning patterns of community organization, attitudes and aspirations, agricultural knowledge, physical layout of communities and farms, and other crucial social factors is necessary. The authors' backgrounds are social anthropology, cultural geography, and sociology, and we regard careful social science research as an important supplement to technical knowledge.

3. Infrastructure vs. support services

Original project design called for labor-intensive, self-built infrastructure, and more attention to social services. This course was not followed in Ixcan. In the future, we recommend that less money be spent on expensive infrastructure, and that the principles of local initiative, self-help, and respect for the abilities of peasant farmers be taken more seriously.

4. Better provisions for spontaneous settlers

Future projects will have to deal with families who have already established their own colonization areas. Some of these "spontaneous" settlers were unfairly treated in Ixcan; careful attention to the situation of such people is necessary.

5. Better interchange of information

Complete documentation of the Ixcan Project project was difficult to find. Although INTA personnel were very generous with their material, they had not seen important AID documents on the Project. We recommend better efforts to exchange documentation in order to ensure good working relations on both sides.

6. Better local publicity for AID

Although AID is the major financial contributor to the Ixcan Project, its participation is almost invisible at the local level. Signs and other public relations propaganda, much utilized by GOG agencies, are little in evidence for AID. We feel that this very positive aspect of U.S. government overseas activity needs to be more widely known, especially among the local population directly served.

APPENDIX

Documents Reviewed

AID

1975	Project Paper, Guatemala: Small Farmer Development AID office, Guatemala City.
n.d.	File of clippings from Guatemalan newspapers about Playa Grande project. AID office, Guatemala City.
1983	PID on further NTS colonization projects. AID office, Guatemala City.
1982 (March)	Final Report: Northern Transversal Strip Land Resettlement Project. Agricultural Cooperative Development International (ACDI). AID office, Guatemala City.
1983	Land and Labor in Guatemala: An Assessment. AID/Washington and Development Associates.

CARE

1983 (Nov)	Propuesta: Proyecto de Cultivo y Comercializacion de Cardamomo. CARE Office, Playa Grande.

DICA

1983 (Mayo-Sept)	Estudio Socio-Economico del Proyecto 520-T-026. Desarrollo Integral de Comunidades Agrarias, (DICA) INTA office, Playa Grande.

DIGESA

n.d.	Datos de ventas de plantas del vivero. DIGESA office, Playa Grande.

INTA

n.d.	Correspondence from central INTA files, Guatemala City.
n.d.	Road specifications: correspondence with AID. INTA office, Playa Grande.
n.d.	Maps of project area and surrounding region. INTA office, Playa Grande.

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