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EVALUATION OF THE
FORMAL EDUCATION COMPONENT
OF THE
NON-FORMAL RURAL EDUCATION PROJECT
(522-0108)

EVALUATION OF THE EFFECTIVENESS OF THE
IN-SERVICE TEACHER TRAINING
AND
THE PROGRESS OF THE
EDUCATIONAL RESEARCH GROUP

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REPORT SUMMARY

This is a summative evaluation of the two major activities of the formal education element of the non-formal education project in Honduras. Work on the project began under AID Grant No. 522-0108 in 1976 and continued under AID Loan No. 522-V-031 in 1978. The evaluation was conducted by a professional educator on the staff of Development Associates, Inc.

The two major activities of the project were the In-Service Teacher Training Program and the Program of Training in Research and Evaluation. Each program is based within the Ministry of Education and though related, they are distinct groups and are treated separately in this report.

The In-Service Teacher Training Program provided an intensive 18-month period of formation of 24 experienced Honduran teachers, to prepare them to provide in-service training for other teachers. The particular kind of teaching called for in the in-service training would work toward the national goals of more participatory education and schools that are more involved in the country's process of development. The In-Service Teacher Training Group (ITTG) alternated periods of receiving training at their base in Tegucigalpa, with periods of providing training in field trips to rural areas. They made six field trips in all, spending a month each time giving onsite in-service training to rural primary school teachers. Together with four advisors they covered 157 schools and provided in-service training for 657 teachers in the program. Although a qualitative report of results is not possible, quantitative data indicate that some improvements have been made in the schools and that the climate for change has been initiated. Institutionalization of continuous teacher in-service is recommended.

The second major activity of the project was the Program of Training in Research and Evaluation. In this program, a Research Team composed of eight experienced Honduran teachers was trained over a period of two years in research methodology and evaluation. This report covers only those activities underway or completed since the mid-term evaluation in July, 1978. Most of their training was completed by that time but there have been some training activities since then. The bulk of the time has been spent on filling work orders from the MOE and other agencies. Since the mid-term evaluation the team has done nine research assignments, during which they contacted a total of 442,438 persons. The Research Team has ably demonstrated their capability in research and evaluation.

In summary, the performance objectives of the GOH/AID agreements regarding capacity-building in the MOE for teacher inservice and for research and evaluation have been achieved.

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CHAPTER I
INTRODUCTION

A. Project Description and Background

This is the end-of-project evaluation for the formal education element of the non-formal rural education project in Honduras. Work on the project began under AID Grant No. 522-0108 in 1976 and continued under AID Loan No. 522-V-031 in 1978.

Under the original scope of work, the project was to develop the capabilities of the Government of Honduras (GOH) staff to design, execute and evaluate non-formal and formal programs oriented to development of the rural areas. Both the formal and non-formal programs were to be within the Ministry of Education (MOE), carried out on a test basis in two rural regions.

Specific targets for the project to be achieved by September, 1978 were:

- A minimum of 16 professional personnel, including eight from the Department of Primary Education, trained in investigative methodology for rural areas; and in planning, supervising the execution of, and evaluating formal and non-formal education programs in rural areas.
- Ten learning programs affecting 5,000 adult beneficiaries in two regions, designed, pretested and being implemented.
- Six learning programs designed, pretested, modified and being implemented in at least 50 primary schools benefitting about 4,000 children in two regions.
- Fifty promoters and 400 monitors trained to implement non-formal educational programs and 50 primary school teachers trained to implement Central/Satellite school educational programs.

Several factors altered the original direction of the project, however. One was an organizational change made by the Government of Honduras (GOH) during the time between the signing of the first agreement in June, 1976, and the signing of the second agreement in September, 1976. At that time, the GOH developed a policy to coordinate all non-formal education under the Consejo Superior de Planeamiento Económico (CONSUPLANE). This took the non-formal education component out of the MOE. Thus, in most respects two projects were created, the non-formal education project and the formal education project.

The second factor affecting the formal education component of the project was Hurricane Fifi. AID Loan No. 522-V-031, which continued the project, was made to assist the GOH in its efforts to stimulate recovery from Hurricane Fifi.

The three project activities below were identified as being critical to this effort:

Rural Primary Schools

1. Renovation and enlarging of 54 Central and 270 Satellite schools including approximately 335 classrooms.
2. Construction, equipping and staffing of one In-Service Training Center with a minimum professional staff of 24 and capacity to handle 80 teacher trainees.
3. Training of 24 professionals to staff the Training Center.
4. Provision of one month of training at the Training Center for 1,200 teachers.
5. Distribution of basic teaching equipment kits to project schools.
6. Provision of funds for special practical projects by project schools.

Agriculture Credit

AID funds were to increase the capital of the Banco Nacional de Fomento (BNF) by \$5.0 million, part of which would be to finance technical assistance and training for its employees, and the rest for extension of short-term production credit.

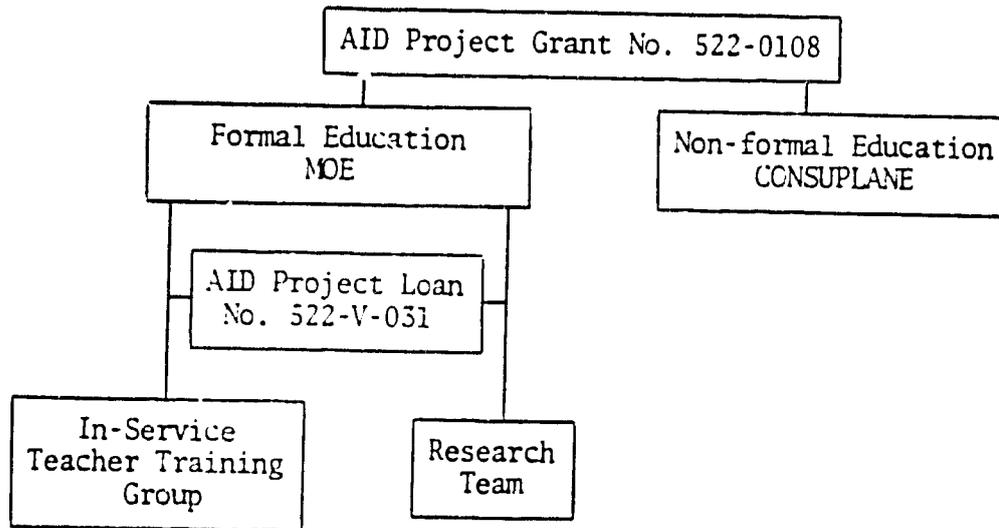
Access Road Reconstruction

About 400 kilometers of access and linkage roads would be repaired and upgraded in the hurricane affected zone. All roads were to service good agricultural production zones populated principally by small farmers.

The education element of the loan was for work in rural primary schools. Efforts were to be concentrated in the six departments suffering the most damage from the hurricane: Islas de la Bahia, Gracias a Dios, Colón, Atlántida, Cortés and Yoro.

Thus, while the non-formal education element of the original project covered other areas of the country and was under the jurisdiction of CONSUPLANE, the formal education element, under the jurisdiction of the MOE and continued through AID Loan No. 522-V-021, focused on these six departments. They comprise the Honduran North coastal region and a group of islands in the Caribbean, Islas de la Bahía.

The following diagram illustrates the project evolution.



Per the terms of PRO-AG 522-5-TQ, the resources of project 522-0108 were divided between the MOE and CONSUPLANE as follows:

	<u>MOE</u>	<u>CONSUPLANE</u>	<u>TOTAL</u>
Actual expenditures	\$108,471.20	\$189,551.54	\$298,022.54

(For the budget breakdown see Appendix D.)

The Ministry of Education formal education project involves two major activities: the In-Service Teacher Training Program and the Program of Training in Research and Evaluation.

The In-Service Teacher Training Program provided an 18-month intensive course for 24 Honduran teachers. This course prepared them to provide in-service training for other teachers. The goal was that with improved teaching there would be fewer repeaters and dropouts and a greater appreciation of the value of education by parents. It was expected this would lead to larger primary school enrollments and ultimately to a better life for Hondurans.

The training program placed strong emphasis on the practical and including the following: research, evaluation, group dynamics, curriculum, methodology, techniques, and didactic materials. Trainees were expected to teach these same practical skills to other teachers.

The group alternated periods of didactic formation at their base in Tegucigalpa, with one-month field trips to rural schools in the six departments in the North most affected by hurricane damage. In in-service sessions with rural primary school teachers, they

tested and revised the Teacher Learning Program. (The Teacher Learning Program was the sum total of all the elements of Teacher In-Service Training.) This program relied heavily on the feedback and evaluations these teachers furnished. Repeated visits, six in all, provided followup of teachers' implementation of in-service training. Overall, the 24 teacher trainers with four advisors, covered 157 schools and provided in-service training for 657 teachers in the program.

The In-Service Program is designed to train teachers to develop primary school students who are well grounded in the basics of reading and mathematics. Perhaps more important, they are given an appreciation of the need for these skills. Through a process of holistic personal development, students learn the skills of group participation, critical thinking, awareness and analysis of community problems and how to seek original solutions to problems. The teachers in the program demonstrated extraordinary dedication and proved themselves capable of training their counterparts.

The curriculum and methodology of the In-Service Training Program was solid and well-developed. Naturally, the degree of effectiveness varied from school to school. The extent to which teachers utilized the in-service training they received differed greatly, depending on such factors as their own receptivity, peer and supervisory support, and the attitude toward the role of the teacher taken by participants.

Of significance, the program is adaptable for use throughout Honduras except in those areas where Spanish is not the mother tongue. For example, in Islas de la Bahía and Gracias a Dios, English and Indian languages are spoken, necessitating either modifications or another training approach.

Besides the In-Service Teacher Training Program, the second major activity of the formal education project was the Program of Training in Research and Evaluation. Thus far a Research Team, composed of eight certified teachers, has completed two years of intensive training in research methodology and evaluation. These specialists provide the Ministry of Education with a research capability upon which to base decisions in the education sector. Significantly, they are Honduras' only certified technicians in research and evaluation. Moreover, not only have they received training in these areas, they have also done some training of others.

The MOE records show there have been many requests for the team's skills. Relatedly, since the mid-term project evaluation in July, 1978, the team has done nine research assignments during which they contacted a total of 442,458 persons. The most extensive study they made was the National Education Census which reached, by questionnaire, 400,000 parents of school-aged children.

Because of their sincere dedication and proven competence, the team has earned the confidence of various sections of the Ministry of Education and other agencies of the government who have called upon the team in their needs for research. There is no doubt the team has been highly productive. It became apparent during their work, however, that they need more training in inferential statistics if their work is to render maximum service to the Ministry. Nevertheless, as indicated earlier, the team is presently capable of training others in research and evaluation techniques; in this way it is potentially able to multiply the benefits of the project considerably.

B. Description of Evaluation

This report presents a final evaluation of the formal education element of the non-formal rural education project of the Ministry of Education (MOE) of Honduras and USAID/Honduras begun under AID Grant No. 522-0108, and continued in AID Loan No. 522-V-031. The non-formal education element of the project under AID Grant No. 522-0108 has not yet been done. The objectives for this evaluation as determined by the contract provided by AID are:

- Evaluate the effectiveness of the training in curriculum design and educational administration provided by project technical assistance to the In-Service Teacher Training Group (ITTG) of the MOE, including:
 - Evaluation of the learning program designed for primary school teachers by the ITTG; and
 - Evaluation of the content and methodology of curriculum training received by the ITTG.
- Evaluate the progress of the educational research group since the mid-term evaluation (July, 1978), with reference to the nature of their activities and their relation to project outputs.

The overall purpose of this evaluation is to assess the project's usefulness to AID and Government of Honduras (GOH) planners in designing and implementing future projects whose goals are to improve the educational and skill levels of "campesino" families.

The evaluation was conducted by a professional educator on the staff of Development Associates, Inc., and included the following means of information gathering:

- Documents from MOE and AID files were reviewed (see Bibliography, Appendix A).
- Onsite visitations were made to Puerto Lempira in the Department of Gracias a Dios, La Ceiba in the Department of Atlántida, and Calpules y Arenales in the Department of Cortés.

- A questionnaire was created and administered to the ITTG (see Appendix B).
- Interviews were conducted with the Technical Commission and members of the ITTG, the Research Team, technical advisors to the program, supervisors, teachers, students, and AID staff.
- Group discussions were held with the ITTG and the Research Team. In addition, the evaluator attended and participated in meetings with supervisors, the ITTG, and the Research Team.

Findings, conclusions and recommendations included in this report are drawn from all of the above sources.

When not on field visitation, the evaluator divided her time (four weeks) about equally between the AID and MOE offices. The professional and support staffs of both organizations were at all times cordial and ready to help.

The evaluator visited one Central school in Cortés and one Satellite school in Atlántida. A larger sampling was not possible due to constraints of time, plus the fact that many schools were closed because of heavy flooding, and in the remaining schools, normal instructional activities had given way to end-of-year activities. Furthermore, the ITTG returned to Tegucigalpa after completing their sixth field trip and there was a need for the evaluator to spend time with this group.

This report is divided into two parts, one on the In-Service Teacher Training Program and the other on the Research Team. For each group we examine the background, training, and problems, and then present the findings, conclusions and recommendations.

CHAPTER II

IN-SERVICE TEACHER TRAINING PROGRAM

A. Background

As indicated earlier, in 1976, AID Grant No. 522-0108 between GOH and AID/H began an In-Service Teacher Training Program. This effort was a component of the formal education program effort carried out as part of a large project called the non-formal rural education project. AID Loan No. 522-V-031, in 1978, continued the non-formal education component of the project. In doing so, it focused the work on the six departments hardest hit by hurricane Fifi. (Departments of Gracias a Dios, Islas de la Bahía, Colón, Atlántida, Yoro and Cortés.) From the beginning, however, the objective of the education component was to provide training for a group of Honduran educators who in turn would be capable of providing in-service teacher training to primary school teachers. The more specific program goals developed by the MOE under AID Grant No. 522-0108 were:

- To provide ongoing in-service training of Honduran teachers to assure the continued improvement of the quality of education;
- To integrate education into the development process, especially in rural areas;
- To prepare teachers to participate in orientation and promotion of socioeconomic community development using the resources of the local environment;
- To coordinate the activities of national and international institutions in matters of education; and
- To continuously plan, execute, supervise, and evaluate the in-service training of educational system personnel.

In addition there are two goals in the National Development Plan (1975-1979) relevant to the project:

- To make education more democratic (participatory); and
- To make education an integral part of the developmental process.

(It is worthy of note here that the National Development Plan for 1979-1985 calls for an ongoing system of in-service training for teachers.)

Below is an outline of the organization of the various groups of people in the In-Service Training Program (ITTG) and a brief description of their place of work.

1. Technical Council

Functions:

- a) Set policy;
- b) Approve work plans, personnel selection; and
- c) Approve construction and equipment plans.

Members:

- a) Sub-Secretary of Public Education for technical matters;
- b) General Director of Planning and Education Reform;
- c) General Director of Secondary Education; and
- d) General Director of Primary Education.

2. Technical Commission

Functions:

- a) Carry out directives of the council;
- b) Coordinate in-service activities;
- c) Develop work plan for ITTG;
- d) Plan and develop supervision and evaluation program; and
- e) Act as counterpart of Advisory Commission.

Members:

- a) Specialist in curriculum, in-service school administration;
- b) Specialist in socio-educational research and group dynamics; and
- c) Generalist, responsible for educational materials.

3. Technical Advisor

Functions:

- a) Advise Technical Commission; and
- b) Advise and train the ITTG in group dynamics; curriculum, research, administration, evaluation, teaching methodology, and didactic materials.

Staffing:

Expert in curriculum/educational administration (18-month AID contract).

Other Technical Assistance:

- a) Expert in socio-educational research and group dynamics (rural social anthropologist, AID contract);
- b) Specialist in didactic materials (audio-visual) (six-month AID contract); and
- c) Specialists in curriculum and supervision (two-week seminar, AID contract).

4. In-Service Teacher Training Team

Functions:

- a) Carry out basic research;
- b) Develop their own integrated curriculum;
- c) Provide in-service training for teachers inclusive of systematized followup and feedback procedures; and
- d) Evaluate program activities.

Members:

Twenty-four certified teachers, all with classroom experience, some with supervisory experience, and all with specializations in different subject areas.

5. Support Staff

- 1 Administrative Assistant
- 1 Secretary
- 1 Office Clerk
- 1 Bookkeeper
- 5 Drivers (when on field trips)

6. Location

The ITTG work area is in an isolated part of the Ministry of Education building. The Administrative Office has eight desks and four file cabinets. The ITTG uses an adjacent, large room with 49 student chairs and a blackboard. They have no desk space or storage area. The bathroom, with occasional running water, doubles as a storage closet. The telephone was never connected, and the mimeograph never worked.

What follows is a description of the training design of the ITTG. The description includes general methodology, general content, input from and participation in outside institutions, and finally, coordination within and outside of the MOE.

B. Training Design of the In-Service Teacher Training Program

Formation of the ITTG and implementation of the In-Service Teacher Training Program in the field went hand-in-hand, one part nourishing the other. For purposes of this report, each is examined separately.

The ITTG developed the In-Service Teacher Training Program during its own training and implemented it during field trips to the rural areas. The group covered all six departments in each field trip except for the third and fourth trips, when Islas de la Bahia and Gracias a Dios were inaccessible due to weather conditions. The map on the following page shows the location of the six northern departments of Honduras where ITTG carried out In-Service Teacher Training.

Prior to each of the six field trips, the team experienced a period of intense formation. Of their own volition they determined what their formation would be. The three members of the Technical Commission along with technical assistants, coordinated activities.

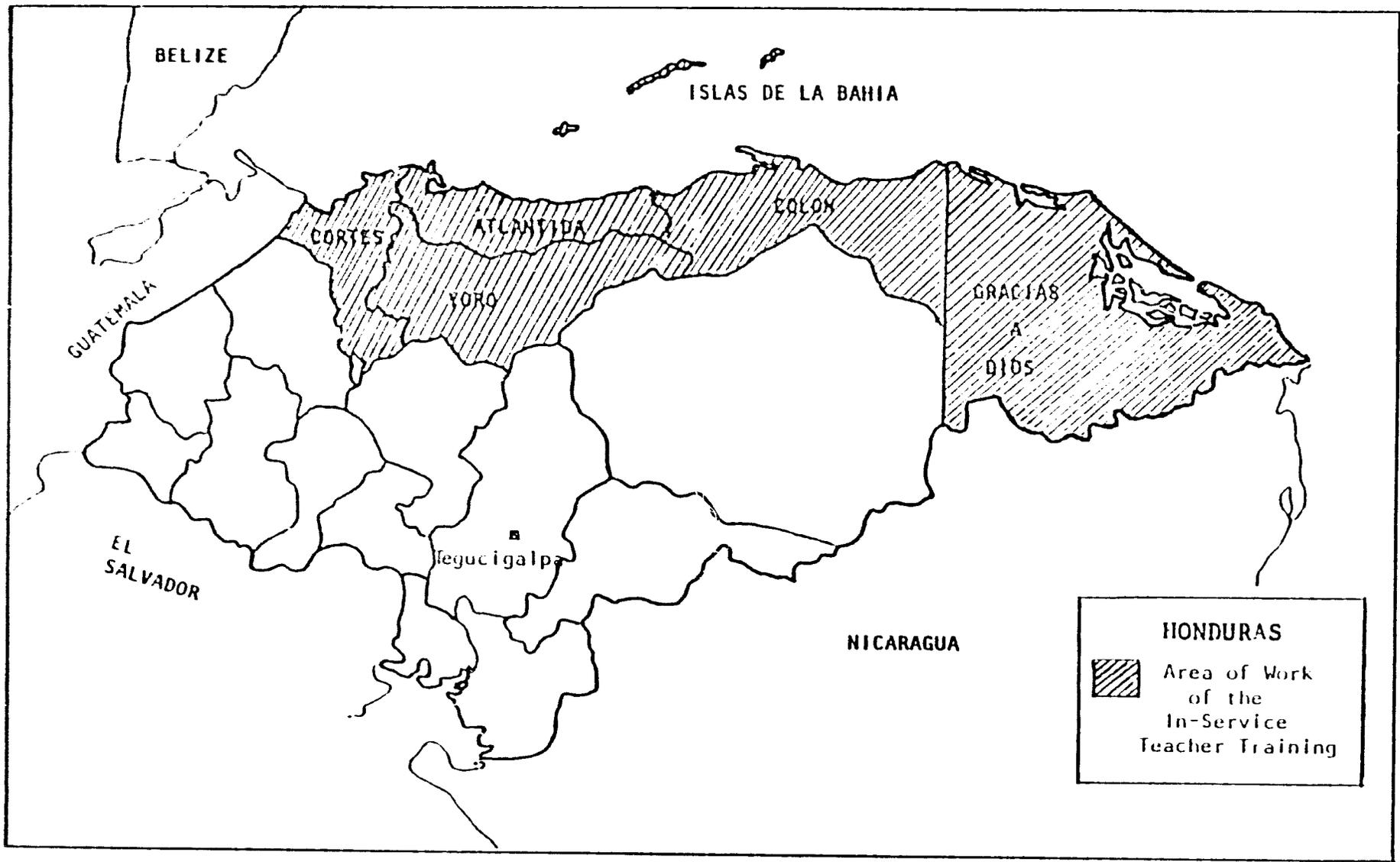
The periods of formation between field trips from June 1978 to November 1979 were:

- prior to 1st field trip - 6 weeks
- between 1st and 2nd - 16 weeks
- between 2nd and 3rd - 16 weeks
- between 3rd and 4th - 6 weeks
- between 4th and 5th - 6 weeks
- between 5th and 6th - 2 weeks

These field trips were designed with a methodology used by the ITTG in their own training experiences.

General Methodology

The design of the methodology is a cycle of group reflection followed by action followed by reflection. The group, which works as a unit, may be any group - the ITTG, teachers receiving in-service, teachers and students, the teacher with parents and students, or all students. In any case the method is the same. Prior to activity the group, by reflection, raises consciousness, increases motivation and makes plans. Plans are executed and the activity is then followed by another period of reflection for purposes of analysis, evaluation and revision. Besides using this method to achieve its own formation, the ITTG used it to produce positive behavioral changes among teachers.



The following is a description of the content of the training received by the ITTG. The description includes orientation to the program, pedagogical content, and participation with other institutions.

General Content

1. Orientation

The first part of the team's training period was spent in arriving at a philosophical agreement among the members about basic questions such as: What is education, the role of the teacher, the role of the student, and the role of the parent in education? This was followed by thorough training in group dynamics through which the team developed a sense of cohesion without losing individuality. Training emphasized good relations with teachers, students and community, as well as how to motivate communities and teachers to action.

The team also was trained in research and evaluation techniques and methodology, using an anthropological and sociological approach. Methods studied were direct observation, active participation, questionnaires and interviews, as well as how to select the best research scheme for each situation.

For further professional development, each team member received a copy of 34 selected readings for individual study, and for group analysis and discussion (see Appendix B, pp. 6-9, for a list of these materials).

2. Pedagogical Content

The pedagogical content of the training received by the ITTG included theory approach, techniques, materials development, curriculum and supervision.

The team studied various theories of learning and child development, with an emphasis on the theories of Piaget. A teaching approach called Integrated Learning Units (ILU) was introduced, whereby students participate in the entire learning process. Students begin by planning the curriculum with the teacher (what will they learn? why?). They then organize the content around certain questions (where? when? who? why?). After implementing their plans for learning, they analyze, evaluate and make new plans for learning.

Teaching techniques and methodology formed a major part of the training. Techniques were presented for working with more than one grade at a time, for students' independent work, and for student evaluation and promotion based on criteria other than the final examination. Methods of teaching reading and mathematics focused on the importance of systematic mastery of graduated levels of difficulty. Reading techniques included

syllabic, phonetic and audio-visual techniques, as well as the use of sight words, stories and experience charts. Further work in techniques and methodology was done in language arts, handwriting, science, social studies, art and music.

One of the most practical elements of the pedagogical content of the ITTG training was in the preparation of didactic materials. Trainees learned to make a wide variety of audio-visual materials with a special view toward improving and making low-cost teaching aids by using materials found locally.

In curriculum, the trainees examined various frameworks, theories and models and the relative merits of each. As part of their training in supervision, trainees developed five models which could be adapted to actual school situations in the six departments.

5. Conferences Given by Resource People from Other Institutions

In addition to their own training sessions, many sessions were arranged for presentation to the team by outside resource people. These sessions included:

- Specialist in non-formal education from the Programa Nacional de Educación Extraescolar de Honduras
Topic: Non-Formal Education
- Advisor from the Ministry of Education
Topic: How to Plan Independent Work When Teaching Two or More Grades at Once
- Expert in agrarian reform, from the Programa de Capacitación Campesina para la Reforma Agraria (PROCARRA)
Topic: Agrarian Reform
- Education specialist from UNESCO
Topic: Non-Formal Education and In-Service Programs
- Sociologist from the University of Honduras
Topic: Philosophic Bases of Education
- Specialist in natural science, from the University of Honduras
Topic: Natural Science in Primary Schools
- Specialist in Spanish language, from DIGEPRE
Topic: Reading and Writing in the First Grade of Primary
- Specialist in art education, from the Escuela Nacional de Bellas Artes
Topic: Art in the Primary School

- Specialist in music education, from the Escuela Nacional de Música
Topic: Music in the Primary School
- Curriculum specialist from UNESCO
Topic: Integrated Learning Units
- Professor of primary education, former national director of primary education
Topic: Rural Central/Satellite Schools
- Anthropologist from AID
Topic: Anthropology and Curriculum

4. Participation of ITTG Members in Outside Training Activities

Besides receiving input from outside institutions, the ITTG participated in a number of training activities in various regions of Honduras and in Panamá. They include:

- First Central American Seminar on Curricular Development (one participated) July, 1978, Tegucigalpa.
- Workshop on Group Dynamics and Audio-visual Resources (two participated) two weeks, September, 1978, Tegucigalpa.
- Interchange of Ideas and Experiences with Panamanian Curriculum and Educational Reform Units (23 ITTG, plus three members of Technical Commission) November 26-December 4, 1978, Panamá.
- Conference of Departmental Supervisors (three attended) December, 1978, Honduras.
- Observation of Work of a Supervision Group in Training at the Escuela Superior del Profesorado in the Taulabe and Juticalpa zones (all ITTG members).
- Seminar of Departmental Supervisors (three ITTG, one Technical Commission) January, 1979, Honduras.
- Seminar on Non-Formal Education (two ITTG) January 29-February 3, 1979, Danlí.
- Seminar on Making and Evaluating Investment Projects (one ITTG) February, 1979, Honduras.

5. Coordination

Coordination with other institutions was a major goal of the program, which defined coordination as

- identification with other institution(s); and
- achieving common objectives through concerted action.

Intra-institutional coordination was the most difficult to achieve. In 1979, there were 12 meetings for the purpose of coordinating activities of the In-service Program within the administration of the MOE. There was a general lack of consensus among the team about the success in achieving this coordination. However, all members are disposed to continue efforts in this direction, and there have been encouraging demonstrations of good will on the part of the administration.

The ITTG made a number of efforts to achieve coordination. There were meetings for information, cooperation and coordination with branches of the MOE and other institutions. These meetings were with a variety of agencies including: the Department of Extension and Technical Assistance for Primary Education (MOE), the National Commission of Reform (MOE), the Curriculum Unit (MOE), the Research Unit (MOE), the Technical Support Services for Educational Programs (MOE), the School Construction (MOE), the Superior Teacher's School "Francisco Morazán," the National Program of Non-Formal Education (PRONAEH), the Institute of Professional Formation (INFOP), the Ministry of Natural Resources, the National Agrarian Institute (INA), the Regional Junta of Development, Second Military Region, based in San Pedro Sula, and the Agency for International Development (AID).

In December, 1979, the ITTG will visit all five Normal Schools to give an orientation to the In-Service Teacher Training Program. Then in January, 1980, a discussion of the program with the ITTG is on the agenda of a general meeting for all departmental supervisors.

Taken together, all of the foregoing elements of the trainees' formation influenced the design and content of the product: the Teacher In-Service Learning Program. What follows is a description of the Teacher In-Service Learning Program - how it was developed and implemented and the nature of its content.

C. Teacher In-Service Learning Program

The Teacher In-Service Learning Program is the sum total of all the elements of in-service training as given by the ITTG. The Learning Program was designed for primary school teachers by the Technical Commission, the Technical Advisor, and the ITTG. Each

of these persons had input, with time to internalize program content and time to exchange ideas about what they were learning and would be teaching to other teachers.

The Teacher In-Service Learning Program was designed with six units, structured sequentially so that each unit builds on the previous one. All of the six units have characteristics in common. They represent a period of four weeks' field work involving departmental supervisors, auxiliaries, teachers, students, and community. They begin with meetings with supervisors to discuss the program, and they include school visits with observation of teaching and individualized technical assistance for teachers. They use a variety of activities: seminars, conferences, lectures, workshops, plenary sessions, group work, panel discussions, classroom observations, study circles, displays, demonstrations, and home visits. They provide continuous feedback and evaluation at all levels on a daily basis and again after completing each unit, by ITTG, supervisors, teachers and students.

Implementation of the six units of the Teacher In-Service Learning Program took place during the six field trips made by the 24 ITTG members, the Technical Commission and the Technical Advisor. Between June, 1978 and October, 1979, these 28 people worked for six periods of one month each, in the Departments of Gracias a Dios, Islas de la Bahía, Colón, Cortés, Yoro and Atlántida (Gracias a Dios and Islas de la Bahía were not included in the third and fourth field trips due to the damage caused by Hurricane Greta).

Divided into groups, the 28 members of the ITTG set an arduous schedule for themselves which they followed even under adverse conditions of travel and weather extremes.

Initially, the teachers and community members were not receptive to the program. In the past, each said they had been promised much by the MOE, but without delivery. Through discussion and common search for feasible solutions within the limits of the community, they gradually opened up.

Content of Teacher In-Service Learning Program

As may be expected, the content of the Teacher In-Service Learning Program included many of the elements of the ITTG's own training. First, there was an orientation to the program and its goals as well as its general methodology of reflection-action-reflection. Teaching techniques and methodology emphasized reading and mathematics, but also included language arts, science, social studies, handwriting, and art. Teachers in the program learned the rationale and techniques for using Integrated Learning Units. They also learned techniques for working with more than one grade at a time and for facilitating independent work for students; they learned how to evaluate students and how to determine promotion, as well as how to evaluate themselves. Preparation and use of didactic materials was another program component.

Two especially innovative elements of the program were the agricultural courses and the practical projects, both of which are described below.

Practical Projects. AID Loan No. 522-031 specifically called for "provision of funds for special practical projects initiated by project schools." These are a kind of learning laboratory for the purpose of providing rural schools with start-up costs for learning experiences that have practical application for students. Some examples are: raising pigs, chickens, rabbits, fish, bees; growing rice, yucca; dressmaking.

The ITTG members promote the idea of practical projects to teachers in the program, who complete a questionnaire to determine their level of interest. After observation in the classroom, the ITTG members consult other teachers in the school, as well as the school director and departmental supervisor.

Barring any problems thus far, a meeting of parents, teachers and all students of the school must be held to determine the level of interest and to decide the type of project. A formal application which specifies objectives, budget and time plan is then sent to the ITTG office, where the selection of applications is made. Applications are sent to DIGEPRE for official approval, and from there to the Office of Construction which manages funds. A check is then sent to the director of the applicant school, who is held responsible for its disposal and the return of invoices paid. Invoices for expenditures are sent to the ITTG office for verification.

Several conditions regulate the practical projects. Food-related projects must be for the purpose of learning to increase food production, and not for immediate consumption by the school population. All projects must have the potential to recover funds spent, and funds recovered must be used locally for another practical project in the school, to expand the same project, or to improve the school. No more than \$500 is granted per project.

Of the \$100,000 assigned to this project under AID (522-V-031), the first \$20,000 has been spent. This is the first part of the funding. All of it has been used and as soon as the invoices for expenditures are all returned from the project schools, the second part of funding will be available. A waiting list of 37 applications is pending. Since October, 1978, 47 projects have been funded.

The following observations are from the evaluator's onsite visit to San Juan Pueblo, Department of Atlántida, where practical projects are underway:

Using the land surrounding the school (about one city block), students and teachers are cultivating yucca for feeding three pigs they plan to raise, beginning February, 1980. Parents and students have constructed

a cement block, roofed structure for the pigs, and have begun a piped water system to the structure. They have spent this entire year in preparation. In addition, parents are helping with a school latrine, as are students.

Sixth grade students are working in two different communities constructing three model latrines in each community. One of these communities elected a school parent as director of the "letrización" project. Both communities will build 25 latrines each, with parents and students doing the work.

Besides practical projects, another effort to make education more relevant was to provide agricultural courses.

Agricultural Courses. These provide program participants with skills needed to implement practical projects in schools. The content of the courses is 30% theory and 70% practice. Instruction is provided gratis by the Instituto Nacional de Formación Profesional (INFOP). Courses include two weeks in animal raising and two weeks in food cultivation.

AID Loan No. 522-V-031 provides \$100,000, to be used for enrollees' expenses which is managed by the Office of Construction. For 1980, 24 courses are planned for 733 teachers.

To date, two courses have been given. The first course was from April 16 to May 17, 1979, at the José Cecilio del Valle School, Aldea San Isidro, Municipio Tocoa, Department of Colón. Nineteen teachers, two parents, one student and one ITTG member completed the course. The second course was from April 24 to May 25, 1979, at the Edgardo Alaniz School, Aldea Arenales y Calpules, Municipio San Pedro Sula, Department of Cortés. Completing the course were 23 teachers, one parent, one ITTG member, and six students.

INFOP usually limits enrollment to 15 for maximum participation but they accepted more for this program. At the outset INFOP resisted the idea of including parents and students in the plan. They feared that students and non-professionals in the same classroom setting could not learn on a par with teachers. In the end, however, all agreed this was not the case, rather it was a positive experience and should be continued.

By initial agreement the agricultural courses were to be in Zamorana for 180 teachers. However, it was decided that working with INFOP would be more suitable, for several reasons.

The INFOP structure would allow the program to reach more people, up to 600. INFOP would give courses locally, in the environment of enrollees, using local resources and thus the community would be incorporated more easily into courses, creating closer ties between community and school. Coordination among participating institutions would be promoted. A major plus was that primary

classes would not be interrupted, since colleagues of teacher-enrollees covered their classes, often teaching double sessions with no extra pay. Some enrollees attended the courses half-day and taught half-day. In all, INFOP would allow greater returns for the money invested, more enrollees and at no cost for training.

There was evidence in several places that teachers who had taken the courses were applying knowledge gained. For example, the practical projects of pig raising in Isleta, Colón, and chicken raising in Zapotal, Cortés were enlarged and improved after teachers had taken the courses.

The following is a report from the evaluator's classroom observation in Calpules y Arenales, Department of Cortés, which demonstrates an application of what was learned in the agricultural courses.

Sixth grade: The class was having a review lesson on how to deliver a baby pig.

Teaching technique: Questions from teacher, then students questioned each other. Lack of written materials alleviated by a student's reading short sections of a booklet. Reading used as basis for further questions and discussion. Students were obviously interested. Teacher used several opportunities to bring out something to learn from other subjects (math, spelling, etc.).

D. Problems Encountered

In the various Teacher In-Service Learning Program activities, a number of problems were encountered which inhibited the work to some extent. Some of the problems were general and others were directly program-related.

The baseline data collected in June, 1978 by the ITTG on their first field trip revealed that all six departments had certain problems in common. They included: lack of teaching methodology; scarcity, lack and poor use of teaching material; lack of supervision; poor implementation of student evaluation system; little involvement of the school in the community; poor physical condition of the schools; ill-health and poor hygiene of students; lack of equipment or equipment out of order; and plans and programs far from reality.

Additional problems were subsequently revealed in other field trips. Supervisors were unable to cover all the schools assigned to them and they felt a lack of communication with teachers. Teachers were unprepared for their work and many lacked certification. There was a critical lack of housing for teachers, many of whom were living outside the community where they work. There was a rapid turnover of teachers and a need for teachers who would stay in the rural area. Finally, teachers felt a lack of material support from the MCE.

Other problems included too many students in a classroom (enrollment in early grades is said to be 50-150 children), and too many grades in one classroom with only one teacher. Many schools lacked blackboards and chalk, teaching materials, tools, land for practical projects, and any kind of reading matter. Transportation and communication were problems which affected, among other things, the school lunch program. Food was lost and children went hungry for want of a workable distribution system.

Problems more directly program-related tended to hamper the effectiveness of the project. There was an initial lack of confidence of the rural people in the MOE. They claimed that the many promises made previously by the MOE had gone unfulfilled and that this program "sounds too good to be true". Teachers felt they needed more orientation about the program, and that not enough teachers were receiving in-service training to make a difference. Supervisors felt that they needed more in-service to be able to do program followup; they also lacked a clear idea of the role of a supervisor in relation to the program. The high turnover of teachers made followup difficult. The ITTG members did not have enough supplies for their field work (chalk, blackboard paint, etc.). In Gracias a Dios, where the only way to reach project schools was by often treacherous waters, ITTG members needed life-jackets but had none.

Delays in the school construction that was to be provided by AID Loan No. 552-031 also affected the project. The poor communication between the Office of Construction and the ITTG impeded the movement of funds for equipment (vehicles, desks), materials, and practical projects. For example, didactic materials requisitioned 18 months ago were still not delivered. Agricultural courses were suspended: enrollees had been promised \$75 reimbursement for expenses but it took six months for payment, due to administrative problems; the enrollees threatened to boycott the program for non-payment.

A problem most pronounced in the Departments of Gracias a Dios and Islas de la Bahía was that the group work and other methods being promoted by the program were ineffective when used with non-Spanish speaking children taught by a monolingual Spanish-speaking teacher.

E. Findings

The In-Service Teacher Training Program provides practical ways to help the schools to become a dynamic force in the community, by bringing together people of all ages and roles, in a mutual effort to find solutions to the problems which they share. The desirable effects of the program include changes of attitude as well as of behavior. The program has effected such changes among some supervisors, teachers, students and parents.

The general consensus of supervisors, teachers and ITTG members is that (1) initial negative reactions to the program and problems are being overcome, and (2) implementation is a slow process but a beginning has been made.

The following is a compendium of results which have been reported with increasing frequency during the last 18 months by the supervisors, teachers and ITTG members.

Supervisors

- Participated in program activities; attended seminars and meetings; made followup visits to schools.
- Received feedback from ITTG regarding problems in their district schools.
- Had opportunities to possess, study and discuss the Honduran National Plan and other documents related to education in Honduras.

Teachers

- Changed their attitude toward the role of the teacher.
- Improved their relations with students, more interchange with them.
- Are making more home visits.
- Are using more group work in teaching.
- Are working together more with other teachers.
- Are participating in more community functions.
- Report better rapport with supervisors and auxiliaries.
- Make and use teaching materials demonstrated by ITTG.
- Are more willing to seek technical assistance from ITTG.
- Are putting into practice the Integrated Learning Units.
- Are asking for more in-service training.
- Are making increased use of MPE textbooks.

Parents

- Changed their attitude from resistance to positive interest and cooperation.
- Participate in school activities, especially in practical projects.

- Have closer ties with schools, visit more frequently.
- Continue to demonstrate interest in the program.*

Students

- Participate more in the teaching/learning process.
- Demonstrate more self-confidence and involvement in school.
- Show an increase in ability to work in groups as well as independently.
- Are involved in practical projects and in community involvement projects.
- Are investigating problems and seeking solutions (Integrated Learning Units).

Other

Mass media was used for informing the public about the In-Service Teacher Training Program: radio (Yoro) and newspaper (Colón)

Table 1 records general impressions gained by the ITTG in their classroom observations in project schools. Although the qualitative aspect of the extent of implementation cannot be measured, the table serves as a rough quantitative estimate.

After each field trip, the group from each department wrote a report. The following is from the final report made after the ITTG's sixth and last field trip to the Department of Cortés, November, 1979. At the time of writing this was the only final report completed.

Final Report and Evaluation, Cortés

The instruments used were direct observation, individual questionnaires for teachers, and group interviews with students and teachers. The ITTG spent one day in each of the 29 schools. When asked if they would continue using participatory methodology in teaching next year, all but five of the 195 teachers said "yes". Presented in Table 2 are some of the observations made by the ITTG of their final site visits to the schools in Cortés.

* Numbers in attendance at parents-teachers-ITTG meetings, November, 1978, Department of Cortés: Río Blanco 69, Eueros Aires 115, El Zapotol 75, Colonia Bográn 59, Calpules y Arenales 79, Rivera Hernández 117, El Carmen 67, San Cristóbal 55.

TABLE 1
OBSERVATION OF TEACHERS APPLYING ELEMENTS OF
IN-SERVICE TRAINING
(IN ALL SIX DEPARTMENTS)

<u>Observed in the Classroom</u>	<u>Number of the 24 In-Service Team Members Who Have Ob- served This during Class- room Visits</u>
1. Increased participation of children in learning	22
2. Use of methodology for teaching reading and math	11
3. Students grouped for reading according to levels	19
4. Teachers prepare their reading lessons	17
5. Textbooks from the Ministry being used by students	17
6. Use of didactic materials made with local materials	20
7. Use of self-evaluation by teachers	19
8. Mathematics taught systematically by graduated level of difficulty	19
9. Use of practical projects as learning laboratories in the schools	22
10. Students working in small groups	18
11. Increased involvement of parents in school activities	20
12. Increased involvement of teachers in community activities	18
13. Some of the audio-visual aids made by classroom teachers during in-service and used in teaching	
- flash-card holders	22
- picture collections	14
- abacus	21
- place value chart	23
- math games	20
- flash cards for reading and math	22
- magic markers (homemade)	15
- ditto (homemade)	20
- flip chart	17
- flannel board	15
- murals	17
- posters	21

TABLE 2
OBSERVATIONS OF FINAL SITE VISITS

<u>Observed in the Classroom</u>	<u>Frequency of Response (at 29 Schools)</u>
1. Change in conduct of children (participation, cooperation, research)	20
2. Integration of elements of in-service training into classroom activities	11
3. Improvement in physical appearance of the school	17
4. Participation of parents	7
5. Change of attitude of teacher (responsibility, relations with students, parents and peers)	8
6. Professional preparation of the teacher	12
7. Practical projects functioning	6
8. Weakness in applying methodology of the program	22
9. Parents' lack of awareness of the program	15
10. Lack of resources for teachers to consult	14
11. Lack of program orientation for school directors	10

F. Conclusions and Recommendations

Following are the conclusions and recommendations based upon the findings of this report.

Conclusions

1. The program could effectively integrate rural schools into the socioeconomic development of the nation.
2. The curriculum content and methodology of training programs are solid, well-developed and fairly well balanced. The primary emphasis is on practical application in actual teaching/learning situations. Problems found in the local community, the nation, and beyond* often become the teaching/learning situation.
3. How effective the program is differs from school-to-school, depending on factors such as receptivity, peer and supervisory support.
4. The In-Service Teacher Training as developed in the learning program is adaptable for use in any of the regions of the country where Spanish is the first language.
5. The ITTG, the Technical Commission and the Technical Advisor are a cohesive, dedicated group who have made an extraordinary effort. In the field they average 15 hours a day, and at the office, ten. On field trips they "rough it," lacking amenities and persevering under extreme conditions of weather, roads and waterways.** At times they have gone beyond the amount of work called for in their Plan of Action.***
6. All indications are that the team has a good understanding of the program. They have demonstrated this by being able to implement the Teacher Learning Program in the field.
7. Program personnel have a comprehensive, first-hand knowledge of the state of rural primary school education in the six departments worked, and could be a valuable information resource for the MOE and the government as a whole.

* In one of the schools visited the evaluator found a 6th grade class discussion on "The Causes of Underdevelopment in Central America."

** Team members went from house-to-house wading in puddles caused by pouring rain to invite parents to a meeting. Because their school had no roof and was flooded, they found a parent who agreed to house the meeting. November, 1979. Islas de la Bahía.

*** March, 1979 Field Trip, 114 schools planned. By request of teachers, the Team covered an additional ten schools, making a total of 124 schools.

8. Expertise in curriculum needs to be further developed.
9. There is a lack of clear role definition by the Ministry for the In-Service Teacher Training Program. The ITTG, specially selected from among many applicants, started out at salaries but a shade higher than teachers' salaries. For those who had been supervisors, this meant a cut in pay. Most members have the added expense of living away from their home towns. After two years of specialized training, the ITTG have received no increment in salary, although the teachers have received a raise. The position of the ITTG is unstable and uncertain; their contract ends December 31, 1979.

In light of the foregoing, the evaluator concludes that this program should be continued ideally to become institutionalized within the MOE. The project objective has been achieved: to provide training for a group of Honduran educators who in turn would be capable of providing in-service teacher training to primary school teachers. A group of 24 Honduran teachers have completed an 18-month training period during which time they provided about a month of in-service teacher training onsite to 657 primary school teachers in 157 schools (see Table 3 on the following page).

Recommendations

1. Increase the number of in-service teacher trainers. Now that the ITTG of 24 has completed an intensive training period, divide them into smaller teams to train other personnel to be in-service teacher trainers.
2. Include trainees from regions not yet represented in the ITTG (Islas de la Bahía, Mosquitía, etc.).
3. In the In-Service Teacher Learning Program, strengthen the curriculum work. Diminish the scope of work to be covered in one field trip and concentrate on covering fewer activities more thoroughly to allow time for internalization.
4. In areas where students have limited or no proficiency in Spanish, consider the provision of bilingual education. Prepare those who will be working in these areas with knowledge of how to teach Spanish as a second language.
5. Integrate the In-Service Teacher Training Program into the Normal Schools.
6. Improve the physical facilities used for training purposes.

In addition, the evaluator recommends that the In-Service Teacher Training Program should be continued and become institutionalized within the MOE.

TABLE 3
 BENEFICIARIES OF IN-SERVICE TEACHER TRAINING PROGRAM
 1979

Department	Rural Pilot Schools (Central Schools)	Total Schools (Central/Satellite Schools)	Number of Teachers	Number of Students	Number of Communities
Cortés	5	29	181	7,980	29
Yoro	4	29	114	4,941	29
Atlántida	5	28	116	5,748	28
Colón	10	39	126	6,079	39
Islas de la Bahía	3	17	31	1,207	17
Gracias a Dios	3	15	63	2,260	15
TOTALS	30	157	631	28,215	157

CHAPTER III

RESEARCH TEAM

A second group to receive specialized training within the MOE was the Research Team. Although the ITTG and the Research Team are two distinct entities and are treated as such in this report, the Research Team played an important role in the training of the ITTG. Training in research and evaluation was one of the components first implemented in the ITTG formation. The Research Team assisted with this training for about a year. One member of the Technical Commission of the ITTG had also been a member of the Research Team, so from the beginning the two groups have had a close relationship.

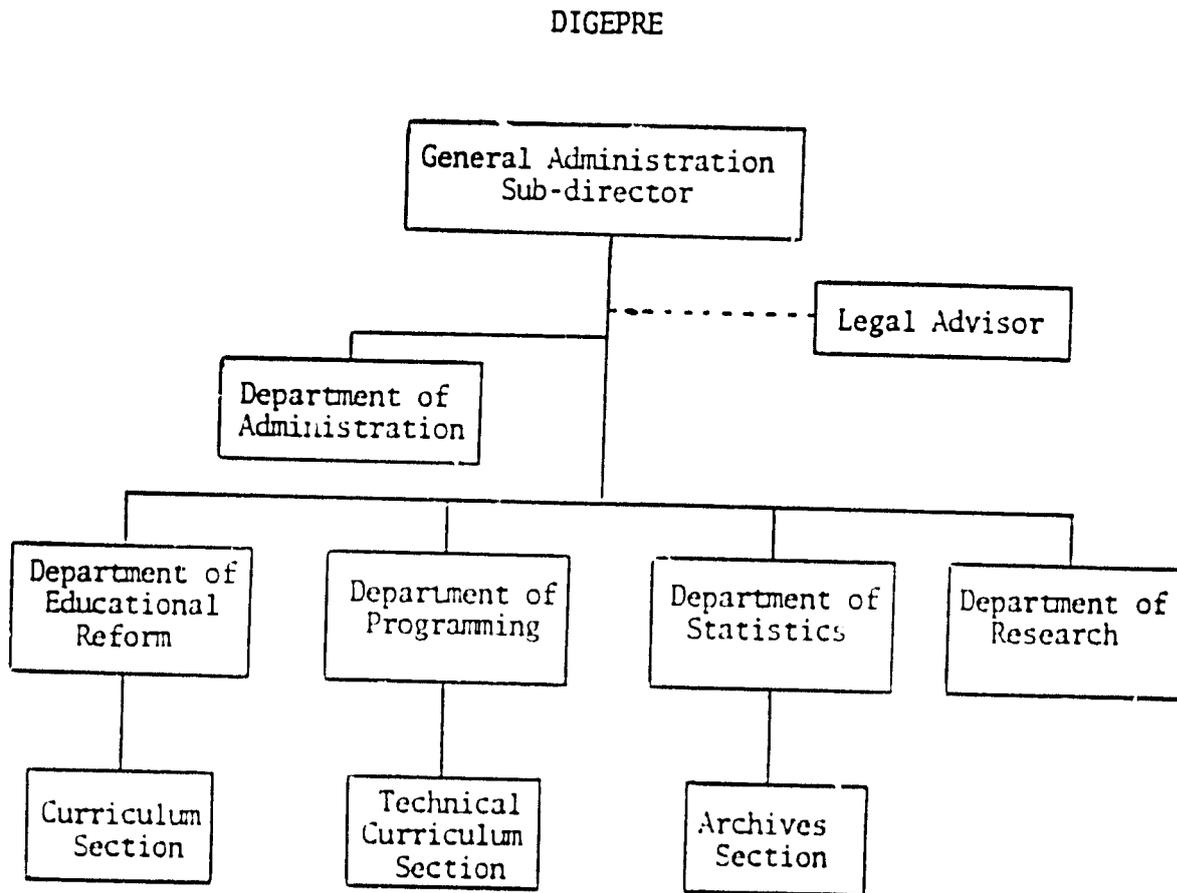
The Research Team had already done considerable investigative research in the six departments in 1977. In 1978 when the ITTG began to prepare for work there, they used the data already available as a springboard to further research done on the first field trip. This new research included structured and semi-structured interviews, and pre-coded questionnaires. The Research Team assisted the ITTG in planning and implementing this. Although the ITTG has basic knowledge of research and evaluation, they recognize that the expertise of the Research Team goes beyond their own. There is a mutual respect for professional territoriality.

In this section of the report the general background of the Research Team effort is presented, a description of training received and provided is given, a report of findings, and a case study of one project is included and finally, conclusions and recommendations are made.

A. Background

AID Grant Agreement 522-0108 provided for eight professional personnel from the MOE Department of Primary Education to be trained in investigation and evaluation techniques. The basic goal of this effort was to provide educational planning and research capability to the MOE by equipping its personnel with the knowledge and skills necessary for research and evaluation. Eight certified teachers, three of whom had been supervisors, made up the Research Team. They are from all parts of the country. Within the team there is a General Coordinator (appointed by the Ministry), a Work Coordinator (rotates every 30 days), and a key-punch operator. The Research Team is part of the MOE Dirección General de Planeamiento y Reforma Educativa (DIGEPRE).

LOCATION OF RESEARCH TEAM WITHIN DIGEPRE



B. Training

The following describes the initial training and ongoing training received by the Research Team. They have also provided training for others demonstrating the effectiveness of their own training.

Training Received by Research Team

Prior to the mid-term evaluation (July, 1978), the team completed a 15-month course from a rural social anthropologist (AID Contract), in which they studied techniques of research and evaluation in the social sciences, with an emphasis on education (September 8, 1976 - November 30, 1977).

Since July, 1978 various team members have had additional training:

- January-December, 1979. One team member was sent to Del Valle University, Guatemala, for further studies in research and evaluation. (AID scholarship.)
- January-June, 1979, Honduras. Two team members were sent to the Instituto Centro-Americano de Computación y Finanzas for further studies in programming. (AID scholarship.)
- January-March, 1979, Tegucigalpa. All team members were sent to the Instituto Hondureño (IHCI) for special computer-English. This course was interrupted because of the urgency of other work. (AID scholarship.)
- June-September, 1979, on-site. 7:00 a.m.-9:00 p.m. daily. All team members took a course on educational administration and law.
- August, 1979, Costa Rica. Three members were sent for a seminar on instruments for educational research.
- September, 1979, Panamá. Two members were sent for a seminar on regional educational planning.
- September, 1979, Honduras. Selected members attended a seminar on methodology for evaluating educational projects, given by a specialist in educational evaluation (AID contract).

Training Provided by Research Team

In August, 1978 two members of the Research Unit gave the complete training in Statistical Package for the Social Services (SPSS) to two technicians from Panamá, one from the Ministry of Health and one from the Ministry of Education. Training included: use of diskettes, keypunch, coding of research instruments, phases in the process of research, steps of data computation, general execution of SPSS, and how to interpret computer output. The objective was to process the research data collected by the Ministry of Education in Panamá.

In February-September, 1979 the Research Team trained the personnel of the School Map Project (MOE) in the use of the Statistical Package for Social Sciences. Thirteen interviewers were trained, and four instruments were prepared and used.

Diploma

After a long period of negotiation, the MOE awarded the members of the Research Team a diploma in March, 1979. This "Certificado de Competencia Profesional" recognizes the group as certified technicians in research and evaluation. In fact, they are the only certified technicians recognized by the MOE in Honduras. The diploma reports a total of 2,288 academic hours and 2,160 hours of practice from September, 1976 to January, 1978.

C. Problems Encountered

There are a number of problems which threaten the well-being of the Research Team. Within DIGEPRE, the Research Team have the lowest salary of all the technical personnel. They have the same salary they started with two years ago which was at that time slightly higher than teachers' salaries. Three of the team members had been supervisors before joining the Research Team but they accepted a reduction in salary when they joined the team. Now that teachers have just been granted an increase in salary, however, the difference is more sharply felt. The Research Team feels that with its pressure of work demands and the need to spend long periods in rural areas, it should receive higher salaries. If salaries are not raised, some members may resign. All are from "pueblos" and have economic responsibilities there. Living in the capital adds an expense burden they would not otherwise have.

Another problem is that the number of requests for research to be done far exceeds the team's ability to deliver. Either the team needs to include more members, or the quantity of work required needs to be lessened. There is also a lack of coordination of work orders from the MOE. Because the team does not have authority to make decisions regarding work to be accomplished, new work orders are begun before previous ones are completed.

Team members feel a need for more training, especially in data analysis and statistics. In addition, more personnel need to be trained to transcribe data on diskettes. At present, only one staff person can do this work. Two more are needed so that the dual data station can be fully utilized. Many shelves of untranscribed data are waiting to be processed.

Although the Research Team has had serious problems they have produced a considerable amount of work which is described in the following pages.

D. Findings

The nine projects described below indicate the progress made by the Research Team as well as the nature of their activities. One of the project outputs as stated earlier was to give the MOE a capability in educational research; the Research Team in carrying out these projects has demonstrated this capability.

In the following pages a synthesis of the nine projects completed or underway since July, 1978 is provided, as well as a case study of the fifth project, Basic Education.

1. Sector Responsible: DIGEPRE
Project: Estimation of Damage Done by Hurricane Greta in Gracias a Dios and Islas de la Bahía
Area: Departments of Gracias a Dios and Islas de la Bahía
Period: October-December, 1978
Population: School directors
Objectives: Statistical information about damage to schools caused by Hurricane Greta
Techniques: Semi-structured interview
Cases: 51
2. Sector Responsible: EDUCREDITO
Project: Tuition Loans for Secondary Students
Area: Communities of Langué, Goascorán and environs, in the South
Period: November-December, 1978
Population: Students of grades 6, 7, 8, and 9, parents and teachers
Objectives: Determine parents' interest in tuition loan, reasons for students not going beyond sixth grade.
Techniques: Interviews, questionnaire (individual and group); statistical questionnaire.
Cases: 50 secondary students
72 primary students
85 parents
13 secondary teachers
30 primary teachers

250

3. Sector Responsible: Corporación Hondureña de Desarrollo Forestal (COHDEFOR)

Project: Socioeconomic Study for the Educational Component of Forest Management

Area: Las Lajas, Comayagua

Period: November-December, 1978

Population: "Campesinos" (rural residents)

Objectives: Questionnaire drafted by COHDEFOR, revised for computer use; coded, master code developed, programmed fed into computer

Techniques: Pre-coded questionnaires (final product of work with COHDEFOR) to be used with 1,980 "campesinos"

4. Sector Responsible: DIGEPRE

Project: Plans and Programs at the Preschool and Primary Level

Area: Colón, Cortés, Atlántida, Comayagua, Intibuca, Copán, Choluteca, Santa Bárbara, Valle

Period: March-June, 1979

Population: Teachers at preschool and primary levels, parents of children in preschool and primary, students of secondary and primary, departmental supervisors and auxiliaries for primary, school directors.

Objectives: Evaluate plans and programs of preschool and primary levels; study professional level of teachers and their desires to improve; concerns of parents; extent of use of sequential learning programs in primary and secondary; reasons for drop-out.

Techniques: Semi-structured, pre-coded questionnaires, interviews

Cases:

Primary:	189 teachers
	34 directors
	538 parents
Preschool:	237 parents
	49 teachers
Students:	196 secondary, 381 primary
Supervisors:	18 departmental, 2 auxiliaries

(Work on this project was stopped to do the ICASE study. The data is waiting to be processed.)

5. Sector Responsible: DIGEPRE
- Project: Basic Education
- Area: Tegucigalpa, San Pedro Sula, Choluteca
- Period: June, 1979
- Population: Directors of primary schools
- Objectives: Preliminary study of basic needs of teachers, students, classrooms for implementing a Basic Education Project which would enable more sixth grade students to attend mid-level schools.
- Techniques: Semi-structured questionnaire
- Cases: 31
6. Sector Responsible: DIGEPRE
- Project: Administrative Restructuring in the Normal Schools (research contracted for el Instituto Centro-Americano de Administración y Supervisión, Panamá)
- Area: Normal Schools
"Normal de Occidente" La Esperanza
"Normal del Sur" Choluteca
"Normal Centroamérica" Comayagua
"Normal España" Danlí
"Normal Mixta Pedro Nufio" Tegucigalpa
"Escuela Superior del Profesorado" Tegucigalpa
- Period: June-August, 1979
- Population: Administrative and teaching personnel, students, specialized personnel, support personnel, community leaders
- Objectives: To study the present state of administration in the above six schools; the professional level of the teachers; physical structure of the schools; academic adaptation of students; level of school-community interchange.
- Techniques: Semi-structured, pre-coded questionnaires, interviews
- Cases: 463

7. Sector Responsible: DIGEPRE

Project: National Educational Census

Area: Entire country

Period: September, 1978-June, 1979

Population: Parents of school-age children

Objectives: To determine the level of preschool and primary school attendance.

Techniques: Structured, pre-coded questionnaire for statistical analysis of the number of students at pre-primary and primary level.

Cases: 400,000

(Data waiting to be processed.)

8. Sector Responsible: AID

Project: Enrollment in Primary Schools

Area: Departments of Cortés, Atlántida, Colón, and Yoro

Period: October-November, 1979 (30 days)

Population: School administrators and students

Objectives: Determine the increase of enrollment in different types of schools (central, satellite, rural, urban) during this year, as compared to the enrollment at the time of Hurricane Fifi.

Techniques: Pre-coded questionnaire

Cases: 10,000 in each of the four departments; total 40,000

9. Sector Responsible: DIGEPRE

Project: Assess and Process Data for the Department of Programming, MCE

Area: MCE

Period: November, 1979 (2 days)

Objectives: Assist the Department of Programming in evaluating the MCE Operations Plan

Techniques: Adapt various questionnaires to the SPSS system for computer processing

Cases: 58

Presented on the following page is a chronogram of the nine research projects done by the Research Team covering the period July, 1978-November, 1979.

Case Study of Basic Education Project Research

The following is a case study of one of the nine projects (Basic Education). It is intended to give an idea of how the Research Team works on a specific project.

Assumption: The present secondary school system is not able to absorb all the students graduating from primary schools.

Purpose of Study: The Ministry of Education has decided to try out a plan called the Basic Education Project. This plan would add on grades 7, 8, and 9, to all urban primary schools, so that more students would be able to complete up to ninth grade.

Work Order: The DIGEPRE charged the Research Team with a preliminary study in the cities of Tegucigalpa, San Pedro Sula, and Choluteca. Departmental supervisors and auxiliaries made a tentative selection of schools to be explored as possible sites for the Basic Education Project.

Number of Schools Selected: Fourteen from Tegucigalpa, 15 from San Pedro Sula, and 16 from Choluteca.

Plan: The Research Team interviewed the director of each of the 55 schools, using a semi-structured questionnaire (see Appendix C). The categories included were:

- General aspect of the school
- Location in relation to other schools
- Type of functioning
- Physical aspect
- Number of rooms, dimensions of rooms
- Available space
- Electrical installations
- Material and equipment
- Furniture
- Administrative personnel
- Teaching personnel

CIBEXGUM OF RESEARCH PROJECTS

Done by Research Team

PROJECT	1978						1979											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
National Educational Census	400,000 parents of school-age children *****																	
Estimated Damage Done by Hurricane Greta	51 school directors *****																	
Socio-economic Study, Forest Management (CIBEXGUM)	*****																	
Billion Loans for Secondary Students (HACEDITO)	249 cases (students, teachers, parents) *****																	
Assess and Process Data for Department of Programming (DEC)	***																	
Plans and Programs at Preschool and Primary Levels	1,644 cases (students, teachers, parents, directors, supervisors) *****																	
Basic Education	31 school directors *****																	
Administrative Restructuring in the Normal Schools	463 cases (school personnel, students, community) *****																	
Enrollment in Primary Schools	40,000 (students, administrators) *****																	

- Professional level
- Area of influence of each school
- Other variables considered important

Final Report: For each of the 55 schools studied, a uniform format was used for reporting the results. First, a narrative described the school, including the categories used in the questionnaire (furnishings, personnel, and so on). Additional notations of relevant information not brought out in the questionnaire were made. This was followed by conclusions about what aspects of the school disposed it to being a likely or an unlikely site for the project.

Enrollment records were reported for grades 1-6, from the last five years, showing how many enrolled, how many took examinations, how many passed, how many repeated and how many dropped out. Next came sixth grade records from the last five years, showing how many enrolled, took examinations, passed, repeated and dropped out. Finally, a series of graphs were presented, one showing the percent of increase/decrease of sixth grade enrollment for the past five years, one for the percent of increase/decrease of total school enrollment in all 55 schools, one for the total enrollment of all 55 schools, and one for the total enrollment for each school. In the final report the Research Unit lists schools according to "A", "B," or "C".

The priority "A" schools are five schools that have space and the possibility of a double session, and 12 schools that have space for night classes.

The priority "B" schools are ten schools that need enlarging, construction, repair, and in some cases, professional training for teachers and administrators.

The priority "C" schools are three schools that do not have the minimum requirements for the project.

The report then lists criteria for the selections of schools to be studied and finally, general suggestions for the Basic Education Project. The final suggestion is that a second study be made, involving the parents, teachers, students and other persons considered important, in order to obtain a more representative viewpoint of what would favor or discourage implementation of the project.

E. Conclusions

The Research Team is a highly motivated, unusually dedicated, integrated team, whose permanence in the work for which they have been trained seems vital to the MOE. The team has earned

the confidence of the various sections of the MOE, as well as other agencies of the government, as demonstrated by the number of work orders received.

The team has been highly productive. However, the work remains at the level of description and baseline data. The original goal in training the team was to do no more than descriptive research, and not to interpret the research findings. In the process of work on the various projects, the team realized that they needed more than what had been included in the original agreement. They did some study of data analysis on their own but they now feel more strongly than ever, a need to learn inferential statistics. Lacking this limits the usefulness of their work.

The Research Team has mastered the basic tools of research which can be applied to any field, not just education. They have demonstrated they are capable of training others to have the same skills.

Based upon the foregoing evidence, the evaluator concludes that the project agreement goal has been achieved: to provide research capability to the MOE. A group of eight certified teachers have completed two years of intensive training in research methodology and evaluation techniques. Working within the MOE, this group has demonstrated, in a variety of ways, a research capability already being utilized to capacity. This is compatible with the performance objectives of the program as stipulated under AID Grant No. 522-0108 of 1976, and as continued in AID Loan No. 522-V-051.

Recommendations

1. Offer a salary competitive with compensation for comparable work in the MOE and in the private sector.
2. Establish a system to coordinate and prioritize work orders from various sources.
3. Increase the number of Research Team members by having them train others.

CHAPTER IV

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Although the conclusions and recommendations relative to the two major activities (the In-Service Teacher Training Program and the Research Team) of the formal education project are stated in two separate sections of this report, they are synthesized here so as to provide an overall picture of the project as a whole.

Both activities have fulfilled the performance objectives of the formal education element of the non-formal education project as stipulated under AID Grant No. 522-0108 of 1976 and as continued in AID Loan No. 522-V-031. A group of 24 experienced Honduran teachers have completed a training period of 18 months, during which time they provided a month of onsite in-service teacher training to 657 primary school teachers in 157 rural schools. A group of eight certified Honduran teachers have completed two years of training in research methodology and evaluation techniques. The Research Team have in nine research projects contacted a total of 442,438 people since July, 1978, and have repeatedly proven in their work that the MOE, through the Research Team, does indeed have a research capability.

While both the ITTG and the Research Team have had thorough training for their respective fields of work, there are areas of training for each group which need strengthening. The ITTG could use more expertise in curriculum, and the Research Team could use training in inferential statistics to maximize the usefulness of their work.

Although both groups are composed of highly motivated and unusually dedicated people, the low salaries are a serious threat to their being able to continue in the work. The ITTG has the added question of where they fit in the organizational structure of the MOE.

A recommendation is made that the number in both groups be increased by having those already trained become trainers of others. Further recommendations for the ITTG are to integrate the program into the Normal Schools, to include trainees from regions not yet represented, to improve the facilities used for training purposes, and to make program modifications in regions where students have limited or no proficiency in Spanish. An additional recommendation for the Research Group is to establish a system to coordinate and prioritize work orders.

The Research Team is institutionalized now as an integral part of the MOE. It is recommended that the In-Service Teacher Training Program be continued and also institutionalized as an integral part of the MOE.

APPENDICES

- A. Bibliography
- B. Questionnaire for ITTG
- C. Basic Education Project Questionnaire
- D. Budget

BIBLIOGRAPHY OF DOCUMENTS CONSULTED

FOR THIS EVALUATION

- AID/H. "Briefing Book on the U.S. AID Program to Honduras." Honduras, 1977.
- AID/H. "Rural Education Subsector Assessment, Republic of Honduras." Honduras, 1976.
- AID/H. "Non-Formal Rural Education," (Project Paper and Project Agreements). Honduras, 1976.
- CABRERA, Rodrigo. "Evaluación intermedia del proyecto educación rural no formal." Honduras, 1978.
- _____. "Evaluación intermedia del PRONAEHH 1978." Honduras, 1978.
- CORONADO, Luis A. "Informe de actividades (de la Unidad de Investigación) del año 1977-1978."
- Development Associates, Inc. "Final Report for the Technical Assistance Project." Honduras, 1979.
- MARQUEZ, Nidai Amarilis Pineda de. "Informe final de asistencia técnica en ayudas audiovisuales." Honduras, 1979.
- _____. "Informe mensual de actividades desarrolladas en el programa de asistencia técnica en el planeamiento y desarrollo de medios audiovisuales." Honduras, 1979.
- _____. "Plan para entrenar el equipo de actualización en planificación, producción y uso de materiales didácticos audiovisuales para la escuela primaria rural." Honduras, 1979.
- MOE. "Análisis de la evolución y desarrollo de la educación en Honduras, Período 1971-1978." DIGEPRE, MOE. Honduras, 1979.
- MOE. "Evaluación en progreso, Reconstrucción Rural II, 522-V-051." Departamento de Construcción y Mantenimiento de Escuelas, MOE. Honduras, 1979.
- MOE. "Evaluación(es) Trimestral(es). Dependencias del Ministerio de Educación Pública." Honduras, 1978-1979.
- MOE. "Memoria de la unidad de investigación." DIGEPRE, MOE, Honduras, 1978.
- MOE. "Plan operativo, año 1979." Honduras, 1978.
- MOE. "Prediseño de la investigación sobre el proyecto beca-préstamo a implementarse en las comunidades de Langue, Las Lajas, Goascoran Y Aramecina." DIGEPRE, MOE, Honduras, 1978.

MOE. "Informe de actividades, enero-abril 1979." (Informes preparados después de cada gira, de cada departamento visitado.) Programa Nacional de Actualización Permanente, MOE. Honduras, 1978-1979.

MOE. "Proyecto de educación básica." DIGEPRE, MOE, Honduras, 1979.

MOE. "Reglamento para el levantamiento del censo educativo nacional." DIGEPRE, MOE, Honduras, 1978.

PALACIOS, L. Victoria de. "Informe(s) bimestral(es) sobre las actividades realizadas." Honduras, 1978-1979.

_____. "Informe final de las actividades realizadas en el programa de actualización durante sus dos años de funcionamiento: 1978-1979." Honduras, 1979.

VIGANO, Oscar. "Evaluation of the PRONAEHH Communication System." AID/Honduras, 1978.

CUESTIONARIO PARA LOS ACTUALIZADORES

(Parte de la Evaluación del Entrenamiento en el PRONAPERM)

Para obtener información completa de cada Actualizador de PRONAPERM, les rogamos llenar este cuestionario. La Retroalimentación suya es sumamente importante para hacer una evaluación profunda y justa. Esta evaluación tiene como propósito mejorar el programa de educación rural en el futuro.

Favor llenar el cuestionario con todo cuidado y en la forma más breve posible.

No necesita firmarlo.

GRACIAS

CUESTIONARIO

1. ¿Cómo califica Ud. el "rapport" entre Ud. y los maestros?

Muy Bueno _____ Bueno _____ Regular _____

2. Escriba una condición que conozca Ud. en la que el maestro esté poniendo en práctica las Unidades Integradas de Aprendizaje.

3. Escriba una condición en la que Ud. haya visto que el maestro aplica adecuadamente el sistema de:

I. Evaluación Individual

II. Promoción Controlada

III. Trabajo en Grupos

4. De estos componentes del programa, ¿Cuales lograron pasar del nivel de teoría y modelos al nivel de aplicación?

	muy práctico	algo práctico	no práctico
- Seminario sobre evaluación			
- Entrenamiento en técnica metodológicas			

	muy práctico	algo práctico	no práctico
- Entrenamiento en materiales didácticos audiovisuales			
- Entrenamiento en investigación educativa			
- Entrenamiento en el diseño de currículum			

5. ¿Utilizan los maestros con que Ud. trabajó la evaluación individual de los maestros?

No _____ Algunos Si otros No _____ Una vez al Mes _____

Si, pero no con regularidad _____

6. ¿Qué indicios hay de que ellos continuarán utilizando la hoja de evaluación?

_____ porque han aceptado la hoja de auto-evaluación

_____ porque la comentan y evalúan entre sus compañeros

7. De todas las metodologías que Ud. ha compartido con los maestros, ¿Cuál es

- la que más utilizan _____

- en qué materias _____

8. ¿Cómo ha comprobado que el maestro le ha dado funcionalidad al material didáctico que Ud. aprendió a hacer?

_____ lo utiliza en sus clases

_____ ha utilizado otros recursos de su medio para hacerlos

_____ los alumnos han participado en la elaboración y utilización del material.

Uí

9. Escriba tres (3) cambios en los currícula que Ud. ha visto desde la primera gira al campo.

a. _____

b. _____

c. _____

10. Escriba en que forma las acciones del Programa han mejorado la coordinación entre supervisores departamentales y auxiliares.

En que forma ha mejorado la coordinación entre las dependencias del Ministerio de Educación

11. Describa como le ha ayudado Ud. al maestro en su labor docente con dos o más grados. (Desde la primera gira)

12. ¿Qué cambios ha visto Ud. en la enseñanza de la lectura en las escuelas bajo el Programa?

_____ los maestros agrupan los niños en niveles

_____ los maestros preparan sus clases

_____ los maestros utilizan los libros dados por el Ministerio

- la lectura se enseña mas como un medio que como un fin
- los maestros utilizan mecanismos del medio: periódicos, etc.

13. ¿Qué cambios ha observado Ud. en la enseñanza de la matemáticas en los seis (6) grados de primaria?

- los maestros gradúan su enseñanza
- los niños participan con mayor interés
- los niños tienen una actitud más positiva hacia la matemática
- se está cubriendo más el Programa

14. Escriba el nombre de tres (3) proyectos prácticos que ha visto en sus visitas a las escuelas, que se iniciaron como resultado de su trabajo con los maestros.

- a. _____
- b. _____
- c. _____

15. ¿Cómo calificaría estos tres (3) proyectos prácticos?

	Excelente	Bueno	Regular	¿Porqué?
a.				_____
b.				_____
c.				_____

16. Escriba tres (3) situaciones en que Ud. puso en práctica lo que aprendió en la preparación de material didáctico audiovisual.

- a. _____

- b. _____

- c. _____

17. ¿Cuales de los materiales producidos en el curso audiovisual pudo elaborar con los maestros en el campo?

- | | |
|--|--|
| <input type="checkbox"/> Tarjeteras | <input type="checkbox"/> Caricaturas en el aprendizaje |
| <input type="checkbox"/> Laminario | <input type="checkbox"/> Mesa de arena o aserrín |
| <input type="checkbox"/> Abaco | <input type="checkbox"/> Acuario |
| <input type="checkbox"/> Caja de Valores | <input type="checkbox"/> Terrario |
| <input type="checkbox"/> Tabla de Anillos numéricos | <input type="checkbox"/> Insectario |
| <input type="checkbox"/> Cuadro del Ciento | <input type="checkbox"/> Especímenes |
| <input type="checkbox"/> Rompecabezas (juego para matemáticas) | <input type="checkbox"/> Colecciones |
| <input type="checkbox"/> Tabla de Áreas y perímetros | <input type="checkbox"/> Modelos |
| <input type="checkbox"/> Tarjetas de lectura y matemáticas | <input type="checkbox"/> Títeres |
| <input type="checkbox"/> Teatro de rollo | <input type="checkbox"/> Grabaciones |
| <input type="checkbox"/> Pantógrafo didáctico | <input type="checkbox"/> Transmisiones simuladas de la radio |
| <input type="checkbox"/> Trípode práctico | <input type="checkbox"/> Fotografía |
| <input type="checkbox"/> Compaz para pizarra | <input type="checkbox"/> Retropoyección |
| <input type="checkbox"/> Marcadores | <input type="checkbox"/> Imágenes fijas |
| <input type="checkbox"/> Estarcidor multicopias | <input type="checkbox"/> Imágenes animadas |
| <input type="checkbox"/> Rotafolio liviano | |
| <input type="checkbox"/> Hectógrafo | |
| <input type="checkbox"/> Pizarra liviana | |
| <input type="checkbox"/> Franelógrafo | |
| <input type="checkbox"/> Magnetógrafo | |
| <input type="checkbox"/> Periódicos murales | |
| <input type="checkbox"/> Exhibidores | |
| <input type="checkbox"/> Láminas de tablero | |
| <input type="checkbox"/> Láminas secuenciales | |
| <input type="checkbox"/> Murales | |
| <input type="checkbox"/> Cartel | |
| <input type="checkbox"/> Mapas y Globos Terráqueos | |

18. ¿Cómo le está sirviendo el material mimeografiado que se le entregó para su capacitación?

- referencia para los maestros con que trabajó
- actualización personal
- recurso y herramienta para mi trabajo

19. ¿Cómo considera este material?

NOMBRE	Muy Util	Util	No Util
<input type="checkbox"/> Modelo de Evaluación Curricular.			
<input type="checkbox"/> Fines de la Educación Hondureña.			
<input type="checkbox"/> Plan Nacional de Desarrollo.			
<input type="checkbox"/> Documento del Programa			
<input type="checkbox"/> Reglamento de las Escuelas Rurales Piloto. . .			
<input type="checkbox"/> Teorías Cognoscitivas del Aprendizaje.			
<input type="checkbox"/> Dos Modelos de Planeamiento Curricular			
<input type="checkbox"/> Organización del Currículo			
<input type="checkbox"/> Enfoque Diacrónico-Sincrónico del Proceso de Investigación.			
<input type="checkbox"/> Retro alimentación			
<input type="checkbox"/> El Hombre en el Mundo Primitivo.			
<input type="checkbox"/> Un Currículo de Aprendizaje Integrado basado en Necesidades e Intereses.			
<input type="checkbox"/> Observación Participante			
<input type="checkbox"/> La Sociología como Ciencia			
<input type="checkbox"/> Los Campesinos			
<input type="checkbox"/> Entrevistando Informantes.			
<input type="checkbox"/> El Proceso de Acelerar Cambio Comunal.			
<input type="checkbox"/> Investigación Participativa, un Enfoque para el Cambio.			
<input type="checkbox"/> Visión Sociológica-Antropológica			
<input type="checkbox"/> Intervención Participante en el Campo.			

NOMBRE	Muy Util	Util	No Util
___ La Investigación y el Progreso Social.			
___ Diseño de Investigación.			
___ Las Técnicas Educativas Grupales			
___ El Método de Phillips 66			
___ La Investigación como un Instrumento Educativo para el Desarrollo.			
___ La Presentación.			
___ Técnica "Panel Foro"			
___ Qué podemos Observar en un Grupo			
___ Dinámica de Grupos			
___ Anteproyecto de un Sistema de Evaluación para el Período de Formación.			
___ La Secuencia que debe Observarse en el Desarrollo del Currículo.			
___ Esquema de Procedimientos en la Elaboración de Cuestionarios			
___ Escuelas de Filosofía.			
___ Deficiencia en la Formación del Docente.			
___ Qué es el Currículo.			
___ La Renovación de la Enseñanza y la Didáctica			
___ Canciones de Honduras.			
___ Concepción del Currículo			
___ Tres Características de Personas con Salud Mental.			
___ Tres Estilos de Desarrollo del Currículum.			
___ Factores Económicos y Sociales			
___ Currículo y Antropología Cultural.			
___ Dirección del Aprendizaje y Presentación de la Materia			
___ Planeamiento de la Unidad Didáctica.			
___ Modelo de la Evaluación Curricular			
___ Guía de Evaluación del Educando.			
___ Desarrollo de Buenos Hábitos de Estudio.			

NOMBRE	Muy Util	Util	No Util
___ Principio de la Escuela Nueva.			
___ Función de la Evaluación en la Educación . .			
___ De las Necesidades a los Intereses			
___ Principios Fundamentales de la Evaluación . .			
___ Educativa Informal.			
___ Caracterización General del Aprendizaje. . .			
___ Métodos y Técnicas de Enseñanza.			
___ Algunas Consideraciones sobre la Dinámica de Resistencia al Cambio.			
___ Elaborando un Presupuesto Familiar			
___ Fases del Proceso de Consulta.			
___ Participación y Democracia			
___ Reglamento para el Levantamiento del Censo Educativo Nacional.			
___ Principios que Orientan la Educación			
___ Instituciones que Orientan la Educación. . .			
___ Un Enfoque de Sistemas en la Educación . . .			
___ Sistema de Evaluación y Promoción Contro- lada.			
___ Manual de Curso Básico de Material Didáctico Audiovisuales			
___ Manual No. 1 de Material Didáctico Audiovisuales			
___ Reglamento General de Evaluación, Promo- ción, Matrícula y Recuperación.			
___ Proyectos Prácticos, Disposiciones Generales			
___ Técnicas, procedimientos e Instrumentos para la Evaluación de Conductas			
___ Recursos para el Trabajo Autónomo en las Escuelas Rurales.			
___ Ideas y Sugerencias para Realizar Ejerci- taciones de Aprestamiento			
___ Las Escuelas en el Campo			

NOMBRE	Muy Util	Util	No Util
___ La Unidad Integrada de Aprendizaje			
___ Cómo me Siento Acerca de mi Trabajo de esta Semana			
___ Sugerencias para la Enseñanza de la Lectura.			
___ El Método Ideovisual			
___ El Método de Palabras Normales			
___ El Método Alfabético			
___ El Método Silábico			
___ El Método de Cuentos			
___ Destrezas de los Estudios Sociales			
___ La Enseñanza de las Ciencias			
___ Adaptación, Bases de la Conducta (Jean Piaget)			
___ Canciones Infantiles para la Escuela Primaria.			
___ Métodos y Técnicas para Enseñar las Palabras Nuevas			
___ Bases Psicológicas del Aprendizaje			

20. ¿Qué aspectos del Programa considera Ud. como más valioso? Enumere por favor:

21. Escriba una sugerencia que considere Ud. serviría para mejorar el Programa de Actualización, en cuanto a:

a. Diseño de Currículum. _____

b. Contenido de Currículum. _____

c. Metodología del Currículum. _____

d. Material Didáctico. _____

e. Administración Educativa. _____

f. Investigación Educativa. _____

22. Describa un situación en que haya visto (en las giras) un cambio en las relaciones entre

a. maestro y alumnos: _____

b. maestro y padres de familia: _____

REPUBLICA DE HONDURAS
MINISTERIO DE EDUCACION PUBLICA
DIRECCION GENERAL DE PLANEAMIENTO Y REFORMA EDUCATIVA
UNIDAD DE INVESTIGACION

PROYECTO EDUCACION BASICA

1979

ENTREVISTA EXPLORATORIA A DIRECTORES DE ESCUELAS PRIMARIAS

I. ASPECTO GENERAL.

1. Comunidad _____
Municipio _____ Departamento _____
2. Nombre de la Escuela _____
3. Ubicación de la Escuela.
 - 3.1 Medio rural.
 - 3.2 Medio urbano.
4. Tipo de funcionamiento:
 - 4.1 Escuela de aplicación.
 - 4.2 Escuela Guía Técnica.
 - 4.3 Escuela Rural Piloto.
 - 4.4 Escuela Filial.
 - 4.5 Escuela Común
 - 4.6 Escuela de Ensayo.
5. Por su clase, la escuela es de:
 - 5.1 _____ primera clase.
 - 5.2 _____ segunda clase.
 - 5.3 _____ tercera clase.
 - 5.4 _____ cuarta clase.
6. La escuela funciona con jornadas:
 - 6.1 única
 - 6.2 doble

II. DATOS SOBRE EL BENEFICIO.

7. En cuantos edificios funciona la Escuela?

3. El edificio es propiedad del:
- 3.1 Estado.
 - 3.2 Municipal.
 - 3.3 Patronato Comunal.
 - 3.4 Particular.
 - 3.5 Otro. _____
(Especifique)
9. Dónde se encuentra ubicada la escuela?
- 9.1 En el centro de la comunidad.
 - 9.2 Fuera de la comunidad.
 - 9.3 Intermedia a dos comunidades.
 - 9.4 En un barrio o colonia ubicada al: _____
10. El edificio fue construido:
- 10.1 Especialmente para escuela.
 - 10.2 Adaptado para escuela.
 - 10.3 Para otro propósito (sin adaptaciones).
11. Condición física del edificio:
- 11.1 Buena.
 - 11.2 Mala.
12. Cuántas aulas tiene esta escuela? _____
13. Qué dimensión tienen las aulas?
- 13.1  6X3
 - 13.2  6X3
 - 13.3  6X3
14. Matrícula actual (1979)
- | | | | | | |
|-------|-------|---------|-------|-------|-------|
| Niñas | _____ | Varones | _____ | Total | _____ |
|-------|-------|---------|-------|-------|-------|
15. Estado de las aulas.
- 15.1 Bueno
 - 15.2 Mala
16. La iluminación de las aulas es:
- 16.1 Buena
 - 16.2 Mala.

17. La ventilación de las aulas es:

17.1 Buena

17.2 Mala

18. Terreno o terrenos que posee la escuela son propiedad de:

18.1 la Municipalidad.

18.2 del Patronato.

18.3 la iglesia.

18.4 persona particular.

18.5 institución privada.

18.6 propio de la escuela.

18.7 cooperativa.

18.8 Estado.

18.9 otro: _____

19. El (los) terreno (s) que posee la escuela, a qué distancia se encuentra? _____

20. Dimensiones del terreno: _____

21. Condiciones del terreno:

21.1 Rocoso

21.2 Arcilloso

21.3 Arenoso

21.4 Pantanoso

21.5 Fértil

21.6 Árido

III. SERVICIOS, INSTALACIONES, MATERIAL Y EQUIPO QUE CUENTA LA ESCUELA.

A) Servicios.

22. ¿Tiene instalación de agua la escuela?

22.1 Sí

22.2 No.

23. ¿Qué tipo de agua usan?

23.1 Artesiana

23.2 Río

23.3 Municipal

23.4 Otro

23.5 Fuente particular

23.6 Alcantarilla pública.

24. Tiene alumbrado eléctrico la escuela?
24.1 SI.
24.2 No.
25. Funciona alguna escuela nocturna en este edificio?
25.1 SI.
25.2 No.
26. Qué tipo de fiestas se celebran en esta escuela?
26.1 Veladas.
26.2 Almuerzos.
26.3 Kermesse (verbenas)
26.4 Actos cívicos solo con los alumnos.
26.5 Coronación de ruinas.
26.6 Fiestas populares y patronales.
27. Con qué instalaciones cuenta esta escuela?
27.1 Oficina para la dirección.
27.2 Biblioteca.
27.3 Salón de actos.
27.4 Bodega.
27.5 Taller de corte y confección.
27.6 Taller de carpintería.
27.7 Servicios sanitarios.
27.8 Instalaciones agropecuarias.
27.9 Cocina.
27.10 Laboratorio.
28. Qué material y equipo tiene esta escuela?
28.1 Agricultura.
28.2 Carpintería.
28.3 Apicultura.
28.4 Albañilería.
28.5 Cocina.
28.6 Corte / confección.
28.7 Laboratorios.
28.8 Deportivo.
28.9 Material didáctico.
29. Está en funcionamiento la Biblioteca de la Escuela?
29.0 No tiene biblioteca.
29.1 SI.
29.2 No.

30. En qué jornada funciona la Biblioteca de la Escuela?

30.1 de la mañana.

30.2 de la tarde.

30.3 jornada doble.

IV. MOBILIARIO.

31. Cantidad y calidad del mobiliario que tiene la escuela.

	cantidad	estado
31.1 pupitres unipersonales		
31.2 pupitres bipersonales		
31.3 pupitres múltiples		
31.4 sillas		
31.5 mesas		
31.6 cátedras		
31.7 archivadores		
31.8 armarios		
31.9 pizarras		
31.10 bancos		
31.11 libreros		
31.12 otros (especificar)		

32. Cuántos maestros tiene a su cargo? _____

33. Cuántos de los maestros de esta escuela se encuentran realizando estudios de especialización en cursos vacacionales?

Número de maestros	Especialidad que estudian
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

34. Cuál es el nivel profesional? Especifique cuántos.

- 34.1 Especializados. _____
- 34.2 Titulados. _____
- 34.3 En profesionalización. _____
- 34.4 Diplomados. _____
- 34.5 Estudiando en la Universidad. _____
- 34.6 Sin título. _____

35. Si los maestros son especializados, especifique cuántos y de qué especialidad.

No. de Maestros	Especialidades

36. Cuántos de sus maestros trabajan solo en primaria? _____

37. Cuántos de sus maestros trabajan además en secundaria? _____

38. Los maestros que trabajan en secundaria, cuáles materias sirven?

39. En qué jornada trabajan en secundaria estos maestros?

39.1 Jornada de la mañana.

39.2 Jornada de la tarde.

39.3 Jornada nocturna.

40. Además del personal docente y administrativo, de que otro personal dispone la escuela?

40.0 No tiene.

40.1 Maestro especial de _____

40.2 Bibliotecario (s)

40.3 Vigilante

40.4 Conserje

40.5 Asadorn

40.6 Otro (especificar) _____

41. Mencione el nombre de las escuelas que están a su alrededor y que pudieran aportar maestros y alumnos. Calcule distancia aproximada a cada una de ellas.

Nombre de la Escuela	Lugar o Barrio	Distancia Aproximada en Km.

42. Qué es la actividad principal de los habitantes de este sector?

43. Sabe usted qué hacen los alumnos cuando egresan del 6o. grado?

14. De los alumnos que egresan del 6o. grado y que se dedican a trabajar, cuál es la actividad preferente?

15. En virtud de la actividad principal de este sector, qué capacitación piensa que convendría a los muchachos del Ciclo Común de Cultura General?

16. Enumere las principales organizaciones que apoyan a la escuela.

RESUMEN DE: MATRICULA INICIAL, MATRICULA FINAL, DESERTORES, TRASLADADOS, NO EVALUADOS, EVALUADOS, NO SATISFACTORIOS, BUENOS, MUY BUENOS Y SOBRESALIENTES DURANTE EL QUINQUENIO 1971-1978.

Año	Matrícula Inicial			Matrícula Final			Desertores			Trasladados			No Evaluados			Evaluados			No Satisfactorios			Buenos			Muy Buenos			Sobresalientes					
	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T			
1971																																	
1972																																	
1973																																	
1974																																	
1975																																	
1976																																	
1977																																	
1978																																	
1979																																	

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-10-

OBSERVACIONES

(para cualquier comentario o agregado importante que no esté
previsto en este instrumento).

6/

RESUMEN DE: MATRICULA INICIAL, MATRICULA FINAL, DESERTORES, TRASLADADOS, NO EVALUADOS, EVALUADOS
 NO SATISFACTORIOS, BUENOS, MUY BUENOS Y SOBRESALIENTES DURANTE EL QUINQUENIO 1974-1978.

ALUMNOS DEL 6o. GRADO

AÑOS	Matrícula Inicial			Matrícula Final			Desertores			Trasladados			No Evaluados			Evaluados			No Satis factorios			Buenos			Muy Buenos			Sobresa lientes					
	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T	V	N	T			
1974																																	
1975																																	
1976																																	
1977																																	
1978																																	
TOTAL																																	

MATRÍCULA 6o. GRADO 1979: NIÑAS _____ VARONES _____ TOTAL _____

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BUDGET FOR AID GRANT 522-V-0108

Between the signing of the first agreement in June 1976, and the signing of the second agreement in September 1976, the GOH developed a policy to coordinate all non-formal education under the Consejo Superior de Planamiento Económico (CONSUPLANE). This took the non-formal component of the program out of the MOE.

AID stipulated that no more than 40% of the funding could be used for formal education.

Per the terms of PRO-AG 522-5-TQ, the resources of Project 522-0108 were to be divided between the MOE and CONSUPLANE as follows (see attached Table No. 1):

Programa Nacional de
Educación Extraescolar
de Honduras

	<u>MOE</u>	<u>PRONAEEH</u>	<u>TOTAL</u>
Technical Services	\$117,000	\$155,000	\$272,000
Training	12,500	5,500	18,000
Commodities	7,000	73,000	80,000
Other Costs	<u>5,000</u>	<u>14,000</u>	<u>19,000</u>
T O T A L	\$141,500	\$247,500	\$389,000
	(36.4%)	(63.6%)	(100%)

As of 6/30/79, actual expenditures and/or contracted obligation stood as follows (see attached Table No. 2):

	<u>MOE</u>	<u>PRONAEEH</u>	<u>TOTAL</u>
Technical Services	\$ 86,245.50	\$ 92,979.50	\$179,225.00
Training	9,423.00		9,423.00
Commodities	6,802.00	83,288.00	90,090.00
Other Costs	<u>6,000.70</u>	<u>13,283.84</u>	<u>19,284.54</u>
T O T A L	\$108,471.20	\$189,551.34	\$298,022.54
	(36.4%)	(63.6%)	

The Grant Project Status Report for 6/30/79 showed an unobligated balance of \$87,406.46. Of this amount, then, a minimum \$31,815.95 corresponds to the MOE and \$55,590.51 to the PRONAEEH.

TABLE No. 1

PRO-AG BREAKDOWN

	<u>MOE</u>	<u>CONSULPLANE</u>	<u>TOTAL</u>
Technical Assistance			
Advisor	\$ 37,500	\$ 37,500	\$ 75,000
Research	12,500	12,500	25,000
Methodology	-0-	75,000	75,000
Audio-Visual	8,500	21,500	30,000
Ag. Education	<u>50,000</u>	<u>-0-</u>	<u>50,000</u>
Sub Total	\$117,000	\$155,000	\$272,000
Training	\$ 7,000	-0-	\$ 7,000
	<u>5,500</u>	<u>5,500</u>	<u>11,000</u>
Sub Total	\$ 12,500	\$ 5,500	\$ 18,000
Commodities	<u>\$ 7,000</u>	<u>\$ 73,000</u>	<u>\$ 80,000</u>
Sub Total	\$ 7,000	\$ 73,000	\$ 80,000
Other Costs	-0-	\$ 11,000	\$ 11,000
	<u>\$ 5,000</u>	<u>\$ 3,000</u>	<u>\$ 8,000</u>
Sub Total	\$ 5,000	\$ 14,000	\$ 19,000
TOTAL	<u>\$141,500</u>	<u>\$247,500</u>	<u>\$389,000</u>
	(36.4%)	(63.6%)	

TABLE No. 2

NON-FORMAL RURAL EDUCATION

(522-4-76)

<u>ITEM</u>	<u>Amount Obligated</u>	<u>Amount Contracted</u>	<u>MCE</u>	<u>CSP</u>	<u>Deobligated</u>	<u>Obligated Balance</u>	<u>Unsubob. Balance</u>
<u>TECHNICAL SERVICES</u>	100,000.00		59,895.50	40,629.50	2,711.44	97,288.56	2,070.00
Project Advisor Cont. 1 & 2 PID/T 60053	73,200.00	73,122.00	44,282.50	28,839.50			
Research Advisor PID/T 60066	18,780.00	18,630.00	9,390.00	9,390.00			
ST Research Advisor PID/T 60070	2,400.00			2,400.00			
ST Research Advisor PID/T 60076	2,300.00		2,300.00				
<u>PARTICIPANTS</u>	3,923.00	3,569.06	3,923.00		353.94	3,569.06	
<u>COMMODITIES</u>	43,000.00		6,802.00	33,688.00	.33	42,999.67	2,510.00
PID/T 60058	13,604.00	13,604.00	6,802.00	6,802.00			
PID/T 60069	26,886.00	26,886.00		26,886.00			
<u>OTHER COSTS</u>	8,077.00	6,173.77	1,200.70	4,973.07		8,077.00	1,904.23
TOTAL			71,821.20	79,290.57		151,934.29	6,484.23

TABLE No. 3

NON-FORMAL RURAL EDUCATION
(522-5-TQ)

ITEM	Amount Obligated	Amount Contracted	MOE	CSP	Deobligated	Obligated Balance	Unsubob. Balance
<u>TECHNICAL SUPPORT</u>	150,700.00	78,700.00					72,000.00
NFE Methodology P10/T TQ 0037	52,350.00	52,350.00		52,350.00			
Curriculum P10/T TQ 0066	15,350.00	15,350.00	15,350.00				
Audio-Visual P10/T TQ 0075	11,000.00	11,000.00	11,000.00				
<u>PARTICIPANTS</u>	5,500.00						
P10/P TQ 0076	5,500.00	5,500.00	5,500.00				
<u>COMMODITIES</u>	52,150.00	49,600.00		49,600.00			2,536.87
P10/C TQ 0026	20,336.00			20,336.00			
P10/C TQ 0035	6,504.00			6,504.00			
P10/C TQ 0054	7,610.00			7,610.00			
P10/C TQ 0081	15,150.00			15,150.00			
<u>OTHER COSTS</u>	19,500.00	13,110.77		8,310.77			
Radio	11,000.00	5,454.75		5,454.75			5,545.25
Miscellaneous	8,500.00	7,656.02	4,800.00	2,856.02			843.98
TOTAL		146,910.77	36,650.00	110,260.77			60,926.10

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EMPRESA NACIONAL DE ENERGIA ELECTRICA

TEGUCIGALPA, D. C. HONDURAS, C. A.

ABLE "ENEE"

APARTADO 99

Recd' 5/23/80
Eng. Office

PROYECTO DE ELECTRIFICACION RURAL.

VALLE DEL AGUAN.

EVALUACION ANUAL 1979.

PRESTAMO AID. 522- T- 033

EVALUACION ANUAL 1979.

INDICE.

- 1.- RESPONSABILIDADES DE IMPLEMENTACION.
- 2.- ASIGNACION DE RECURSOS.
- 3.- UBICACION DEL PROYECTO DENTRO DE LOS PROGRAMAS DE LA ENEE.
- 4.- ENTRENAMIENTO DE PERSONAL.
- 5.- PLAN DE EJECUCION.
- 6.- ANEXOS.

1.- RESPONSABILIDADES DE IMPLEMENTACION.

La organización de la Empresa Nacional de Energía Eléctrica, tal y como puede verse en el ANEXO 1. Organigrama. Empresa Nacional de Energía Eléctrica, está presidido por la Junta Directiva, la cual está integrada por:

- a.- El Secretario de Estado en los Despachos de Comunicaciones, Obras Públicas y Transporte.
- b.- El Secretario de Estado en el Despacho de Recursos Naturales.
- c.- El Secretario de Estado en los Despachos de Hacienda y Crédito Público.
- d.- El Secretario Ejecutivo del Concejo Superior de Planificación Económica.
- e.- El Presidente del Banco Central de Honduras.
- f.- Un Representante del Concejo Hondureño de la Empresa Privada.

La Junta Directiva tiene a su cargo la administración y la Dirección de la Empresa. El Gerente asistirá a todas las sesiones de la Junta Directiva, con voz pero sin voto. Las sesiones serán presididas por el Secretario de Estado en los Despachos de Comunicaciones Obras Públicas y Transporte. Los secretarios de Estado fungirán como miembros de la Junta Directiva por el tiempo que duren en sus respectivos cargos. Los representantes propietarios y suplente del Concejo Hondureño de la Empresa Privada serán designados por el Secretario de Estado en los Despachos de Hacienda y Crédito Público, de las ternas presentadas por dicha organización, por un periodo de tres años. En todas las reuniones deberán asistir por lo menos cuatro miembros para lograr el quorum necesario; las decisiones se tomarán por mayoría de votos, pero con un mínimo de cuatro votos a favor. Como apoyo a la Gerencia están las Sub-Gerencias administra

tiva, de Operación, y de Ingeniería y Construcción; bajo ésta última, y en su condición de Proyecto Especial, está el Proyecto de - Electrificación del Valle del Aguán.

En las diferentes actividades ya ejecutadas de Proyecto, se ha contado con el apoyo de varias de las Divisiones de la Empresa a través de sus respectivos Departamentos y Unidades:

a.- División de Ingeniería Electromecánica.

- 1) Departamento de Diseño. a través de las Unidades de: Plantas, Sub-Estaciones, y Transmisión y Distribución, en el diseño de la L.T. 138 K.V., y de las Sub-Estaciones.
- 2) Departamento de Análisis de Sistemas, en la revisión de planos en la preparación de Documentos Contractuales.

b.- División de Ingeniería Civil.

- 1) Departamento de Diseño y Dibujo. a través de la Unidad de Dibujo, cooperando en la preparación de planos, dibujos, cuadros e informes del Proyecto.

c.- División de Construcción.

- 1) Departamento de Construcción. a través de la Unidad de Topografía, en el Levantamiento topográfico para el diseño de líneas de transmisión y subestaciones, y la imposición de Servidumbre.

d.- División de Asuntos Contables y Financieros.

A través de sus Departamentos de Contabilidad y Tesorería, en lo relacionado a los pagos a Reyes y Asociados, Harza-Engineering Co., y Richards Associates, Compañías Consultoras y Constructoras respectivamente.

e.- División Comercial.

A través de sus unidades, en lo relacionado a la forma de -
venta de energía a los diferentes usuarios.

También se presenta el organigrama del Proyecto, ver ANEXO 2, Orga -
nigrama. Proyecto Electrificación Valle del Aguán, cuya organiza -
ción está presidida por el Jefe del Proyecto. en quien el Gerente -
y el Sub-Gerente de Ingeniería de Construcción han delegado autori -
dad para el control y supervisión del Proyecto. Los consultores -
Reyes-Harza, que tienen a su cargo el diseño y la supervisión téc -
nica del proyecto, proporcionarán Ingenieros de Diseño y Supervi -
sión, quiénes conjuntamente con Ingenieros de Diseño y Supervisión
de la Empresa, trabajarán en las respectivas áreas.

EMPRESA NACIONAL DE ENERGIA ELECTRICA

TEGUCIGALPA, D. C., HONDURAS, C. A.

TABLA "ENEE"

APARTADO 99

2.- ASIGNACION DE RECURSOS

RECURSOS FINANCIEROS.

El Proyecto tiene un costo estimado en 43 millones de lempiras, siendo financiado en 23 millones de lempiras con fondos de la ENEE, y 20 millones de lempiras con fondos del préstamo de la Agencia Internacional para el Desarrollo (AID), convenio 522-T-033.

A continuación se presentan, el Plan de Financiamiento del Proyecto para la ENEE y la AID, con estimado de costos para los diferentes conceptos, y el Programa de Desembolsos para 1980.

PLAN DE FINANCIAMIENTO.

	FINANCIAMIENTO.		EN MILES DE DOLARES.	
	AID.	ENEE.	MONEDA EXTRANJERA	MONEDA LOCAL.
- Líneas de Transmisión, 180 Kms	4,925	648	4,925	648
- Sub-Estaciones, 5	2,590	1,050	2,590	1,050
- Sistema de Distribución, 500-Kms.	540	1,990	1,518	1,012
- Líneas Secundarias, 500 Kms.	860	960	1,092	728
- Transformadores 20,000 KVA.	280		280	
- Servicios 20,000 Usuarios.	300		240	60
- Contadores, 20,000 Usuarios.	140		140	
- Ingeniería y Administración.		2,160	821	1,339
- Servicio, Almacenaje y Facilidades de Adiestramiento.		300	30	270
- Fondo para alambrado interno	215	325	215	325
- Programa de adiestramiento.	100			100
- Evaluación.	50		25	25
- Imprevistos.		2,685		2,685
T O T A L.	10,000	10,118	11,876	8,242

EMP. ESA MUNICIPAL DE ENERGIA ELECTRICA

TEGUCIGALPA, D. C., HONDURAS, C. A.

TABLE "ENEE"

APARIADO 96

PROGRAMA DE DESEMBOLSOS

1980.

FASE DEL PROYECTO.	EN MILES DE LEMPIRAS	
	ENEE.	AID
1.- CONSTRUCCION LINEAS 138 K.V.	1,295.54	
a. Construcción, Richards Associates.	649.25	3,939.62
b. Supervisión Reyes-Harza.	206.29	
c. Supervisión ENEE.	340.00	
d. Servidumbre.	100.00	
2.- SUBESTACIONES.	600.00	
a. Compra de Equipo.		
b. Construcción.	525.00	1,023.00
c. Supervisión. Reyes-Harza.	50.00	
d. Supervisión. ENEE.	25.00	
3.- CIRCUITOS DE DISTRIBUCION.	2,117.57	
a. Compra de Equipo.		
1. Compra de Herrerajes.	1,200.00	
2. Compra de Postes		
b. Construcción.		
c. Supervisión, Reyes-Harza		
d. Supervisión ENEE.		
e. Diseño, Reyes-Harza.	827.57	
f. Diseño. ENEE.	90.00	
g. Servidumbre.		
4.- BODEGAS.	270.00	
a. Diseño Reyes- Harza.	10.00	
b. Supervisión ENEE.	60.00	
c. Contrato.	200.00	
T O T A L.	4,283.11	4,962.62

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UNIT - 1000 LEPPIRAS

INCOME STATEMENT

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	****	****	****	****	****	****	****	****	****	****
ELECTRICIDAD	74311.	93019.	107767.	136962.	172024.	187255.	183425.	216705.	206893.	314752.
OTRAS VENTAS	620.	652.	684.	718.	754.	792.	830.	872.	916.	962.
AJUSTE COMA.	0.	0.	12408.	9698.	11574.	26984.	61710.	8548.	10306.	12418.
TOTAL REVENUES	74931.	93671.	120859.	147378.	184352.	215031.	245965.	226125.	298115.	328132.
GENERACION	6796.	8055.	8700.	11252.	13510.	14500.	15513.	12318.	16901.	17915.
COMPOSTIBLE	5792.	11770.	26007.	31907.	43786.	60656.	66477.	10611.	12783.	15400.
TRAFASISICA	1352.	1655.	1902.	2014.	2995.	3220.	5906.	6327.	6711.	7177.
DISTRIBUCION	4482.	5154.	6031.	7056.	8255.	9659.	11301.	13222.	15664.	18044.
ADMINISTRACION	10313.	11861.	13876.	16235.	18994.	22225.	26003.	30423.	35595.	41646.
DEPRECIATION	16530.	18760.	22765.	28224.	33205.	34484.	40811.	45341.	73098.	77743.
TOTAL OPERATING COSTS	45265.	57255.	79281.	95808.	120745.	144744.	166011.	112242.	160557.	177940.
NET INCOME FROM OPERATIONS	29666.	36415.	41577.	51570.	63607.	70288.	79955.	107883.	137558.	150193.
TOTAL INTEREST PAYABLE	17718.	25680.	34459.	44025.	57200.	70423.	81881.	86612.	87406.	83400.
LESS INTEREST CAPITALIZED	2158.	10121.	16087.	21608.	30757.	45925.	51065.	57225.	2931.	5682.
INTEREST CHARGED TO INCOME	15560.	15559.	18371.	22417.	26443.	24498.	30816.	29387.	84475.	77718.
NET INCOME BEFORE TAXES	14106.	20857.	23206.	29153.	37164.	45789.	49138.	78496.	53083.	72475.
INCOME TAXES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NET PROFIT OR LOSS	14106.	20857.	23206.	29153.	37164.	45789.	49138.	78496.	53083.	72475.
DIVIDENDS PAID	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
RETAINED PROFIT	14106.	20857.	23206.	29153.	37164.	45789.	49138.	78496.	53083.	72475.
NET INCOME FROM OPERATIONS AFTER TAXES	29666.	36415.	41577.	51570.	63607.	70288.	79955.	107883.	137558.	150193.
AVERAGE NET FIXED ASSETS	374070.	404767.	461835.	573199.	707111.	781640.	888511.	1024705.	1678436.	2372284.
RETURN ON AVERAGE NET FIXED ASSETS IN OPERATION	7.9	9.0	9.0	9.0	9.0	9.0	9.0	10.6	8.1	6.3
AVERAGE TOTAL FIXED ASSETS	457192.	599933.	798499.	1028898.	1308689.	1652903.	1984004.	2205272.	2353597.	2522746.
RETURN ON AVERAGE TOTAL NET FIXED ASSETS	6.5	6.1	5.2	5.0	4.9	4.3	4.0	4.9	5.8	6.0

FACTIBILIDAD FINANCIERA ENE OCTUBRE 1979 (BANCO MUNDIAL) ENE 1980

UNIT - 1000 LEMPIRAS

SOURCES AND APPLICATION OF FUNDS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
NET INCOME FROM OPERATIONS AFTER TAXES	29866.	36415.	41577.	51570.	63607.	70288.	79955.	107883.	137550.	150193.
DEPRECIATION	16530.	18760.	22765.	29224.	33205.	34484.	40811.	45341.	73098.	77743.
INTERNAL CASH GENERATION	46196.	55176.	64343.	79794.	96812.	104771.	120765.	153224.	210656.	227935.
BORROWINGS	62750.	118914.	151345.	170152.	225108.	239416.	170572.	58256.	36179.	58235.
GENIEPAC CENTRAL	10000.	19700.	26400.	36000.	40000.	48000.	53000.	0.	0.	0.
FORNOC ELECTRIFICACION RURA	470.	412.	356.	350.	300.	254.	211.	195.	160.	142.
TOTAL SOURCES OF FUNDS	119416.	192402.	242444.	286296.	362220.	392441.	344548.	211676.	246995.	286312.
INTEREST	15560.	13555.	18371.	22417.	26443.	24498.	30816.	29387.	84475.	77718.
INTEREST DURING CONSTR. AND OPTIMIZATION	2158.	10121.	16087.	21608.	30757.	45925.	51065.	57225.	2511.	5522.
TOTAL DEBT SERVICE	30590.	41370.	50664.	62838.	82546.	100613.	126334.	154353.	179204.	171662.
CAPITAL EXPENDITURES	85835.	149145.	184906.	199806.	262686.	297301.	204852.	66782.	67523.	104409.
DIVIDENDS PAID	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
INCREASE IN WORKING CAP- ITAL OTHER THAN CASH	2760.	4630.	5010.	4440.	8260.	7250.	4740.	8200.	5020.	13360.
TOTAL APPLICATION OF FUNDS	119104.	195145.	240580.	267084.	353492.	405163.	335925.	229335.	255747.	281562.
ANNUAL CASH SURPLUS	232.	-2743.	1864.	19212.	8728.	-12722.	8623.	-17659.	-8753.	-145.
CASH AT BEGINNING OF YEAR	3324.	3556.	812.	2677.	21889.	30617.	17895.	26518.	8859.	106.
CASH AT END OF YEAR	3556.	812.	2677.	21889.	30617.	17895.	26518.	8859.	106.	-43.
TIMES DEBT SERVICE COVERED BY INTERNAL CASH GENERATION	1.6	1.4	1.3	1.3	1.2	1.1	1.0	1.0	1.2	1.4

FACTIBILIDAD FINANCIERA ENE OCTUBRE 1979 (BANCO MUNDIAL) ENE 1980

UNIT - 1000 LEMPIRAS

PRO FORMA BALANCE SHEET

FACTIBILIDAD FINANCIERA ENEE OCTUBRE 1979 (BANCO MUNDIAL) 23 ENE 1980

UNIT - 1000 LEMPIRAS

PRO FORMA BALANCE SHEET

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
FIXED ASSETS IN OPERATION LESS DEPRECIATION	511373. 127599.	582115. 156355.	686715. 188806.	874671. 226182.	1034915. 269180.	1111689. 314143.	1345642. 366165.	1491724. 421789.	2832726. 505787.	3012714. 595064.
NET FIXED ASSETS IN OPER. WORK IN PROGRESS	383774. 127097.	425760. 263236.	497999. 410094.	648488. 501304.	765734. 701052.	797546. 1040674.	979477. 1150312.	1069934. 1210822.	2326938. 100301.	2417630. 200674.
TOTAL NET FIXED ASSETS	510871.	688956.	908003.	1149792.	1467586.	1838220.	2129788.	2280756.	2427239.	2618253.
CASH AND BANK BALANCES WORK. CAP. OTHER THAN CASH	3556. 43149.	812. 47779.	2677. 52789.	21989. 57229.	30617. 65489.	17895. 72739.	26518. 77479.	8859. 85679.	106. 94699.	-43. 105389.
TOTAL CURRENT ASSETS	46705.	48591.	55466.	79118.	96106.	90634.	103997.	94538.	94805.	105046.
TOTAL ASSETS	557576.	737587.	963469.	1228910.	1563691.	1928854.	2233785.	2375294.	2522044.	2723299.
CAPITAL ACCOUNT SURPLUS REVALUATION RESERVE	157431. 111358. 35897.	175843. 132215. 73515.	202599. 159421. 114295.	238949. 184574. 162994.	279249. 221737. 220450.	327593. 267527. 282342.	380714. 316665. 358006.	380909. 345161. 431100.	381069. 448244. 590242.	381211. 520710. 758900.
TOTAL EQUITY	304686.	381573.	472314.	586417.	721436.	877371.	1056184.	1207177.	1409554.	1640937.
LONG-TERM DEBT LESS CURRENT PORTION	252889. 15690.	356013. 16205.	491153. 18813.	642492. 25346.	842254. 30189.	1051481. 44452.	1177594. 67741.	1168110. 91798.	1112494. 88262.	1002469. 87412.
NET LONG-TERM DEBT	237199.	339808.	472340.	617146.	812065.	1007029.	1109855.	1076315.	1024234.	995057.
TOTAL CURRENT LIABILITIES	15690.	16205.	18813.	25346.	30189.	44452.	67741.	91798.	88262.	87412.
TOTAL LIABILITIES	252889.	356013.	491153.	642492.	842254.	1051481.	1177594.	1168110.	1112494.	1082469.
TOTAL LIABILITIES + EQUITY	557575.	737586.	963468.	1228908.	1563690.	1928852.	2233770.	2375287.	2522048.	2723306.
DEBT/EQUITY RATIO CURRENT RATIO	45/55 3.0	48/52 3.0	51/49 2.9	52/48 3.1	54/46 3.2	55/45 2.0	53/47 1.5	49/51 1.0	44/56 1.1	40/60 1.2

FACTIBILIDAD FINANCIERA ENEE OCTUBRE 1979 (BANCO MUNDIAL) 23 ENE 1980

UNIT - 1000 LEMPIRAS

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REGISTRADA EN EL HONDURAS C. A.

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RECURSOS HUMANOS

El Proyecto cuenta con el personal técnico especializado para las diversas etapas del mismo. La Empresa Nacional de Energía Eléctrica ha designado un Jefe de Proyecto bajo cuya responsabilidad está el control y supervisión general del Proyecto. Tanto la ENEE, como los Consultores tienen asignado el personal técnico necesario para desarrollar las actividades tanto de Diseño como de supervisión, en las respectivas etapas del Proyecto; este personal es:

ETAPA DE DISEÑO

ENEE.	Reyes - Harza
Jefe de Proyecto.	Director del Proyecto.
Ingeniero Electricista.	Ingeniero Residente.
Ingeniero Practicante(2)	Ingeniero Electricista B
Personal de apoyo.	Ingeniero Electricista C.
	Ingeniero Civil.
	Arquitecto.
	Personal de Campo.
	Dibujantes.
	Personal de Apoyo.

ETAPA DE SUPERVISION.

1. Línea 138 K.V.	
Ingeniero Civil A (2)	Ingeniero Electricista A.
Inspectores (3)	
2. Sub-Estaciones.	
Ingeniero Electricista A.	Ingeniero Electricista A.
Ingeniero Civil.	Ingeniero de Pruebas.
Inspectores (3).	

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3. Líneas 34.5 K.V.

Ingeniero Civil A (2)	Ingeniero de Estaqueo
Ingeniero Electricista B.	Ingeniero Electricista A.
Inspectores (3)	Ingeniero Electricista B.

4. Sistemas de Distribucion.

Ingeniero Electricista A.	Ingeniero Electricista A.
Ingeniero Electricista B.	Ingeniero Electricista A.
Ingeniero Civil. A.	
Ingeniero Civil B.	
Inspectores (3).	

5. Bodegas.

Ingeniero Civil B.

La organización, y líneas de autoridad de este personal pueden verse en el ANEXO 2. Organigrama. Proyecto Electrificación Valle del Aguán. La Supervisión técnica del Proyecto estará bajo la responsabilidad - del Ingeniero Residente de los Consultores, quien juntamente con el personal técnico de los Consultores y de la ENEE. realizarán los trabajos requeridos en ambas etapas del Proyecto, los cuales podemos resumir en:

ETAPA DE DISEÑO.

1. Diseño de las líneas primarias de 34.5 K.V.
2. Diseño del sistema secundario de 120/240 voltios, incluyendo el alumbrado público, acometidas de servicio, y esquemas de alambrado interior de viviendas.
3. Diseño de los dos edificios para almacenamiento de materiales incluyendo espacio para oficinas y aulas de clase.
4. Preparación de los documentos contractuales para la construcción de las partidas 1,2 y 3; la evacuación de las ofertas y las recomendaciones a la ENEE. para la adjudicación de los respectivos. contratos de construcción.

ETAPA DE SUPERVISION

1. Supervisión de la Construcción de las línea de 138 K.V. y de las Sub-Estaciones de transformación de 138/34.5 K.V..
2. Supervisión de la Construcción de las líneas de 34.5 K.V.- sistemas secundarios, alumbrado público, y alambrado interior de viviendas.
3. Supervisión de la Construcción de los edificios para almacenamiento, oficinas y aulas de clase.

Para control de las actividades tanto administrativas como de campo del Proyecto, se cuenta con las siguientes oficinas:

Jefatura Proyecto Valle del Aguán.
Empresa Nacional de Energía Eléctrica.
Edificio Valle Aguiluz. 1 Ave.
Comayaguela, D.C.

Consultores Reyes- Harza.
Edificio El Castañito.
Barrio Pueblo Nuevo
Tegucigalpa, D.C.

Proyecto Valle del Aguán
Edificio Reyes
La Ceiba, Atlántida.

Posteriormente la ENEE. acondicionará una oficina en el Valle del - Aguán, posiblemente en Tocoa, ó en Olanchito o Sonaguera.

3.- UBICACION DEL PROYECTO DENTRO DE LOS PROGRAMAS DE LA ENEE.

Tal y como se explicó anteriormente el Proyecto de Electrificación del Valle del Aguán, dentro de la organización de la Empresa, está-

ubicado como Proyecto Especial dependiente de la Sub-Gerencia de -
Ingeniería y Construcción.

Hasta la fecha, este Proyecto es el más grande de Electrificación-
rural que la Empresa ha emprendido, y aparte de otras pequeñas áreas,
el cual tiene como objetivo principal el ofrecer, a los residentes-
y a los inversionistas actuales y futuros, beneficios en cuanto a la
calidad de vida, empleo, ingreso económicos, estado nutricional, etc.

La Compañía Consultora Harza Engineering Company, en su programa de
Expansión del Sistema de Generación de la ENEE. 1979-1982, identifi-
có un programa que satisfecerá económicamente y a corto plazo los -
requerimientos de energía. De acuerdo a los programas de la Empresa
la entrada en operación comercial de la primera unidad del Proyecto
El Cajón será en marzo de 1985 lo que llevó a preparar un programa-
interino de Expansión a fin de lograr un sistema de aumento de car-
ga que pueda satisfacer los requerimientos; este programa interino-
de Expansión identificó los Proyectos de la Planta Diesel de Puerto
Cortés y el Proyecto Hidroeléctrico El Nispero como facilidades adi-
cionales de generación, estos proveerán alrededor de 50 MW de capaci-
dad y 250 GWH / año de energía generada. La Planta Diesel Puerto Cor-
tés. El Proyecto está siendo financiado a través del Préstamo del -
Banco Internacional de Reconstrucción y Fomento N. 1629-10 por Lempi-
ras Lps.13,374.00, un préstamo del Banco Nacional de Prfs per Lempi-
ras Lps.14,875.000 y Lps.5,640.000 de fondos propios de la ENEE. co-
mo contraparte local. Su entrada en operación comercial está progra-
mada para el 30 de Junio de 1980.

El Proyecto Hidroeléctrico El Nispero, de 22.5 MW está localizado en
el Rfo Palaja cerca del pueblo de El Nispero, unos 25 Km. al suroeste
de Santa Bárbara. El Proyecto está siendo financiado a través del -
préstamo del Banco Internacional de Reconstrucción y Fomento No.1629-

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HO, y con fondos propios de la ENEE., así:

Lps.33,556.000 del préstamo del Banco, y Lps.17,685.000 de contraparte local. Su entrada en operación comercial está programada para el 28 de Febrero de 1982.

Ambos proyectos serán conectados al Sistema Nacional de Transmisión, a fin de satisfacer los requerimientos de energía, tanto de las poblaciones cercanas como de cualquiera que esté incorporada al Sistema Nacional.

La demanda de energía eléctrica en el Valle del Aguán fue determinada en el Estudio de factibilidad de la Electrificación rural del Valle del Aguán preparado por la A.I.D. en colaboración con la ENEE, en abril de 1977. Posteriormente Harza Engineering preparó un estudio de la determinación de los índices de carga y consumos en el Valle del Aguán, del cual presentamos un resumen a continuación; en el estudio se consideraron tasas de incremento poblacional diversas, por los asentamientos humanos que el INA está haciendo en esa zona, y por los grandes proyectos agro-Industriales que serán ubicados en esa zona.

Además de las poblaciones localizadas a lo largo del Valle, se han identificado como consumidores: La Empresa Nacional Portuaria, CONADI, CORFINO, COHBANA Y STANDARD FRUIT Co.

Las poblaciones a las cuales se ha proyectado dar servicios eléctrico han sido agrupadas en los lotes No.1, No.2 y No.3 por su proximidad a las Sub-Estaciones convertidores 138/34.5 K.V., su localización de estas poblaciones puede verse en el ANEXO 3. Localización de los lotes, el listado de las mismas, conforme al lote que pertenecen es:

LOTE -1-

P. CASTILLA.

Trujillo.

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REPARTO DE CABLES

CABLE "ENEI"

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Esprimento
Q. Arena.
Salamá.
J. Antonio.
El Barro.
Sinaloa.
Taujica.
Q. Agua.
Brichen.
Palmichal.
Chapagua.
Col. Aguan.
Tarros.
Corocito.
Corfino.
B. Oriental.

LOTE -2-

Curva de Isleta.
Sonaguera.
Faos.
Rfo de Piedras.
Curva de C.
Oda. Arena.
Lorelay
Sabanas Lor.
Churrusquera.
Guayabal.
Campo Nuevo.
Parma.

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TELECOMUNICACIONES S. A.

CABLE "ENEE"

APARTADO 99

Agua Caliente.
Chacalapa Spar.
Chacalapa P.T.
Monte Abajo.
Ataseosa.
Ilanga.
Ceibita.
Nevones.
Copete.
Caballería.
Valley.
Bohemia.
Sabá.
Sabana de Elixir.
Elixir.
Lucía.
Los planes.
Trorador.
Lanza.
Tiburones.
La masica.
Achote.
El Café.
P. Agua Abajo.
P. Agua Arriba.
Orica.
Paguales.
Lerida.
Prieta.
Cuaca Viejo.

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APARTADO 94

Cuaca Nuevo.
Chirpa.
La Bolsa.
Cayo Sierra.
Zamora.
Concepción.
Guapinol.
Cayo Campo.
Ceibita T.
Tocoa.
San Isidro.
Rigores.
El Coco.
R. Bonito.
Olvido.
La Paz.
Capulfn.
Guanacaste.
Isleta Central.
Carriones.
El Perú.
Corozal.
Vía Nuvia.
Sambo Creek.
Salinan
Cacao.
Jutiapa.
Nueva Armenia.

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APARTADO 99

LOTE -3-

El Potrero.
Tegujal.
Santa Cruz.
Arenal.
San Jerónimo.
El Nance.
Tacualtaste.
Santa Bárbara.
Tejeras.
Chorrera.
Coyoles.
El Carril.
Medina.
Sandor Fruit Company.
San José Arriba.
San José.
Tegujinal.
Ocote.
Juaguas Arriba.
Olanchito.
Potrerillos.
El Chaparral.
Puerto Escondido.
La Sabana.
Barranco.
San Carlos.
Bocatoma
San Francisco.

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REDUCCION-ATA. D. C. NO. 10785. C. -

CABLE "ENEE"

AFIATADO 94

LOTE -3-

Boca de Mame.

Jalisco.

Mendez.

El Juncal.

El resumen a continuación nos presenta breve pero claramente las condiciones e índices obtenidos en el estudio sobre demanda preparado - por HARZA .

DETERMINACION DE LOS INDICES DE CARGA Y
CONSUMOS EN EL AREA DEL BAJO AGUAN.

- 1.- Con el objeto de conocer las diferentes cargas que se conectarán al nuevo sistema Eléctrico de Electrificación Rural, es necesario determinar los índices de consumo del lugar u en éste forma fijar las cargas instaladas a la red. En éste caso se tratará solamente de los consumos Urbano y Rural de tal manera que las instalaciones agro-industriales, irrigación y puertos deberán tratarse independientemente y por separado.

- 2.- De acuerdo con el Estudio de la Electrificación Rural del Bajo - Aguán presentado por el A.I.D. en abril de 1977, existían en ésta región alrededor de 150,000 habitantes (25,000 familias). La tasa usada en éste estudio para el crecimiento poblacional del Valle oscila entre 3.9 y 5.8% por año, de acuerdo con la Dirección de Estadísticas y Censos la misma tasa varía entre 6 y 7% para ser conservadores se ha escogido un incremento anual del 6% para toda la región, durante el período 1974-1981 (asentamiento humano del INA); y del 4.8% para el siguiente decenio. Sin embargo, se harán prudentes excepciones para las poblaciones de Bonito Oriental, - Puerto Castilla, Quebrada de Agua y de cualquier otra población dentro del Valle donde los grandes proyectos agro-industriales ubiquen sus instalaciones. Con base en el Estudio de A.I.D., se ha elaborado el Cuadro No.1 "proyecciones para el Valle del Aguán hasta 1981".

CUADRO No.1

POBLACION	1977	1981	1985	1991
RURAL	95,000	120,000	150,000	190,000
URBANA	55,000	70,000	90,000	114,000
TOTAL.	150,000	190,000	240,000	304,000

Se considerarán poblaciones urbanas, todas aquellas que tienen más de 1,000 habitantes.

- 3.- Para determinar los índices de consumo de las poblaciones del proyecto con más de 3,000 habitantes se tomarán como base los datos históricos registrados en las poblaciones de Marcala y Catacamas (sistema aislado con generación Diesel), Trujillo (sistema aislado con generación diesel y dentro de la región), y Pespire y Nacaome (sistemas Interconectado Nacional). Estas poblaciones observan un nivel de vida similar a las del Valle del Aguán (Ver Cuadro No. II).

El promedio de esos datos históricos arrojan los siguientes valores:

Índice de Consumo : 1363 KWH/abonado/año.

Índice de habitantes por abonado: 12.68 habitantes por abonado.

Factor de Carga : 32%.

- 4.- Para las poblaciones más pequeñas, con menos de 500 habitantes, el índice de consumo de energía eléctrica se calculó a base de un promedio de 725 kWh por abonado para el primer año, 8.7% de aumento - anualmente en los siguientes 4 años y una tasa de crecimiento anual del 3% durante los años subsiguientes.

Se estima que el factor de carga resultante de 17% para el primer año aumentará hasta un valor del 25% en un período de 10 años - (en 1991).

- 5.- Para las poblaciones con más de 500 habitantes pero con menos de - 1000, se escogieron índices de consumo de energía eléctrica anual-

mente de 4.8% para las poblaciones de 1001 a 3000 habitantes se escoge una tasa de crecimiento de 5.4% anualmente para el consumo de energía eléctrica.

- 6.- Para las poblaciones con más de 3000 habitantes los índices fueron determinados a partir de los valores promedio histórico del cuadro No. II.
- 7.- En el cuadro No. III es un resumen de los índices por los cuatro grupos de poblaciones según número de habitantes.

CUADRO N. 11

DATOS HISTORICOS DE SERVICIO ELECTRICO.

POBLACIONES CON NIVEL DE VIDA SIMILAR A LAS DEL VALLE DEL AGUAN.

	<u>PESPIRE.</u>	<u>NACAOME.</u>	<u>TRUJILLO</u>	<u>MARCALA.</u>	<u>CATACAMAS.</u>
POBLACION, HABITANTES	2225	7232	4198	3737	10725
No. DE ARROLADOS.	171	485	439	291	817
CONSUMO ANUAL EN kWh	258,000	873,000	453,000	372,000	980,000
DEM. MAX. kW.	92	485	200	291	340
FACTOR DE CARGA, %	32	38.5	26	32	33
CONSUMO EN kWh/ARROLADOS/AÑO	1508	1800	1031	1278	1200
HABITANTES / ARROLADO.	13.0	14.9	9.6	12.8	13.1

NOTA: TODOS LOS DATOS EN BASE DEL AÑO 1977, CON EXCEPCION DE TRUJILLO EN BASE DEL AÑO 1975.

CUADRO No. III

VALLE DEL AGUAN.

INDICES DE CARGA Y CONSUMO.

HABITANTES POR POBLACION.	INDICE DE CONSUMO KWH/ABONADO/AÑO.		FACTOR DE CARGA %		INDICE DE HABITANTES POR ABONADO.		DEMANDA POR ABONADO EN VATIOS	
	1981	1991	1981	1991	1981	1991	1981	1991
HASTA 500	330	550	17	25	25	20	225	255
501 - 1000	500	800	25	32	18	16	232	285
1001- 3000	650	1100	28	35	15	12	269	364
MAS DE 3000	1300	1900	32	40	13	10	470	542

FECHA: 5 DE FEBRERO DE 1980.

mtb.

PROYECTO ELECTRIFICACION VALLE DEL AGUAN.

REGULACION DE VOLTAJE Y PERDIDAS.

UBESTACION.	ALIMENTADORA No.LOCALIZACION.	CARGA EN KW		REGULACION DE VOLTAJE PORCENTAJE		PERDIDAS PORCENTAJE.	
		1981	1991	1981	1991	1981	1991
B. ORIENTAL.	I PTO.CASTILLA	1051	2370	1.6	3.8	0.8	1.9
	II SINALOA.	756	2312	1.7	5.9	1.4	4.4
ISLETA.	I TOCOA/SAVA	728	1727	1.1	2.6	0.8	1.9
	II RANCHO BONITO	1103	3036	0.8	2.8	0.7	2.2
	III LANZA.	1456	2702	1.2	2.4	1.0	1.9
	IV SONAGUERA./ EL COCO.	158	409	0.3	0.5	0.2	0.5
EIBA.	I JUTIAPA.	390	814	1.3	2.57	0.9	1.9
	I COYOLAS/ OLANCHITO.	495	1148	1.1	2.9	0.8	1.9
	II STANDARD FRUIT COMPANY.	-	8878	-	3.4	-	1.6
	III CHORRERA/ARE- NAL.	126	466	1.0	2.3	0.6	1.3

OTA: ESTOS DATOS EN BASE DEL DISEÑO INICIAL. MODIFICACIONES RECIENTES A LAS ALIMENTADORAS PUEDE RESULTAR EN CAMBIOS EN LOS DATOS.

TEGUCIGALPA, D.C., 7 DE FEBRERO DE 1980.

PROYECTO ELECTRIFICACION VALLE DEL AGUAN
CARGAS DE MAYOR CAPACIDAD CONECTADA Y DEMANDA.

I.- SUBESTACION BONITO ORIENTAL.

AÑO.		1981		1991	
CONSUMIDOR.	ALIMENTADORA No.	CARGA CONECTADA KVA.	DEMANDA KW.	CARGA CONECTADA KVA.	DEMANDA KW
Empresa Nacional Portuaria-Pto.Castilla.	1	2,000	550	3,000	1,380
CONADI					
a) Campamento Sinaloa.	2	1,150	150	1,150	250
b) Fábrica de aceite 15 toneladas, # 1.	2	500	175	500	315
c) Fábrica de aceite 15 toneladas, # 2	2	500	175	500	315
CORFINO.					
a) Aserradero.	3	7,500	<u>1 /</u>	7,500	<u>1 /</u>
b) Fábrica Pulpa y Papel	4	-	<u>1 /</u>	20,000	<u>1 /</u>

1 / CORFINO no ha entregado datos de demanda en KW, consumo de energía o su programa de conexión. Se apartan dos alimentadoras de esta subestación exclusivamente para CORFINO.

II.- SUBESTACION ISLETA.

AÑO.		1981		1991	
CONSUMIDOR.	ALIMENTADORA No.	CARGA CONECTADA KVA.	DEMANDA. KW.	CARGA CONECTADA KVA.	DEMANDA KW.
CONADI. Fábrica de aceite 20 toneladas, # 3.	1	550	215	550	387
COIBANA. a) Bombas de Irriga- ción.	2	1,000	900	2,100	1,800
b) Bombas de Irriga- ción.	3	-	-	1,900	1,600
<u>III.-SUBESTACION COYOLES.</u>					
Standard Fruit Co. a) Coyoles Central.	2	-	-	1,350	450
b) Bombas de Irrigación	2	-	-	8,500	8,400

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4.- ENTRENAMIENTO DE PERSONAL.

Hasta la fecha únicamente se han hecho los arreglos preliminares con el Instituto Nacional de Formación Profesional, con el propósito de organizar los cursos de capacitación que se impartirán en el Valle del Aguán. El INFOP hizo el ofrecimiento formal de preparar el Estimado de Costos, y el Programa de Enseñanza de los cursos a impartir.

El tipo de enseñanza que se tiene proyectada impartir es sobre instalaciones domiciliarias y reparación de aparatos electrodomésticos.

El costo de este entrenamiento se ha Estimado, en forma global, en Lps.200,000 que serán financiados con fondos del préstamo de la A.I.D.

5.- PLAN DE EJECUCION.

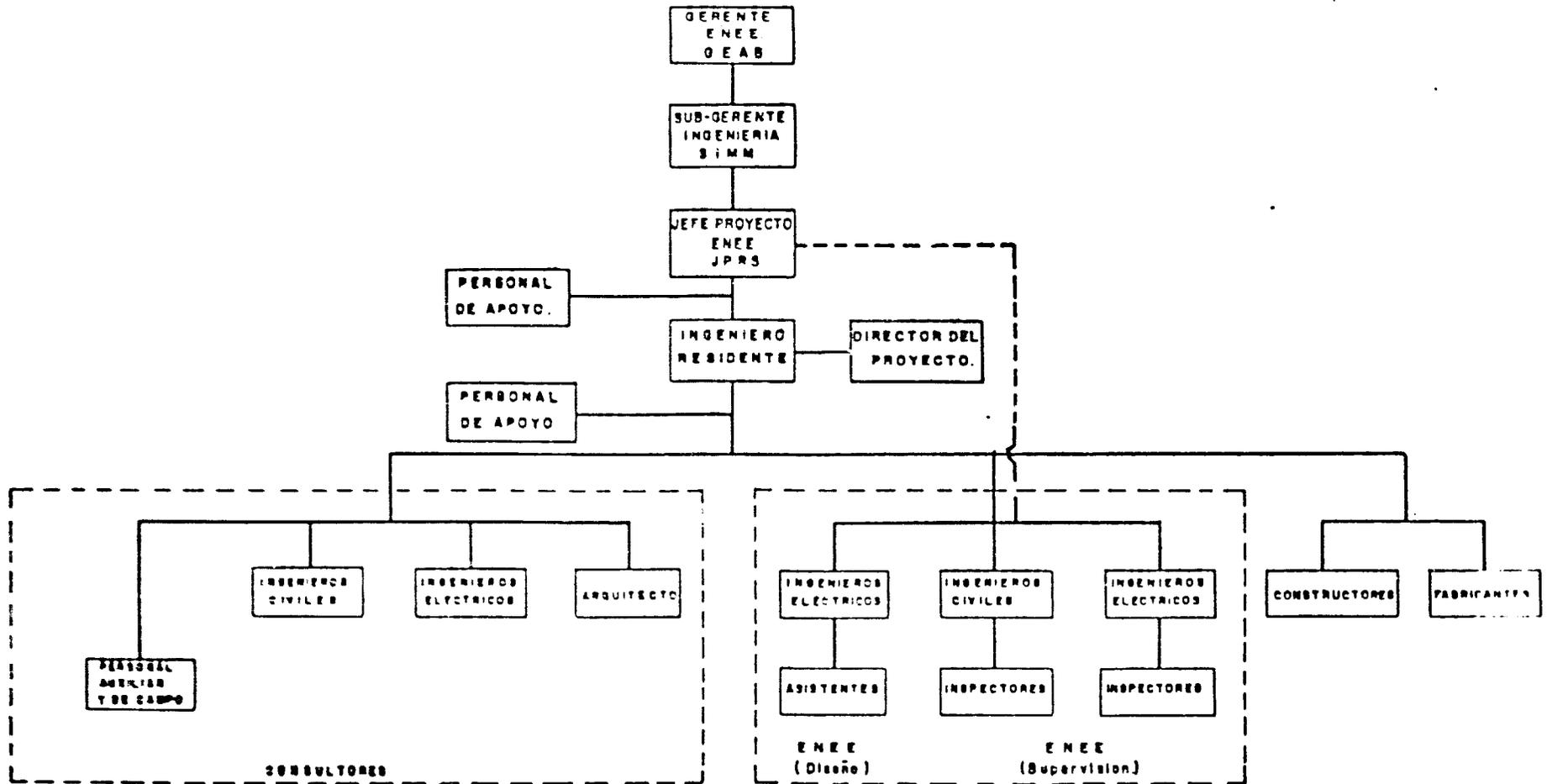
La primera programación del Proyecto fue hecho en 1977 y se esti mó que tendría una duración de 1990 días calendario, a partir de sx inicio el 1 de Octubre de 1976. Una vez iniciadas algunas actividades, y teniendo una mejor visión del alcance y dificultades del Proyecto se hizo una reprogramación en Diciembre de 1978, con una duración de 2244. La última actualización se hizo en Octubre - de 1979, y presenta como fecha de terminación en febrero de 1983.

A continuación se presenta el programa de ejecución, mediante una Gráfica PERT, del Proyecto; en ella se presentán las actividades - su secuencia lógica, duración, fecha de inicio y terminación reales y programadas.

El Proyecto presenta un atraso de tres meses, desde su fecha programada de terminación en noviembre del 82, y su fecha actual pro gramada de terminación en febrero de 1983; este atraso representa el 4% del tiempo programado del Proyecto.

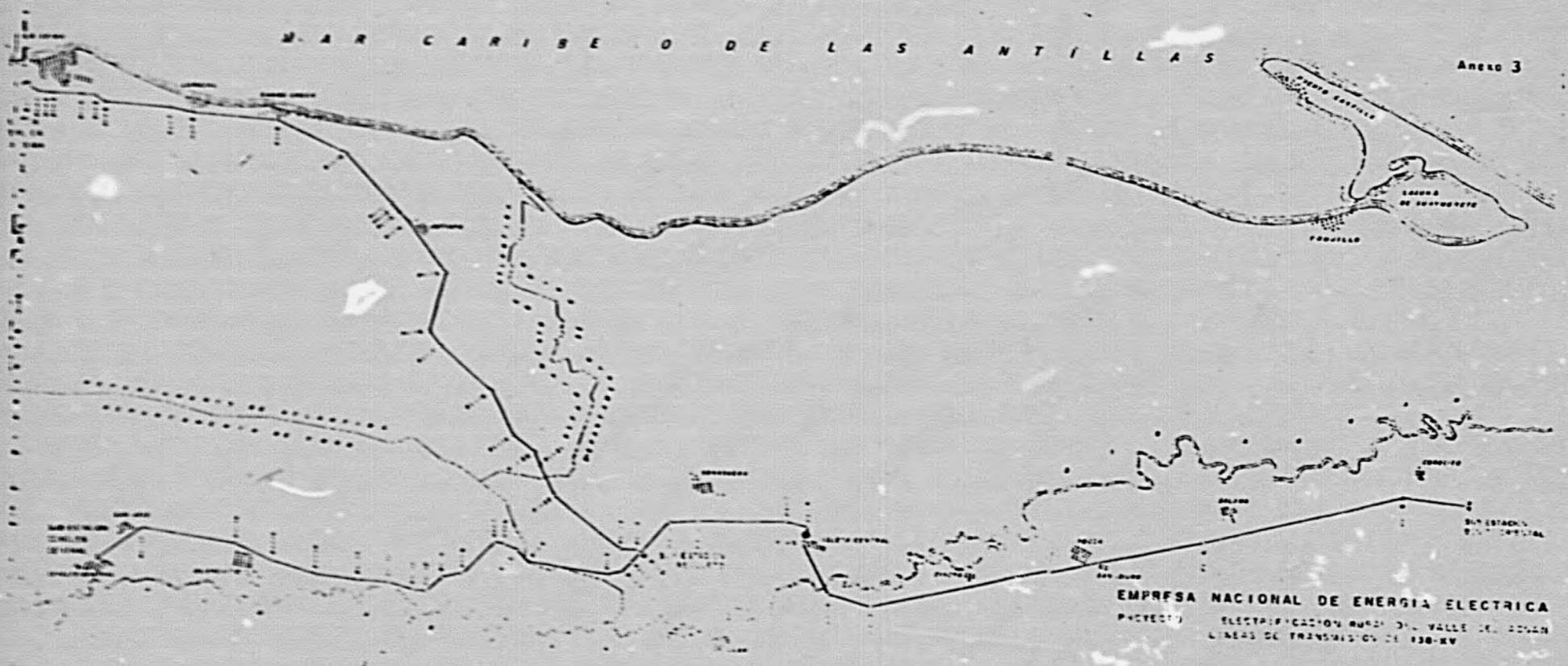
ORGANIGRAMA

PROYECTO ELECTRIFICACION VALLE DEL AGUAN



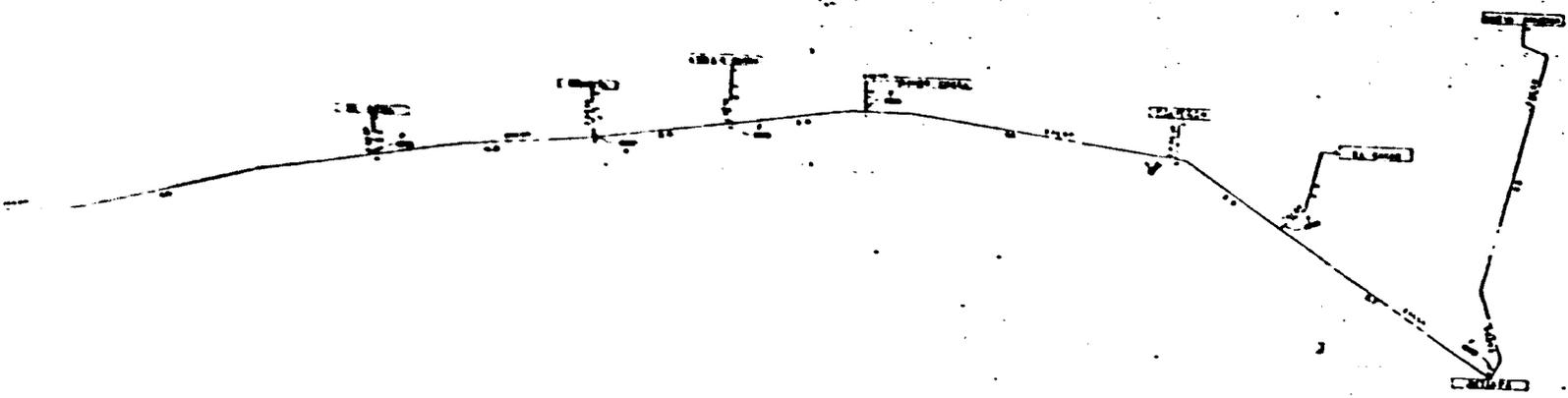
MAR CARIBE O DE LAS ANTILLAS

Anexo 3



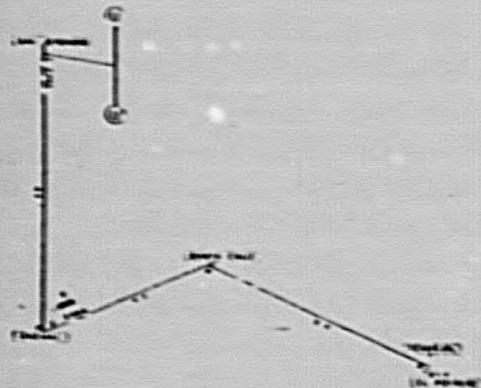
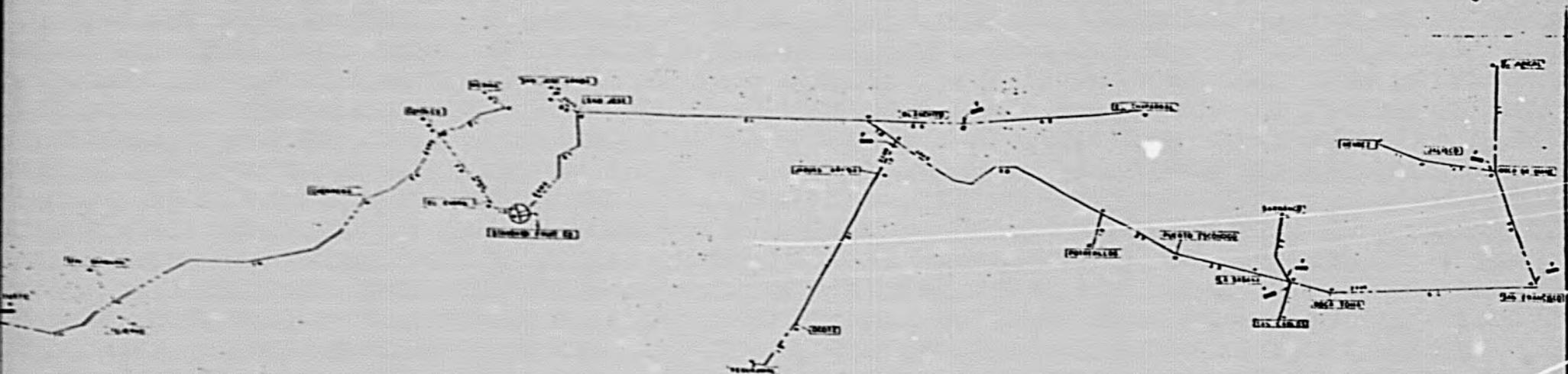
EMPRESA NACIONAL DE ENERGIA ELECTRICA
PROYECTO ELECTRIFICACION RURAL DEL VALLE DE LOS RIOS
LINEAS DE TRANSMISION DE 138-KV

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SIMBOLOGIA

- LINEA PROYECTADA 220 KV
- LINEA PROYECTADA 138 KV
- LINEA PROYECTADA 69 KV
- LINEA PROYECTADA 33 KV
- LINEA PROYECTADA 15 KV
- LINEA PROYECTADA 7.5 KV
- LINEA PROYECTADA 3.3 KV
- LINEA PROYECTADA 1.5 KV
- LINEA PROYECTADA 0.75 KV
- LINEA PROYECTADA 0.375 KV
- LINEA PROYECTADA 0.1875 KV
- LINEA PROYECTADA 0.09375 KV
- LINEA PROYECTADA 0.046875 KV
- LINEA PROYECTADA 0.0234375 KV
- LINEA PROYECTADA 0.01171875 KV
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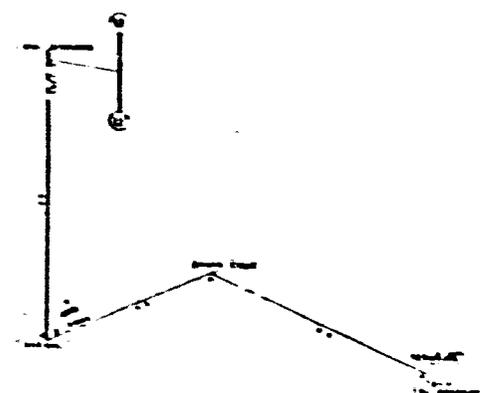
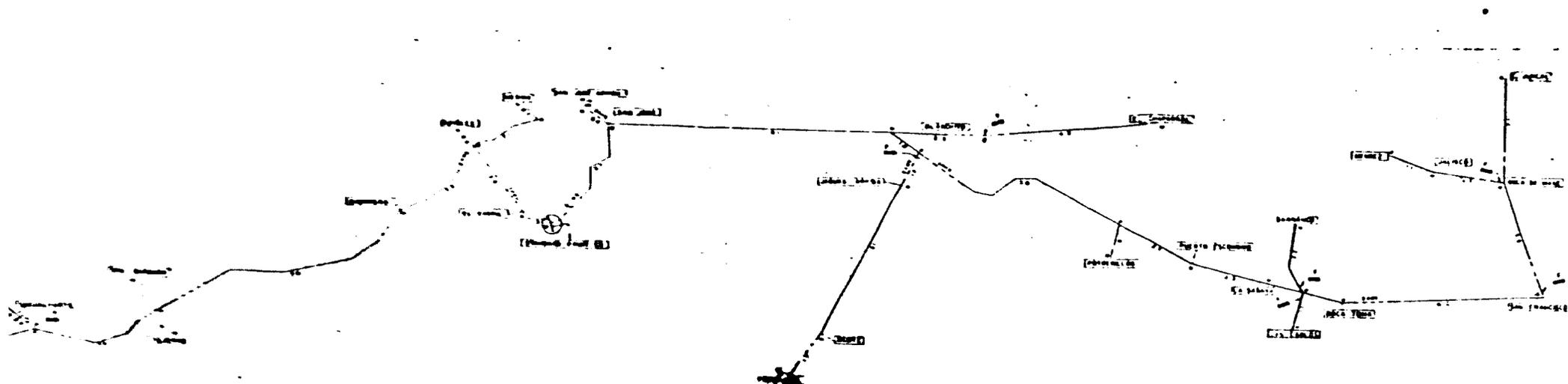
SIMBOLOGIA

- LINEA PUNTO 3.0 4.0/50
- LINEA PUNTO 2.0 3.0/50
- LINEA PUNTO 1.0 2.0/50
- PUNTO DEL CONECTOR
- DISTANCIA ENTRE PUNTO
- PUNTO
- PUNTO DE UNION
- PUNTO DE AGUA POTABLE 20 MP G/L
- BARRIO DE LA SUB ESTACION

"PRELIMINAR"
NO VALIDO PARA CONSTRUCCION

EMPRESA NACIONAL DE ENERGIA ELECTRICA
PROYECTO ELECTRICIDAD VALLE DE AGUILA
DIAGRAMA UNIFILAR
LINEAS DE DISTANCIA 30.5 P. L.
SUB ESTACION 11. E. G. H. 1.1

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SIMBOLOGIA

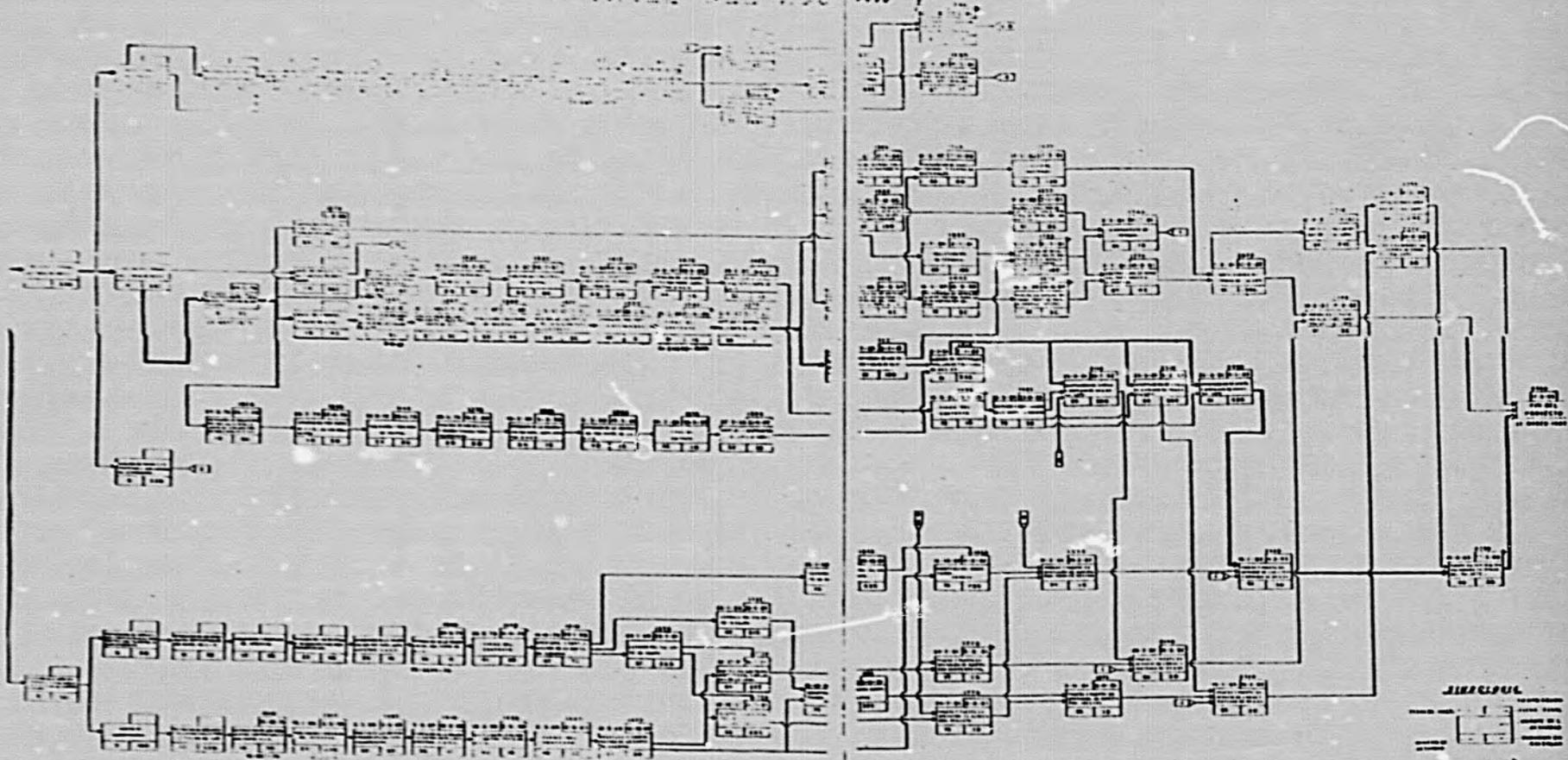
- LINEA PRIMERA 33 KV
- LINEA PRIMERA 13.8 KV
- LINEA PRIMERA 10 KV
- TRONCO DE CONDUCCION
- LINEA ENERGIAS PERDIDAS
- TUBERIA
- PULCACION
- PUNTO DE INSERCCION
- PUNTO DE MANEJO POTENCIAL EN UN CASO
- PUNTO DE LA SUBSTACION

"PRELIMINAR"
NO VALIDO PARA CONSTRUCCION

EMPRESA NACIONAL DE ENERGIA ELÉCTRICA
PROYECTO ELECTROTRANSMISIÓN DE ALTA TENSIÓN
DIAGRAMA UNIFILAR
LINEAS DE TRANSMISIÓN 345 KV
SUBESTACION EL. CUDC. 1°

10/1

PROYECTO DE ELECTRICIDAD
VALLE DEL ARAUCO



LEGENDA

[Symbol]	TRANSFORMADOR
[Symbol]	LINEA DE T.M.
[Symbol]	LINEA DE T.B.
[Symbol]	LINEA DE T.C.
[Symbol]	LINEA DE T.A.

ACTUALIZADO: 20/11/77