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190p
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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

PROJECT PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

NICARAGUA - RURAL EDUCATION DEVELOPMENT (Revised)

AID-DLC/P-2219

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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE: [A] A ADD, C CHANGE, D DELETE

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2. DOCUMENT CODE: 3

3. COUNTRY/ENTITY: NICARAGUA

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 524-0115

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7. PROJECT TITLE (Maximum 40 characters): Rural Education Development

8. ESTIMATED FY OF PROJECT COMPLETION: FY 82

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 77 B. QUARTER 4 C. FINAL FY 82 (Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS ($000 OR EQUIVALENT $1 -)

A. FUNDING SOURCE	FIRST FY 78 B. FX	FIRST FY 78 C. L/C	FIRST FY 78 D. TOTAL	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. TOTAL
AID APPROPRIATED TOTAL						
(GRANT)	(280)	( )	(280)	(815)	(75)	(890)
(LOAN)	(1,128)	(50)	(1,178)	(2,522)	(4,978)	(7,500)
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY		787	787		13,800	13,800
OTHER DONOR(S)						
TOTALS	1,408	837	2,245	3,337	18,853	22,190

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	PRIMARY TECH. CODE D. LOAN	E. 1ST FY 77 F. GRANT	E. 1ST FY 77 G. LOAN	H. 2ND FY 78 I. GRANT	H. 2ND FY 78 J. LOAN	K. 3RD FY 79 L. GRANT	K. 3RD FY 79 M. LOAN
(1) EH	600	600	600	280	7,500	280		330	
(2)									
(3)									
(4)									
TOTALS				280	7,500	280		330	

A. APPROPRIATION	N. 4TH FY ___ O. GRANT	N. 4TH FY ___ P. LOAN	Q. 5TH FY ___ R. GRANT	Q. 5TH FY ___ S. LOAN	LIFE OF PROJECT T. GRANT	LIFE OF PROJECT U. LOAN
(1)						
(2)					890	7,500
(3)						
(4)						
TOTALS					890	7,500

12. IN-DEPTH EVALUATION SCHEDULED: MM 01 YY 79

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

[1] 1 = NO 2 = YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE:

TITLE: Arthur W. Mudge, Director

DATE SIGNED: MM 09 DD 07 YY 77

15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM 09 DD 12 YY 77

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PROJECT PAPER

NICARAGUA - RURAL EDUCATION DEVELOPMENT PROGRAM

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LIST OF ACRONYMS USED IN THIS PROJECT

A&E	Architectural and Engineering
A.I.D.	Agency for International Development
Agromoc	INVIERNO Rural Promoters
CARE	Cooperative for American Remittances Everywhere
CFER	Rural Family Educational Centers
CSC	Comarca School Circuit
DIPSA	Agricultural Planning Directorate (MAG)
EAC	Campesino Agricultural Schools
FAO	Food and Agricultural Organization
FUNDE	Nicaraguan Development Foundation
GON	Government of Nicaragua
IBRD	International Bank for Reconstruction and Development
ILO	International Labor Organization
UNAN	University of Nicaragua
INCAE	Central American Business Institute
INDE	National Development Institute
INVIERNO	Campesino Welfare Institute
LSC	Local School Committee
MAG	Ministry of Agriculture
MOH	Ministry of Health
MPE	Ministry of Public Education
NEC	National Education Center
NFE	Non-Formal Education
OAS	Organization of American States
PEMEN	National Program for the Extension and improvement of Education
POLI	Polytechnical Institute
RAC	Rural Adolescent Centers
RDSL I	Rural Development Sector Loan I
ROCAP	Regional Office for Central American Programs
UCA	Central American University
UNESCO	United Nations Education, Science and Cultural Organization

PART I - PROGRAM SUMMARY AND RECOMMENDATIONS

A. Face Sheet Data. See the preceeding face sheets for summary of fiscal data and project purpose.

B. Recommendations. The Mission recommends authorization of the stated financing for a rural education program to be carried out by the Government of Nicaragua (GON).

1. Project Authorization. $8,390,000. The grant portion ($890,000) will be funded by allotments from FYs - 1977, 1978 and 1979. It is expected that the majority of costs to be grant-financed will be foreign exchange costs. The loan portion ($7,500,000) will carry recommended terms of repayment within 30 years, including a ten year grace period with an interest rate of 2% per annum during the grace period and 3% thereafter. It is expected that the majority ($5.1 million) of the costs to be loan-financed will be local currency costs, with the remainder to be financed as foreign exchange costs. The Nicaraguan unit of currency is the Cordoba (C$) and the rate of exchange is C$7. = U.S.$1.00.

2. Terms and Conditions. The project funding will be subject to the terms and conditions specified in the draft Project Authorization (Annex D).

C. Borrower/Grantee. The borrower/grantee will be the GON. Representing the GON and administering the loan-grant program will be the Ministry of Public Education (MPE).

D. Description of the Program.

1. Strategy for Integrated Rural Development. The Rural Education Program described in this paper represents the third phase of A.I.D. support for the Nicaraguan strategy of integrated rural development. The strategy is to conduct multi-sectoral programs simultaneously within designated rural areas, providing the resident rural poor with expanded development resources and services and a full range of opportunities for improving their lives and modernizing their outlooks, thereby making it possible to break the cycle of poverty. A.I.D. support of this innovative

strategy began in mid-1975 with authorization of the Rural Development Sector Loan No. 524-T-031 that has helped create the GON's new rural development institution, the Instituto de Bienestar Campesino (INVIERNO). INVIERNO's income-raising operations in the target areas are now well underway and the first annual evaluation, conducted in the fall of 1976, showed the program to be meeting or exceeding its interim targets. The second rural program, Rural Health Services, began in mid-1976. By extending, improving, and integrating rural health coverage in the target areas, the Ministry of Health (MOH) intends to achieve a substantial decline in the rates of morbidity and mortality that plague the rural poor. Based on experiences gained in these two programs, complementary efforts under the rural education programs are thus judged to be especially feasible. They will coincide with INVIERNO and MOH operations, both geographically and in the use of community participation mechanisms. It is planned that further programs in municipal development and nutrition will also coincide with and support these sector programs.

2. Program Goal and Purpose

a. Goal. The socio-economic goal of the overall program is to increase the well-being of Nicaragua's rural poor. Intermediate to that goal is the sector goal of expanding and improving rural education in Regions II and V of Nicaragua.

b. Purpose. The purpose of the rural education program is to extend, improve and integrate rural educational services in the target area. Programs are designed so the rural population will receive a greater number of relevant educational services in an improved learning environment using cost effective approaches.

3. Program Components

a. Component One, Administrative Reform and Management Improvement. This component of the program is designed to strengthen the institutional and management capacities of the Ministry of Public Education (MPE) in the areas of planning, organization, staffing, coordination, operations and budgeting. While addressing many of the MPE weaknesses identified in the 1975 Education Sector Assessment, through providing extensive technical assistance to the new Minister and her reform team, this component will also provide critical and strategic support to the other components of the program.

This component includes grant funded technical assistance services at a cost of $410,000. Two special studies will be carried out during the initial stages of this component at a cost of $100,000 also under grant funding. Both long and short-term training opportunities will be made available to MPE personnel. Training costs are estimated at $240,000 of which all will be loan funded. Limited commodities and computer costs will be loan financed (estimated at $175,000) in order to make the technical assistance and training more effective and to strengthen the MPE's capability to carry out needed institutional changes. The GON will provide $830,000 of counterpart to this component in the form of technical assistance, commodity and operating costs.

Justification for Use of Grant Financing. Elements of the program to be grant funded, largely but not exclusively, in Component One, have been selected for the following reasons:

1) Enhanced Acceptability of Potentially Controversial Aspects of the Program. The Administrative Reform and Management Improvement is considered by the GON and the USAID to be a program that will disturb the traditional MPE operating procedures and policies. It is understood that the misgivings of the more traditional elements in the Ministry could well jeopardize the reform program. Nevertheless, substantial changes must be made in the day-to-day operations of the Ministry if it hopes to manage more effectively and efficiently its existing and new rural and urban education programs. Similarly, for relatively intangible and high cost services of long-term advisors with attendant high salaries, allowances, hardship differentials, etc., it is helpful to have at least some grant financing to enhance acceptability.

2) Timing. The prompt beginning of key programs under this component is a necessary condition to subsequent activities. Management skills must be developed early if resource inputs are to achieve maximum impact.

3) Evaluation. The MPE will actively participate in evaluations of program activities. Grant funds will be made available in this grant/loan project in order to strengthen the MPE's capacity to carry out acceptable evaluations of the program components as they are implemented.

b. Component Two, Integrated Community Development. Component Two is designed to develop community capacity to take an active part in determining the nature of the educational services that are delivered to their communities. Local school committees (LSCs) will be formed in the rural areas of Regions II and V. The LSCs will be the mechanism through which the community will communicate with MPE personnel, establish cooperating links with other communities, identify the educational needs of their area, monitor educational progress, and build and maintain local school facilities.

The MPE will build upon and coordinate its community development activities with the on-going community development programs of INVIERNO, MOH, and other groups involved in community development in the rural areas (e.g. churches, CARE, FUNDE.) MPE teachers and supervisors (trained in Component Four) will serve as community promoters, backstopped by four specialized MPE promoters who will be stationed in Regions II and V.

A.I.D. loan and grant funds of $197,000 will be combined with GON counterpart funds of $376,000 for a total of $573,000. Some $105,000 of the A.I.D. grant will finance essential technical assistance for developing the community development capability within the MPE. $92,000 of loan funds will finance the vehicles to provide the MPE personnel with adequate morbility to carry out their community activities. The GON will finance $15,000 of the salary of the technical advisor. In addition the GON will finance increased personnel costs estimated at $206,000 over the life of the loan. Operating costs, estimated at $155,000, will also be covered by the GON for items such as office supplies, promotional materials, vehicle maintenance, etc.

The major expected outputs of Component Two will be: (1) trained central office staff within the MPE which will efficiently support the community development efforts in the field; (2) four MPE promoters who will coordinate their activities with INVIERNO and MOH personnel in addition to supporting the community development activities of the MPE supervisors and teachers. The end of component status will be effective local school committees which are actively promoting demand for and utilization of skills and knowledge.

c. Component Three, Curriculum Development and Related Materials Production. Component Three will develop a radio-supported basic education curriculum that meets the needs of rural primary school age children plus adolescents and adults who lack numeracy and literacy skills. The present curriculum content bears little relationship to the experience of rural children or their parents. The revised curriculum will be adapted for radio and tailored to reflect the realities in the rural areas. Curriculum development for this project will be concentrated on reading, health/nutrition and agriculture. The math curriculum is already being developed by the MPE/Stanford University Radio-Mathematics Project, which will thus serve as a pilot for our broader range of subjects. The MPE staff will also adapt for radio the basic curriculum for social studies (e.g. culture/history.)

A.I.D. and the GON will finance 25 person/years of technical assistance to assist the MPE in developing and implementing the adapted basic education

curriculum. The estimated total cost of this technical assistance is $1,570,000. A.I.D. will grant fund $200,000 of these costs while loan funds will be used to cover costs up to $1,205,000. The GON will finance $165,000 of the technical assistance costs.

Teacher guides, student worksheets and curriculum tapes for radio broadcast will also be produced under this component. A.I.D. will finance these educational materials on a decreasing basis over the life of the project. A.I.D. loan funds of approximately $1,740,000 will pay for roughly half of such materials.

The GON will finance all operating costs of the curriculum development program. Forty-four MPE employees will be working with technical advisors in adapting the existing curriculum for radio broadcast. Fifteen of these individuals are presently employed under the Stanford Radio Math Project. It is estimated that MPE personnel costs over the life of the loan will be $1,584,000. Office supplies and office materials are estimated at $192,000. The GON will also finance the production of teacher guides, student worksheets and curriculum tapes on an increasing basis over the life of the project. The GON will finance $1,684,000 of these curriculum materials.

In summary, A.I.D. will finance $3,145,000 of this component while the GON will cover costs up to $3,596,000.

The major outputs of this component will be (1) the revision of the present primary curriculum and the preparation of radio broadcasts, teacher guides, and student materials; (2) the development of an adult education curriculum directly related to the job skill needs of rural adolescents and adults; and (3) the development of the training curriculum for supervisors and master teachers, traditional teachers and Comarca community teachers, and teachers of adolescents and adults. The end of component status for the development of primary curriculum will be the use of radio-supported curriculum and educational materials in over 1,400 primary schools in Regions II and V. For output number two, the adolescent/adult basic education curriculum will be in use through radio broadcasts, radio forums, cassette tape lessons, educational materials, and EAC/CFER schools. Approximately 2,200 education system personnel will be trained in the field to use the primary and adolescent/adult curriculums.

d. Component Four: Training for Supervision and Teaching. The project activity proposes to meet the need for well-trained, committed teachers

in rural areas through a continuing program of pre-service and in-service orientation and training for supervisors, master teachers, regular teachers, and Comarca community teachers who will work and teach in the rural areas of Regions II and V. Teaching personnel from the rural adolescent training centers, EACs and CFERs, and other teachers who will be using the accelerated basic education radio-supported adolescent/adult curriculum will also receive training on the content and teaching methodology of the adapted curriculum.

In the initial stages of the project, personnel will be drawn primarily from the present pool of primary teachers. However, as the number of schools in the program expands, new teachers will be added to the system. Teaching personnel from the four normal schools operating in Regions V and II and the universities will participate in a series of orientation and curriculum workshops. This project also proposes to make use of both the physical facilities of the National Education Center (NEC) and the teacher training curriculum the Center is presently preparing under the World Bank Loan. The 24 trainers who will have the major responsibility for carrying out in-service training activities under this project will be considered part of the NEC staff.

The A.I.D. loan will partially finance 48 person/months of technical advisors who will work with MPE personnel to develop and carry out a training program in the areas of community development, multi-grade teaching, radio-supported teaching methods, and adult education. The estimated cost of this technical assistance is $240,000 with A.I.D. financing $220,000 and the GON $20,000. In addition, some $42,000 of the A.I.D. loan will finance the purchase of training supplies such as video tape recording equipment and tapes.

The GON will finance per diem costs for in-service and pre-service training of MPE personnel. In addition, the per diem expenses for the training teams will be financed by the GON. The salaries of the teachers while they are in training and the salaries of the trainers are also calculated as counterpart. The GON will finance these operating expenses which amount to $1,790,000.

In summary, A.I.D. will finance $262,000 of the costs of Component Four while the GON will be picking up $1,790,000 of the costs. All A.I.D. costs will be loan funded.

Major component outputs will be (1) a trained cadre of 24 teacher trainers and 100 supervisors who can carry out the necessary orientation and training

or retraining of 2,200 rural education personnel; (2) one hundred master teachers, 1,477 regular teachers and 400 Comarca teachers trained to teach more effectively with the new adapted radio-supported curriculum; (3) the preparation of teachers for the adult accelerated basic education program; and (4) a trained normal school staff capable of providing pre-service training in the skills and knowledge required by the restructured primary system and the rural primary curriculum adapted for radio presentation.

The training component of this program will have the following measurements of end of component status:

1) A trained cadre of teacher trainers conducting teacher training workshops in Regions II and V.

2) Supervisors actively assisting with teacher training, administering the restructured primary schools in their departments, and providing in-service support for education teachers.

3) Master teachers in the Comarca School Circuits providing assistance and guidance to community teachers as planned.

4) Regular and Comarca community teachers functioning at an improved level in rural schools.

5) Teachers conducting accelerated basic education classes for adults and adolescents in rural schools and in both the EACs and CFER centers.

6) Normal school staff members teaching the new radio-supported curriculum to their normal schools classes.

e. Component Five, Strengthening Rural Education Delivery Systems. Component Five is designed to address the infrastructure, support and service constraints that hinder the delivery of rural educational services. This Component complements the activities of the three preceeding components. All construction and repair under this Component will be contracted out to local contractors and A&E firms. The following activities will take place under this Component.

1) Activity A - Comarca School Circuits. One hundred Comarca School Circuits (400 classrooms) will be established and staffed in

the rural areas of Regions II and V where there are no educational services at the present time. The Local School Committees in a designated area will request that a Comarca School Circuit (CSC) be formed in their area. The MPE, in cooperation with CARE, will assist the community in building its school. Self-help construction, using stabilized adobe as the primary building material, will be employed. The individual communities will choose a local person to be their Comarca Community Teacher whose activities they will monitor. This self-help approach will build on community development activities already began in many areas in Regions II and V.

The A.I.D. loan will finance 100% of the estimated $1.97 million CSC construction costs. The GON in turn will finance all salaries for the 400 new Comarca Community Teachers and 100 new Master Teachers. These personnel costs are estimated at $866,000 over the life of the loan. The community will provide the land for the school and provide unskilled labor for the construction of the school. The end of activity status will be 20,000 students including children, adolescents and adults, in Regions II and V receiving an education, whereas previous to this project educational services were not available to them due to the fact that they lived in isolated communities.

2) Activity B - Improving Existing Rural Primary Schools. Approximately 50% of the rural primary classrooms in Regions II and V are in need of repair. Some schools are closed because they are a hazard to students while other classrooms provide a poor learning environment due to less serious structural deficiencies.

A.I.D. loan funds of up to $100,000 will finance the A&E costs for supervising the repair and reconstruction of 530 existing rural primary schools. The GON will provide all repair and reconstruction costs or $795,000. The GON will also finance 140 new teachers for schools that are now closed due to structural problems. This upgrading program will provide a more congenial learning environment where the local teacher can present educational material to young and not-so-young alike.

3) Activity C - Furnishing New and Existing Schools. This activity will address the problem of deficient school furniture in Regions II and V. In addition, furniture will be supplied to the new 400 Comarca classrooms. Three hundred and sixty (360) classrooms, which are without furniture at the present time, will be furnished. Seven hundred and sixty-one classrooms where furnishings are 50% incomplete will be provided the furniture they lack. A.I.D. will finance the purchase

of all furniture at an estimated cost of $398,000. An improved learning environment is the goal of this activity.

4) Activity D - Continuing School Maintenance. This activity is designed to institutionalize a building maintenance program for the primary schools in Regions II and V. With the assistance of a technical advisor under the first component of this project, the MPE will design and implement a maintenance plan which will furnish financial assistance to the Local School Committees for repair and maintenance of the schools under their jurisdiction.

The GON will finance the entire continuing maintenance program and covenant to keep it in operation even after project termination. It is estimated that the plan will cost $955,000 over the life of this project. The end of activity status will be an increased number of continuously well-maintained primary schools in Regions II and V.

5) Activity E - Education Support and Service. Activity E first addresses the constraint of inadequate educational support for rural primary schools from MPE supervisors and central office staff. Supervisors cannot reach many of the isolated communities because they lack adequate transportation while central office personnel often have an urban orientation because they do not have access to the countryside. Four-wheel drive vehicles will be provided to both supervisors and central office staff to be used on a shared basis.

An important subject in the new curriculum is health and nutrition which will be taught in part through practical classroom experience working in the school gardens. This activity will also supply the garden kits to each Local School Committee upon request. These kits will have the necessary garden implements such as shovels, hoes, machetes, rakes, etc.

The A.I.D. loan will finance the school garden kits and vehicles. These two items have an estimated cost of $475,000. The GON's financial responsibility under this activity will be to provide for the maintenance and fuel for the vehicles and pay the salaries of the 32 new supervisors that will be hired over the first three years of the project. These GON operating costs are estimated at $1,042,000. The end of activity status will see a greater number of supervisors and Managua-based MPE staff assisting in the rural areas, and school gardens established in rural communities to serve as a learning mechanism for all its citizens.

6) Activity F - Rural Adolescent Centers (RAC). The Rural Family Educational Centers (CFER) and the Campesino Agricultural Schools (EAC) have been a major positive educational force in the rural areas. This activity will address the need to increase adolescent (ages 14-20) literacy, numeracy, and occupational skills, in the rural areas. The MPE is proposing that the present system of rural adolescent centers be expanded so that they will complement the basic primary education program as the Rural Adolescent Centers provide an opportunity to supplement their education for graduates of primary school. The RAC curriculum concentrates on six major subject areas: (1) Agriculture, (2) Rural Marketable Skills, (3) Home Economics, (4) Community Organization, (5) Basic Education and (6) Health Education.

The A.I.D. loan will finance the A&E costs for supervising the construction of six CFERs and six EACs. In addition, A.I.D. loan funds will be used to purchase $188,000 worth of equipment and furnishings for these centers. The GON will finance all construction costs or an estimated $1,080,000. The MPE will continue to cooperate closely with FUNDE in the construction and operation of the CFERs as well with the Ministry of Agriculture in regard to the EACs. The GON will also pay the costs of operating the centers over the life of the project ($636,000). Through this activity a larger number of rural adolescents will have greater access to skills and knowledge relevant to their daily lives.

7) Activity G - Radio Transmitting and Receiving Capability. In order to broadcast the radio-supported curriculum efficiently in Regions II and V, the GON will install two 20KW radio stations, one in Jinotega (Region V) and the other in Masaya (Region II). These radio stations will be operated by MPE personnel with the prime responsibility of broadcasting the curriculum for primary school children, and for adolescents and adults taking the accelerated basic education courses. Radio/recorders will be provided to each school and RAC.

The A.I.D. loan will finance all of the equipment for the radio stations and the radio/recorders for the schools. Total equipment costs are estimated at $610,000. The GON will construct the two radio stations on GON-owned land at a cost of $60,000. In addition, the GON will finance the costs of operating the stations over the life of the project. These operating costs are estimated at $927,000. The radio stations will become a focal point for the GON's integrated rural development strategy, providing the rural poor with skills and knowledge relevant to improving their living environment.

4. Financial Plan of Program

Based upon the above described Components, it is expected that A.I.D. grant and loan funds and GON counterpart resources will be allocated to the sector program approximately as follows.

SOURCES OF FUNDS
(In U.S.$000s)

Uses of Funds	A.I.D. Grant	A.I.D. Loan	GON	TOTAL
Component One: Administrative Reform and Management Improvement	585	340	830	1,755
Component Two: Integrated Community Development	105	92	376	573
Component Three: Curriculum Development and Related Materials Production	200	2,945	3,596	6,741
Component Four: Training for Supervision and Teaching		262	1,790	2,052
Component Five:				
A. Comarca School Circuits		1,970	866	2,836
B. Improving Existing Rural Primary Schools		100	1,642	1,742
C. Furnishing New and Existing Primary Schools		398	-	398
D. Ongoing School Maintenance		-	955	955
E. Ed.Support & Services		475	1,042	1,517
F. Rural Adolescent Centers		308	1,716	2,024
G. Radio Transmitting and Receiving Capability		610	987	1,597
Sub-Total:		3,861	7,208	11,069
A.I.D. Grant Total:	890			890
A.I.D. Loan Total:		7,500		7,500
GON Total:			13,800	13,800
PROJECT GRAND TOTAL:	8,390		13,800	22,190

E. Summary Findings

The Rural Education Development program as presented in this grant/ loan project is feasible and ready for implementation. Technologies to be utilized are appropriate to the Nicaraguan situation and have been found to be cost effective in Nicaragua. Program cost estimates are reasonably firm. They are based on current market conditions and include contingencies for price increases. Recurring costs that are estimated to result from the program have been accepted by the GON as being necessary, proper and sustainable.

The program meets all applicable statutory criteria. Annexes B and C include the Checklist of Statutory Criteria and the Mission Director's 611 Certification.

F. Program Issues

General issues related to this program concern the ability of GON personnel to manage and evaluate the program, and the scope of activities to be developed over the five year period of the project. The managerial concern is addressed by the First Component and is the subject of Conditions Precedent to Loan Disbursements as outlined in the draft loan authorization contained in Annex D and in Part V of the paper.

Finally, detailed technical and operation question are fully treated in Parts III and IV of the paper.

G. USAID Program Committee

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Approved By:	-	Arthur W. Mudge, Director

Drafted By: Bassford, Cruz, Daniels, Domidion, Facey, Habron, Jones, Lustig, Mann, Schwartz, Sleep, Turman, Wilson

PART II - BACKGROUND AND PROJECT SETTING

A. Rural Development Sector Strategy

Since completion of the Nicaraguan Agriculture Sector Assessment, it has become increasingly clear that development of the agriculture sector, which is a basic goal of the GON's agricultural sector policy, is a function of a longer infinitely more complex process of rural development. Vast potential for agricultural development exists in Nicaragua. An agricultural frontier on the Atlantic Coast covering an area over 61,000 square kilometers (larger than the remainder of the country) is virtually unfarmed, not to mention the improvement in yields which could be obtained through more modern cultural practices. However, converting this potential into a developed agricultural sector requires more than a focus on farm land; it also requires larger and more effective investments in people. Thus, Rural Development has become the key strategy for implementing the GON's Agriculture Sector Policy.

The first objective of this policy is to "improve the standard of living of the rural population through greater access of the population to the flow of goods and services and through increasing the participation of rural inhabitants in decisions which affect their well being." In a larger sense therefore, the GON's Rural Development Sector Strategy involves a major effort to restructure all pertinent public sector policies, institutions and activities so that these become more aggressively responsive to the needs of the people, especially the rural poor. Stated in another way, the results of the GON's rural development strategy should be measurable in terms of better education, improved health and nutrition, better clothing and more adequate shelter, as well as in terms of additional production, higher yields, increased farm incomes, more foreign exchange earnings, and larger contributions of the agricultural sector to the total economy.

1. Framework of the Strategy

Three intrinsic constraints conditioned the design of the rural development strategy. One is the dispersion of the rural poor. Nicaragua has the largest land area (48,000 sq. miles) in Central America; it also has the lowest population to land ratio (33 per square mile). The second constraint is economic. The financial resources required to reach massive members of rural poor over widely

dispersed areas are simply unavailable. Finally, and most importantly is the unforgiving complexity of the nature of poverty and therefore the design of effective programs to help the poor.

In recognition of the above, the GON postulated the following development premises:

a. It is held that poverty is caused both by a lack of financial means and a set of conditions including, but not limited to, deficient education, inadequate nutrition, high morbidity, and inadequate shelter.

b. Given the economic constraints and the complexity of the problem, programs designed to attack poverty must be integrated and complementary in such a way that the outputs of one become inputs for another. It follows that programs designed for short term impact must be valid in the long term.

c. In view of the dispersion of the rural population, program resources should be concentrated first in Regions V and II successively. These two regions contain almost 60% of the target population and are endowed with abundant natural resources.

2. The Integrated Strategy

The GON's strategy is to extend integrated, bureaucratically streamlined systems for the delivery of credit, education, health and nutrition services and better rural municipal government to the rural poor in selected regions until members of the target group have the means and conditions necessary to help themselves up from poverty to progressively higher levels of well being.

The first move in the strategy called for the restructuring of the public agricultural sector so that it can respond more effectively to the problems of the agriculture sector in general and the rural poor in particular. The Ministry of Agriculture's long suit has been in operational programs and services, but none of these

contain the properties needed to reach the rural poor. Its short suit has been in planning, a facility urgently needed to develop studies, prepare project design and evaluate rural development programs. The Ministry proceeded, therefore, to strengthen its planning capabilities with the formation of DIPSA and to create new autonomous "Institutes" to carry on its operational responsibilities with greater independence and flexibility.

The Institute of Campesino Welfare (INVIERNO), was the first of the new operational entities created by the Ministry. INVIERNO's prime responsibility is to improve the lives of the rural poor. To achieve its mandate, INVIERNO may provide any type service necessary or contract for the provision of services with other entities in public or private sectors. To start with, INVIERNO adopted a strategy to gain the confidence of the campesinos by helping to increase net disposable incomes. To implement its strategy, INVIERNO organized a banking service to provide credit to poor rural farmers. The banking facility is organized for people and not for profit. Its clients become "members" of INVIERNO and continue as such until they have "graduated." A flexible repayment system is available so that bad seasons will not further impoverish INVIERNO's members. Moreover, INVIERNO purchases agricultural inputs in quantity, and has organized its own distribution system to assure that economies of scale are passed on to the rural poor. In this first year of operations INVIERNO made over 6,500 loans to poor farmers in Region V.

These outputs were achieved in large measure by a cadre of 44 Agricultural Generalists 1/ called Agromocs who were employed by INVIERNO to motivate, organize, and train poor farmers. The Agromocs entered approximately 164 communities, organized an equal number of community agricultural committees, enlisted 4,500 poor farmers as members of INVIERNO and helped provide them adult education in cultural practices and marketing techniques. During the same period, INVIERNO arranged to provide preventive health care through the Ministry of Health (MOH) and contracted with the Ministry of Public Works to implement a rural road improvement program in Region V.

1/ There are presently 90 Agromocs employed by INVIERNO in approximately 200 communities.

The second major ingredient being folded into the overall strategy is a rural health program, which was designed to begin implementation during the second and third years of the program in Regions V and II. The purpose of this program is to extend, improve and integrate health services for the rural poor. The MOH, which has had previous experience in community development, is training health promoters to work with the campesinos in rural communities. These promoters, working with INVIERNO's Agromocs, will form health committees, in many cases from members of the agricultural committees. The committees in turn will encourage the campesinos to take advantage of health services, training, etc. Included will be efforts to: provide basic health education; deliver basic environmental sanitation services (potable water and latrines); and strengthen the rural health referral system. In this way, rural health activities will build on the efforts of INVIERNO and the Agromocs in rural community development to assure that benefits of the health program are efficiently and effectively delivered to the rural areas.

The third major facet of the Rural Development Strategy is the more difficult program of educating the target population. The purpose of the program is to develop or improve educational programs for rural adults, adolescents and children. Directed to the Regions V and II, this program will strengthen existing schools, develop more relevant curricula, teaching and learning materials for adolescent and primary school systems and organize adult education courses. Following the lead of INVIERNO and the MOH, the Ministry of Education will employ a teacher's aide to work in each of the rural communities. By the time these aides are in the rural areas, most communities will have active agriculture and health committees. Thus the organization of education committees, which will have more responsibility than other committees, should be less difficult. Their task will be to feed back ideas into the curricula development process, monitor the new education program materials, organize construction and maintenance of school facilities, and encourage community participation in the education programs.

The Agromocs and the Health promoters will also play a major role in the education program. Both will assist in the preparation of adult education programs, both could be used as guest teachers, and both should be important sources for the articulation of new ideas for curricula development. In addition, the warehousing and distribution system initiated by INVIERNO will be used in the early years of the program for the distribution of educational materials. The Education

program, scheduled to begin in late 1977, is designed to fully capitalize on the slowly expanding horizons which are developing among the rural poor as a result of the INVIERNO and MOH efforts.

A fourth and follow-on contribution to the Rural Development Strategy is a Multi-Sectoral Nutrition program. Based upon a newly established national food and nutrition planning mechanism, this program will, in part, help to: upgrade, through a variety of educational means, the food habits of rural dwellers; increase the availability of food for their consumption; and improve through health-related measures, the biological efficiency with which food is utilized by the target population.

The fifth component of the Rural Development Strategy is a Rural Municipal Development program. This component is designed to improve services of rural municipalities to their rural constituencies. It will include a credit fund to finance projects such as better marketing facilities, slaughter houses, grain storage facilities, etc. The program will also provide training and technical assistance to improve the administration of the municipios (county seats of government). In time, the municipal government may become responsible for maintenance of physical facilities such as rural schools and health facilities, and may take over the distribution of school materials from INVIERNO. Further, the municipios may provide campesino legal aid in licensing small farmer business enterprises, property assessment, title clearances and other land purchases or rentals transacted by the rural constituents. It is expected that this program will benefit by added revenues generated by the overall Rural Development Program. More importantly, the experience in civic affairs gained by the agricultural, health, and education committees will tend to assure that municipal government becomes more representative of and responsive to needs of its constituency.

By the time the Rural Municipal Development program is in place, INVIERNO will initiate delivery of a second set of services. Scheduled for implementation in the fourth year of the integrated program, this set of services will be designed to channel the additional incomes of the rural poor into new equity investments. The strategy will be to capture some of the additional income earned by the rural poor through the production credit programs and parlay these into investments in home improvements, small farm enterprises, and land purchases. INVIERNO will make new lines of credit available to the rural poor to facilitate this process. At this point too, INVIERNO will begin divestiture of some of its input supply and distribution facilities. These facilities will become small farm enterprises which are owned and managed by INVIERNO members (socios).

The most crucial test of the GON strategy will occur during this phase of the program. If the health and nutrition interventions have not decreased morbidity, or if the education program has not provided relevant new learning experiences or expanded the horizons of the poor and if the campesinos lack confidence in the will and ability of rural municipal governments to protect their interests, it is

unlikely that the target group would willingly risk investing its small additional income to achieve higher levels of well being. This is the point in the GON's strategy at which all components should converge to help lift the rural poor to a higher set of living conditions and economic well being. If the strategy succeeds, INVIERNO, over time, will be in a position to organize its withdrawal from some of the target areas in Region V.

3. Replication

There are no certain fail safe mechanisms to insure the success of these efforts. Frequent evaluation and many tactical corrections are foreseen in the execution of the GON's complex but innovative Rural Development Strategy. But if it is successful, the all too impervious circle of poverty will be replaced by continuous improvements in the quality of life for the rural poor. Certainly the campesinos should benefit from increasing access to the flow of goods and services and from their greater participation in decision making process. But in the longer term, there should be measurable improvements in the health, and education as well as in the housing, clothing and home conditions of the target population. And if in the medium term, there are measurable increases in the levels of productivity, income and employment as there should be, the GON plans to replicate the strategy in other regions.

4. Priority

The GON's Rural Development program is fully consistent with the U. S. Congressional Mandate and has been actively supported by USAID in its design and in part of its implementation.

B. Educational System Constraints

The attainment of goals and objectives for integrated rural development in particular, and those of national development in general, are dependent on many variables. An efficient educational system is a key variable in determining the success or failure of any economic development program. Relevant knowledge and skills must be transmitted to those people who are the program beneficiaries of the development program.

There is general agreement that little more than half of the total population of Nicaragua is literate, indicating a lack of efficient and effective delivery systems of basic education for large segments of the people. The present system has not extended equitable access to education to all the population. The scarcely populated rural areas have traditionally enjoyed fewer benefits in education than those in the more densely populated urban and urban fringe areas.

Likewise, the available statistics support the perception that the rural areas face the most pressing educational needs. In 1974, it was estimated that 70 percent of the rural population was illiterate as compared to 25 percent of the urban population. In rural areas only 82 out of every 1,000 entrants into grade one complete grade four, and only 53 of 1,000 entrants complete grade six. In urban areas, 440 out of every 1,000 students who enter grade one complete grade six. These statistics clearly indicate the inability of the present system to cope with the pressing needs for education in rural areas at a level remotely equitable with the needs of the students in urban areas.

One of the causes for these disparities is financial in nature. It has been estimated that only 27% of GON expenditures for primary education are directed to the rural areas, although these areas contain 54% of the primary school age population. Another cause is the poor quality of educational services provided to the rural areas. Unmotivated teachers and inadequate curriculum further diminish the educational value of available financial resources. Approximately 60% of all students in rural areas drop out after or during the first grade. As a result of the juxtaposition of these two factors dropout costs during the first three grades of rural primary schools in Nicaragua account for approximately 68% of the national budgetary resources allocated to rural education. The foregoing inefficiencies in the current educational system directly affect the GON's ability to achieve its national development goals.

Another source of these problems flows from a series of internal constraints in the Ministry of Public Education (MPE) that limit the outreach and quality of educational services provided. These include (1) an inefficient central organization and administration, (2) low levels of access to rural primary education, (3) poor utilization of existing facilities and lack of school maintenance, (4) absence of coordination between curriculum development and human resource development needs for trained manpower, (5) inadequately trained and poorly supervised rural primary school teachers, and (6) the lack of a cost-effective educational delivery system that

can reach isolated rural populations with integrated learning packages that are meaningful to their real life experiences, and useful in their daily lives.

An analysis of specific internal constraints must begin with a consideration of the structure of the MPE and the operational procedures which it follows. The MPE has traditionally been highly centralized, with final authority for even minor decisions vested in the Minister who in turn delegates areas of responsibility to subordinates, without relinquishing the right to make final and vital decisions. Since there is neither civil service, nor tenure, the authority of the Minister, and of each succeeding level of administration, is awesome and occasionally threatening. Furthermore, since all MPE positions, including supervisors and teachers, are essentially appointive in nature, controls over appointments are difficult to exercise, job definitions remain vague, and the possibility that unqualified persons may get and keep jobs remains real.

Under these circumstances, job security and professional advancement are heavily dependent on maintaining the good will of immediate superiors, a condition which does not encourage risk taking, innovation, or change. They lead also to the establishment of hegemonies resistant to effective integration with the general strategy of the Ministry and with tendencies toward isolation, autonomy and empire-building. By-products of this kind of atomization have been inefficient utilization of resources, duplication of effort and communications breakdowns.

A second major constraint relates to the factual bases for decision-making and determination of objectives within the MPE. Despite improvements in statistical analysis, data of the kind and quality needed for important decisions often are not developed, nor is the interpretation of such data as do exist carried out at a very advanced level.

The Education Sector Assessment identified the following additional major internal constraints that must be addressed by the MPE if it plans to carry out the series of innovations and improvements that are required within the context of the national rural development strategies.

Educational Planning. Lacking specialized personnel, goal oriented procedures, and clearly defined lines of communication and responsibilities, the Office of Planning can be expected to confront major problems. In its present physical,

organizational, and staffing configuration, this office has limited capability to carry out major responsibilities in new educational programming in addition to normal operational demands of the national system of education.

Inter-Agency Coordination/Cooperation. To date, few efforts have been made to coordinate educational programs with programs being planned and carried out by other ministries or other institutions, agencies and private groups. The tradition has been to operate in isolation.

Teacher Benefits and Incentives. With special reference to rural areas, it still remains very difficult to attract qualified teachers, i.e., trained normal school graduates, to the more isolated schools because of transportation problems, lack of varied and nutritionally adequate food supply, lack of medical and dental facilities, etc. These deficiencies are very common in the isolated rural areas, and in the absence of incentives for teachers to work in those areas, they will continue to handicap the improvement of rural education.

Pupil/Personnel Accounting. Since the establishment of the Personnel Office within the Ministry only a few years ago, there has been significant improvement in personnel accounting practices. Lack of up-to-date data on many teachers, however, is still a problem, especially for rural teachers. There has never been a good pupil accounting system set up within the MPE. No data exist on attendance, whether individual or average daily attendance at schools, student attrition rates during the school year, etc. The possibility exists that much student data should not be centralized, but that it might best be maintained at the School/Regional Supervision levels. However, in most cases, forms, equipment, and process knowledge of how to do this are seriously lacking.

Educational Supervision. The appropriate and effective functioning of supervision services, especially at the primary education level, is of pivotal importance in bringing about needed educational reforms. There currently is no other vehicle available for the rapid upgrading of teaching personnel or for making the investigations and reporting data prerequisite to effective program planning and evaluation.

Personnel Capabilities. Within the Nicaraguan public school system, there is a dearth of subject matter expertise and methodological "know-how" at all educational levels. Until most rural teachers are capable of using multi-grade teaching

techniques and until both rural teachers and vocational instructors are sufficiently knowledgeable in their subject matter areas (including, for at least rural teachers, health, nutrition and basic agriculture) neither the needs of the rural poor nor the development needs of the country will be effectively addressed.

Curriculum. Although the MPE has completed a program of primary curriculum reform for grades 1 - 6, and this curriculum is now in use in both urban and rural areas, recent studies have indicated that this curriculum, and its delivery system, do not adequately meet the needs of rural poor populations.

Methodologies/Instructional Systems. The use of outmoded teaching methodology is a continuing problem in the schools, with heavy dependence on the lecture-recitation method. In the absence of library books or other supporting material, teachers are forced to use traditional approaches. Textbooks are provided free of charge at the primary level, but are wearing out and not being replaced, and students at the secondary level have difficulty affording the cost of their books. Audio-visual equipment and material are seldom found, and even paper, pencils, and chalk are in short supply.

Access/Retention Rates. Most urban students at least have access to the first grade, but initial enrollment for children in some rural areas is as low as it is because many rural children lack access. Many students are "pushed out" after one or two grades because there is nowhere to continue their studies, and many rural school-age children drop out during the first grade. Consequently there is a tremendous educational wastage. It is serious enough to warrant the investigation of alternative rural education strategies which would increase both the internal and external efficiency of the system.

Facilities/Maintenance. A major constraint on the educational system is overcrowded classrooms in the cities, at both the primary and secondary levels. Rural facilities have inadequate furniture, with a number of classrooms in need of repair. Unless due note is taken in the MPE of these conditions and funds allotted to improve them, physical facilities will continue to deteriorate, as will the learning environment of the students.

C. National Educational Development Goals and Strategy

1. Within the context of Nicaragua's overall development strategy, as contained in The National Plan for Reconstruction and Development (1975-1978), four basic goals of the educational sector can be identified:

a. To increase access to improved educational services.

b. To repair physical damage to educational facilities caused by the earthquake.

c. To prepare a work force which can effectively contribute to, and benefit from, increased national economic growth and development.

d. To respond to the distinct educational needs of Nicaragua's poor majority.

2. To achieve these broad goals, a more discrete national educational strategy has been formulated which seeks to:

a. Create a more flexible educational system which is closely tied and responds to changes occurring in the labor market.

b. Reorient curriculum, at both primary and secondary levels, toward more practical pre-vocational training, and away from preparing students only for the next level of academic education.

c. Reorient and upgrade pre-service and in-service teacher training programs in order to increasing the quality and relevance of rural education programs.

d. Increase opportunities for on-the-job training.

e. Introduce work-study programs which will allow lateral re-entry to the classroom after a student completes a period of employment, so as to establish a relevant system of continuing education.

f. Increase National Education budget, giving greater emphasis toward increasing the quality and outreach of rural primary education, reducing illiteracy, and producing skilled workers, technicians, and professionals needed to achieve National Development goals.

These modified educational objectives are consistent with A.I.D.'s Educational Development Strategy and with the Government's National Integrated Rural Development efforts. MPE has recognized the need to act in an integrated manner with other concerned branches of the GON to effect reforms and improvements in education, and more specifically, in rural education, at both the formal and non-formal levels. The MPE is now attempting to design and implement an effective rural educational strategy which can lead to the attainment of national development goals and objectives. The achievement of rural educational goals will require an integration of MEP's efforts with those of other GON ministries and agencies, and a marshalling of all available resources.

D. General Description of the Nicaraguan Educational System

The Nicaraguan educational system is highly centralized. Almost total control and authority are vested in the Ministry of Public Education, subject to executive approval.

Public education at the primary and secondary levels is mainly planned and managed by the MPE. Vocational, technical and specialized educational programs are partially planned and managed by the MPE. University education is essentially uncoordinated, and independently planned and managed. Private primary and secondary education is hypothetically supervised by the MPE, but in reality is planned, managed and financed independently.

A few specialized schools depend on ministries other than the MPE for support and control. The National Agricultural School is under the Ministry of Agriculture and does not depend upon the MPE for funds or curricula. The Military Academy is under the Ministry of Defense, and the Universidad Nacional Autonoma de Nicaragua (UNAN) receives its funding directly from the general budget. The Universidad de Centro America (UCA) is a private institution, independently managed and coordinated with government planning only to the extent that it must justify its requests for subsidies. The Instituto Centroamericano de Administracion de Empresas (INCAE), as a private institution, is assisted, but in no way controlled, by the GON.

The training of primary and secondary teachers is the responsibility of UNAN, UCA and the five (5) normal schools scattered throughout Nicaragua. The National Education Center, built by USAID under Loan 524-L-027, is currently preparing a new curriculum with technical assistance provided under a World Bank Loan. This Center will be responsible for in-service training of primary and secondary teachers, as well as in-service training for teacher trainers, supervisors and school principals.

Primary Education

Primary education in Nicaragua consists of six grades and is directed to students, ages seven through twelve. There is a significant proportion of students over twelve but only a few below the age of seven. Within the Public School System are included so called "semi-public" schools in which the teachers are provided and paid by the MPE, but the buildings and facilities are private.

There are approximately 2,300 primary schools in Nicaragua, about 88% of which are public. Only 35% of the classrooms, however, are located in the rural areas. A major reason is the scarcity of teachers in those areas.

The relationships between the number of classrooms available and the total primary school enrollments of 114,568 in the rural areas and 219,095 in the urban areas, result in an average of 52 students per classroom in both urban and rural schools. Such a figure is misleading because it does not reflect the uneven distribution of students in classrooms, with fewer than 15 students in two or more grades in some and more than 60 in others.

Secondary Education

Secondary education in Nicaragua consists of two cycles: a three year Basic Cycle and a two - three year Diversified Cycle. The GON has been unable to build secondary schools rapidly enough to keep up with the demand; so that about 38.5% of secondary school students attend parochial and private schools (1973, AED p. 49). Most are enrolled in traditional academic programs but there is a growing emphasis on vocational training.

Although there is a good transfer of students from sixth grade to the Basic Cycle, only 54% of all beginning students obtain a secondary school degree in five

years. As a step toward helping the less qualified or less academically oriented students, the GON has introduced vocational/technical training with the aid of other public and private international agencies. The Ministry of Labor, with the support of the ILO and A.I.D., has established the National Apprentice Institute to provide a practical training program in manual arts, with a modest amount of academic work, which is relevant to the needs and interests of workers.

The MPE recognizes that strengthening primary and secondary education, along with the introduction of vocational/technical/agricultural training, might lead to significant increases in student retention rates and has obtained financial support under a World Bank loan to expand and improve vocational/technical training programs.

Post-Secondary and University Education

Institutions which can be classified in this category are few and extremely varied. With a current enrollment of about 12,000 students, the Universidad Nacional Autonoma de Nicaragua (UNAN) is the largest educational institution in the country. With a minimal tuition of about $120.00 per year, and a liberal tuition waiver policy, it is over 85 per cent dependent on the GON for funding. It provides ample choices for post-secondary education in thirty-one different fields. Although originally founded in Leon, it conducts many classes in Managua.

The Universidad de Centro America (UCA) is a private, Jesuit-controlled institution with about 2,600 students in regular sessions and several hundred more in short courses and in evening schools. Only sixteen years old, it offers fewer options than UNAN but has a variety of possible career programs.

A third degree-granting institution is the Instituto Centro Americano de Administración de Empresas (INCAE), modeled after the Harvard Business School and largely developed by the Harvard faculty. It serves the Central American business community, offering post-graduate training leading to a Master in Business Administration degree, as well as short courses in special business-related areas.

Another private, post secondary school is the Instituto Politecnico (POLI), which is primarily concerned with the preparation of teachers and practitioners in applied arts, nursing and physical education. Most of the over eight hundred students

enrolled work during the day; so classes are held in the evenings or during the weekends.

In Granada, located thirty-five miles south of Managua, there is a new government-run technical school, the Instituto Tecnológico de Granada, which is principally committed to the training of middle-level technicians for industry. Finally, there are a few other specialized post-secondary schools located in Managua such as The National School of Nursing and The National Commercial Institute.

Non-Formal Education (NFE)

It has become increasingly evident that learning experiences are not limited to formal education systems. In Nicaragua, as well as in other Latin American countries, a significant amount of planned learning, which takes place in a non-formal setting, contributes to the socio-economic development of the country, provides needed job skills, increases opportunities for formal education, and supplies an alternative educational network. In Nicaragua, non-formal educational activities include agricultural extension, farmer training programs, occupational skill training, adult literacy programs, mass media educational projects, and health and nutrition education programs at the community level. The Nicaraguan Education Sector Assessment (p.p. 74-80) provides a description of non-formal educational activities being carried out by both public and private sector entities.

The assessment further states that more direct knowledge relevant to specific job needs is provided by NFE programs than by the formal education system. NFE programs have more direct contact with communities in the rural areas; in addition, they are able to identify specific manpower needs more rapidly. In general terms, NFE programs are able to assist in alleviating human resources' shortages more efficiently than formal educational programs.

The communication techniques employed in NFE programs in Nicaragua include short-term courses, meetings, lectures, discussion groups, and personal visits. There is less diffusion of information through audiovisual materials, pamphlets, books, mass media, or posters than is found in other Latin American countries. Little effort has been made to determine which communication techniques would be most effective and at what level. The change agents use the specific technique with which they are familiar, without concern for its applicability to the content of the message; and yet most results appear to be positive.

The heaviest concentration of NFE activities is in the Departments of Managua and Matagalpa. There are few NFE programs in Nueva Segovia, Jinotega, Madriz, Rivas, Rio San Juan, Chontales, or Boaco; Zelaya is an exception among the other rural departments, however, because of its isolation and the concerted interest in the area by several different Protestant and Catholic groups.

The GON does not provide technical assistance to or cooperate with private NFE groups except in a very few cases. In no case is there financial assistance offered. This is due primarily to the lack of personnel in the Adult Education Division of the MPE and its restricted budget. It has not been possible to determine the impact of NFE on Nicaragua's overall development effort or to assess its effect on production, income, or changed practices.

It is also not possible to measure comparable trends of educational resources for NFE with formal education. Expenditures are not easily obtained, except for a few individual programs, and a portion of the costs are not easily calculated, since they are in the form of contributed services and facilities. General patterns can be found, however. First the formal education system gets most of the total public educational expenditures in both urban and rural areas. Second, there are more resources for urban-oriented programs than for rural oriented programs. Third, it is clear that potential resources for NFE programs in rural areas are underutilized and untapped, especially available physical facilities, expertise of local craftsmen, progressive farmers, and local rural agricultural, health and nutrition specialists.

External assistance for NFE programs has been overshadowed by assistance to formal education programs. This imbalance is compounded by the larger contributions to urban area programs at the expense of those in the rural areas. However, this pattern is slowly changing as organizations such as UNESCO, FAO, the World Bank, and A.I.D. begin to focus more on the rural areas and on NFE.

E. Previous GON/AID Efforts

Early Efforts

Previous A.I.D. assistance to the education sector in Nicaragua has been provided through both development loans and grants. A.I.D. supported programs have included projects directed toward university expansion; curriculum experimentation,

revision and reform; acquisition of primary and university level textbooks; development of a national plan for education; construction of rural and urban schools; the preparation of an Education Sector Assessment; and completion of a comprehensive study proposing a new rural education program for Nicaragua.

In accordance with past GON priorities, A.I.D. assistance to education and human resources development has generally been channeled to urban areas and has benefited the urban population, except for a few relatively small projects in rural primary school construction which were initiated during the 1960 s. Loan funded assistance has been concentrated mainly within the primary school system. The following are brief, summary descriptions of GON/AID cooperative efforts in education:

1. Grants

a. Primary School Textbooks: In conjunction with the ODECA-ROCAP textbook project which was initiated in 1963 to rewrite and prepare textbooks for all Central American countries, A.I.D. financed the development and the first printing of a new elementary textbook series for grades 1-6. In addition to the development and printing costs, A.I.D. provided funding for the costs of materials, teacher orientation programs, and participant training. These programs continued through 1975. While these efforts made significant progress in meeting needs for instructional materials, recent studies and analyses of the educational system indicate that serious gaps exist in the quantity, quality, and content of textbooks produced under this program.

b. EDUCREDITO: In 1967, USAID provided funds to a student loan program (EDUCREDITO) operated by the National Development Institute (INDE). Approximately $270,000 was granted to this program through 1972, and over 600 students were able to obtain loans to further their education, to upgrade and/or obtain new skills.

c. The National Plan of Educational Development: With contract technical assistance provided by A.I.D., this plan for the 1971-80 period was completed in late 1971. It, in turn, provided the analytic base for the Education Sector Loan 524-L-027.

d. Curriculum Reform: In 1972, the GON completed a program of primary curriculum reform for grades 1-6 with A.I.D. funded technical assistance

provided under contract with the Southwest Alliance for Latin America (SALA). Although this curriculum is now in use in both urban and rural areas, recent studies have indicated that it and its delivery system do not adequately meet the needs of rural poor populations, nor is it consistant with the goals and objectives of the GON's integrated rural development strategy. For this reason, the proposed Rural Education Development Project will place major emphasis on the development of revised rural primary level curricula and the installation of more effective systems of delivery to rural populations.

e. Education Sector Assessment: Using contract technical assistance financed by A.I.D., the GON and USAID completed an Education Sector Assessment in December 1975. This effort updated the data base available from the National Plan for Education and was a necessary initial step in the preparation of a new loan for rural education. This assessment has provided the rationale for this project, identified and analyzed educational development constraints, and recommended a series of action programs.

f. Rural Primary Education Study: In November, 1976, A.I.D. funded technical experts to analyze alternative rural education strategies and programs which could alleviate constraints identified in the Education Sector Assessment. This study has provided the conceptual framework for the proposed loan/grant project.

2. Loans:

a. Rural Primary School Construction: In 1962, USAID signed loan agreement 524-L-004 which provided $540 thousand for the construction of rural schools. The project was completed in 1965 and resulted in the construction of 382 classrooms and 69 auxiliary rooms.

b. Central American University: In 1964, (524-L-008), loan funds were provided to assist in the construction, expansion and equipping of an administration building, library, and engineering facilities. The loan was fully disbursed in 1968.

c. Urban Elementary School Construction: In 1966, a $1.5 million loan (A.I.D. Loan 524-L-014) was signed with the Ministry of Public Education for the construction of approximately 700 primary level classrooms in urban and semi-urban

areas. The project was completed in January, 1972, and the loan has been fully disbursed.

d. Repair of Elementary Schools: Under the Emergency Reconstruction Loan (A.I.D. 524-L-028), fifteen (15) earthquake damaged elementary school facilities were repaired. Additional funds from this loan in the amount of $1.4 million were subsequently used to help finance activities programmed under the Education Sector Loan 524-L-027.

e. Education Sector Loan Project (524-L-027): A $5.3 million A.I.D. Education Sector Loan (524-L-027) was authorized in June 1972. This loan was designed to provide qualitative improvements in the following three major areas, with emphasis at both the primary and secondary levels of education:

1) Upgrade the qualification levels of teachers and professionals;

2) Improve education methods and facilities;

3) Improve management, research, and planning capabilities of the Ministry of Public Education (MPE).

During the final stages of negotiations for this loan, the earthquake which struck Managua in December, 1972 seriously damaged or destroyed a large number of educational facilities. As a result of the need to reconstruct these facilities, the thrust of the loan was redirected, within the context of A.I.D.'s emergency reconstruction assistance, to reestablish destroyed or damaged schools, with emphasis on the primary level of education.

As emergency conditions normalized somewhat in 1974, loan funds were allocated to more qualitative MPE improvements such as the printing of textbooks and teachers' guides, training of Ministry staff responsible for carrying out key programs, and implementing selected research and evaluation activities.

This loan was terminated in December, 1976.

F. Other Donor Assistance

A number of multilateral and bilateral agencies have provided and are providing loan and grant assistance to support Nicaragua's overall education goals. The more significant ones are listed below.

1. CARE

Since 1968, CARE has been active in providing assistance to the Ministry of Public Education for construction of rural schools. The CARE-MPE agreement calls for a tri-partite program in which the Ministry provides transportation of materials, teachers and school furniture; the community provides land, some construction materials, and labor; and CARE contributes construction materials and equipment. Under this program, 88 schools have been constructed in Regions II and V.

2. UNESCO

UNESCO has provided technical assistance to the Ministry of Public Education for a number of years. The majority of this assistance has been for professional personnel to carry out studies concerning various aspects of the system, including supervision, literacy, adult education and audiovisual methods.

3. OAS

The OAS has assisted the Ministry of Public Education by providing technical assistance and scholarships. Technical assistance has been provided in the field of social studies, mathematics and chemistry at the secondary level, in organization and management, and in statistics and data collection. Approximately 21 scholarships a year have also been provided under OAS sponsored programs. These scholarships have been in fields of administration and supervision, curriculum development, statistics, and library training.

4. IBRD

In 1974, the first IBRD loan to the education sector was completed. Through this project the GON received assistance at the secondary level for school construction and

equipment for Technical Institutes and Normal Schools. The loan was for $4.0 million and was matched by a GON counterpart of $4.0 million. The facilities that were constructed are providing space for over 11,000 secondary school students.

In June, 1976, a second Education Loan Agreement for $11.0 million was signed between the GON and IBRD. This project will extend through 1980, thereby overlapping in time with the proposed GON/AID project which will terminate in late-1982. The IBRD project's specific objectives include expanding and improving education and training opportunities in rural areas, increasing agricultural training opportunities, expanding and improving secondary education for the semi-rural population, and improvement of teacher qualifications. The relationship between the IBRD and A.I.D. projects will be treated in Section G below.

G. GON/AID Project Strategy

The low educational and skill levels of the rural poor in Regions II and V act as a constraint to the GON's Integrated Rural Development Strategy in general, and specifically limit the effectiveness of the individual program of the Ministries and agencies involved in the area. Inadequate rural educational services are the rule and the GON realizes that it will take substantial efforts on its part to remedy this situation.

These are several major problems within the educational sector that make the rural education system a constraint to general economic progress. This project will address the following areas of GON concern:

- An undermanaged Ministry of Public Education (MPE) in the areas of planning, organization, coordination, operations and supervision.

- An "urban-oriented" rural primary curriculum.

- Lack of trained teachers.

- Poorly maintained or nonexistent schools.

Under this proposed GON/AID program the GON will take steps to reorganize the structure of the Central Office of the MPE so that it might be more efficient and responsive to the educational needs of Nicaragua. The number

of departments directly reporting to the Minister will be consolidated and reduced. Management systems will be developed to more efficiently handle personnel, communications, and coordination both internally and externally. Special efforts will be taken to upgrade the MPE's planning capability and to reduce the number of rural and urban teachers that do not adequately perform their duties. Key MPE personnel will participate in long and short-term training. In addition, an improved supervisory mechanism will aid in insuring that educational services are delivered to the populace. The advent, within the past year, of a new and vastly improved top management team within the MPE now makes it reasonable to expect that these reforms will in fact be carried out.

A key component of the GON/AID project strategy is the development of a new curriculum, supported by both radio and extensive use of student materials, that is relevant to the learning environment of the rural areas. Radio is justified as the initial educational delivery mechanism because it is the most cost-effective method in areas of low population density and scarce human resources. The new, superior student materials will permit a major departure from the old, ineffective write-it-on-the-blackboard-copy-it-in-your-notebook method of instruction. Primary curriculum will be adapted from the existing primary curriculum for radio broadcast in the subject of mathematics, reading, agriculture, health and nutrition and general studies (culture and sports). This radio supported curriculum will in turn be adapted for an accelerated basic education program that will be broadcast in the evenings and have as its target group adolescents and young adults (from age 14).

The third constraint that the GON/AID program will address is the dearth of trained rural teachers and the lack of support these individuals receive from the MPE regarding curriculum and teaching methods. The MPE will confront this problem by establishing mobile training teams that will travel to the departmental capitals where they will carry out two and six week training programs for teachers and supervisors. These training seminars will deal with the radio-supported primary curriculum, multi-grade teaching, the accelerated basic education program, community development, and group processes and dynamics. It is programmed that each teacher and supervisor will receive a minimum of two weeks of training annually over the life of this project after an initial six week orientation/training session.

The fourth thrust of the MPE/AID strategy is to strengthen the rural educational delivery system. That is, improve the mechanisms and especially the infrastructure through which education is made available to the rural poor. This activity will be based on the active participation of Local School Committees. Existing rural primary schools in Regions II and V will be repaired and equipped with furniture as a result of actions taken by these committees. Where there are no schools and the local school committee (LSC) requests that a school be located in their community, the MPE will take the necessary steps to establish a Comarca School Circuit (CSC-defined below) which will deliver educational services to the community. Further support for the educational system will be provided in the form of a localized maintenance system, support and service vehicles, the radio transmitting and receiving capability for the radio-supported primary curriculum, and the supply of large quantities of student materials.

1. Local School Committees (LSC)

Local School Committees will be formed in the rural areas with the cooperation of INVIERNO and the Ministry of Public Health (MOH). It is essential that the educational system receive the support of the community, as the LSC will serve as the contact in the locale. Specifically, the LSC will be responsible for naming the community teacher, maintaining new schools and repairing existing schools, assisting in the construction of new schools and providing assistance in the development of the radio-supported curriculum. LSCs will be formed in communities where a regular primary school or a Comarca Circuit School will be established and in communities that have an existing primary school.

2. Comarca School Circuit (See Illustrations 1 and 2)

"Comarca" is a term used for a small village which is under the jurisdiction of a municipality. Although the Comarca has town leaders or representatives (Juez de Mesta), the community looks to the local municipality and its elected officers for support and services. The Comarca has no explicit political power and must work through the municipality to obtain services provided by the central government.

The Comarca School Circuit (CSC) is an educational system that will provide educational services to grades 1 - 4 in areas where there have been no previous educational services. The CSC is designed primarily for those communities where, because of an insufficient population base, the MPE cannot provide a well-

ILLUSTRATION 1

ACTUAL SITUATION OF THE SCHOOL NETWORK IN ISOLATED RURAL ZONES

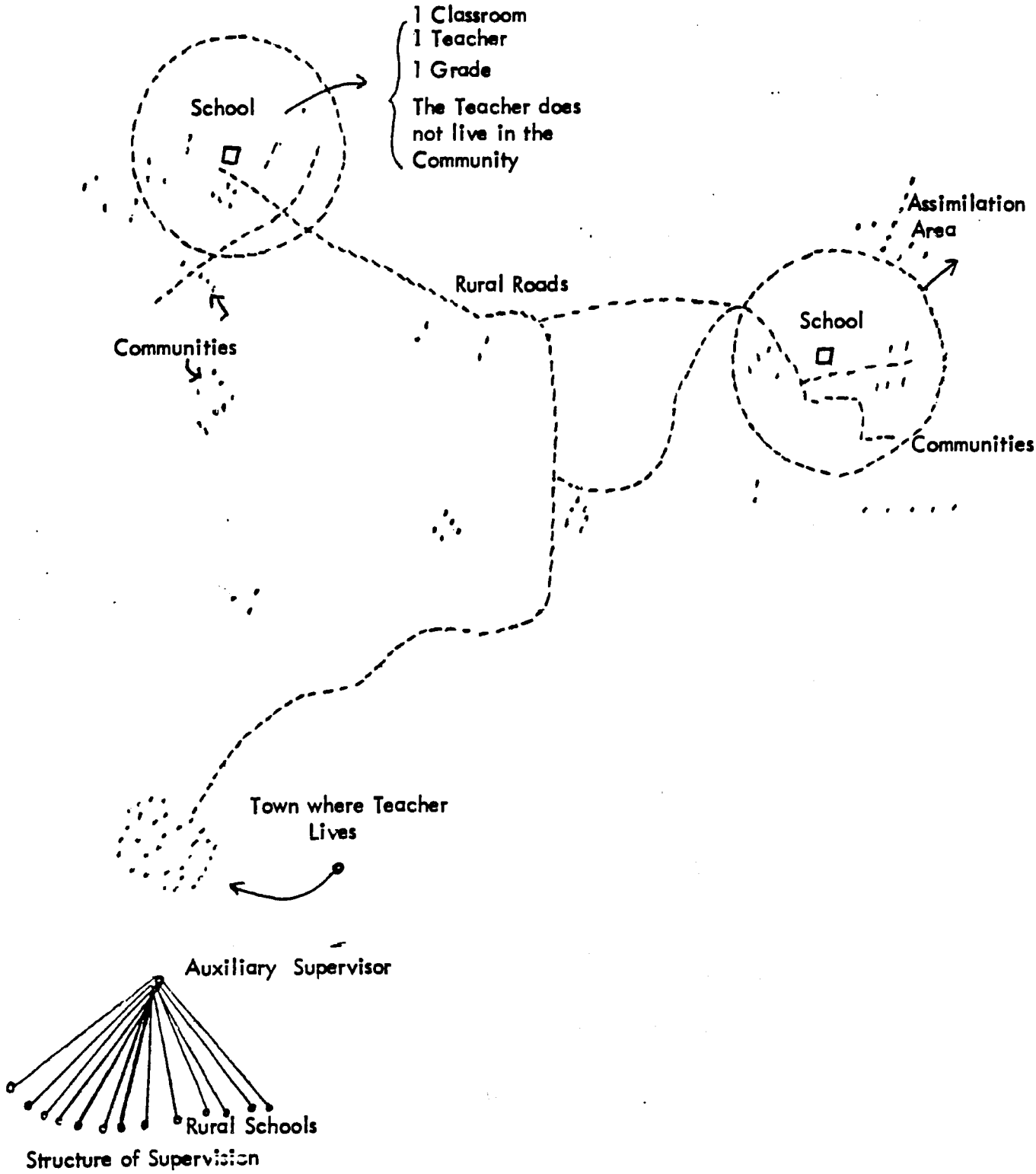
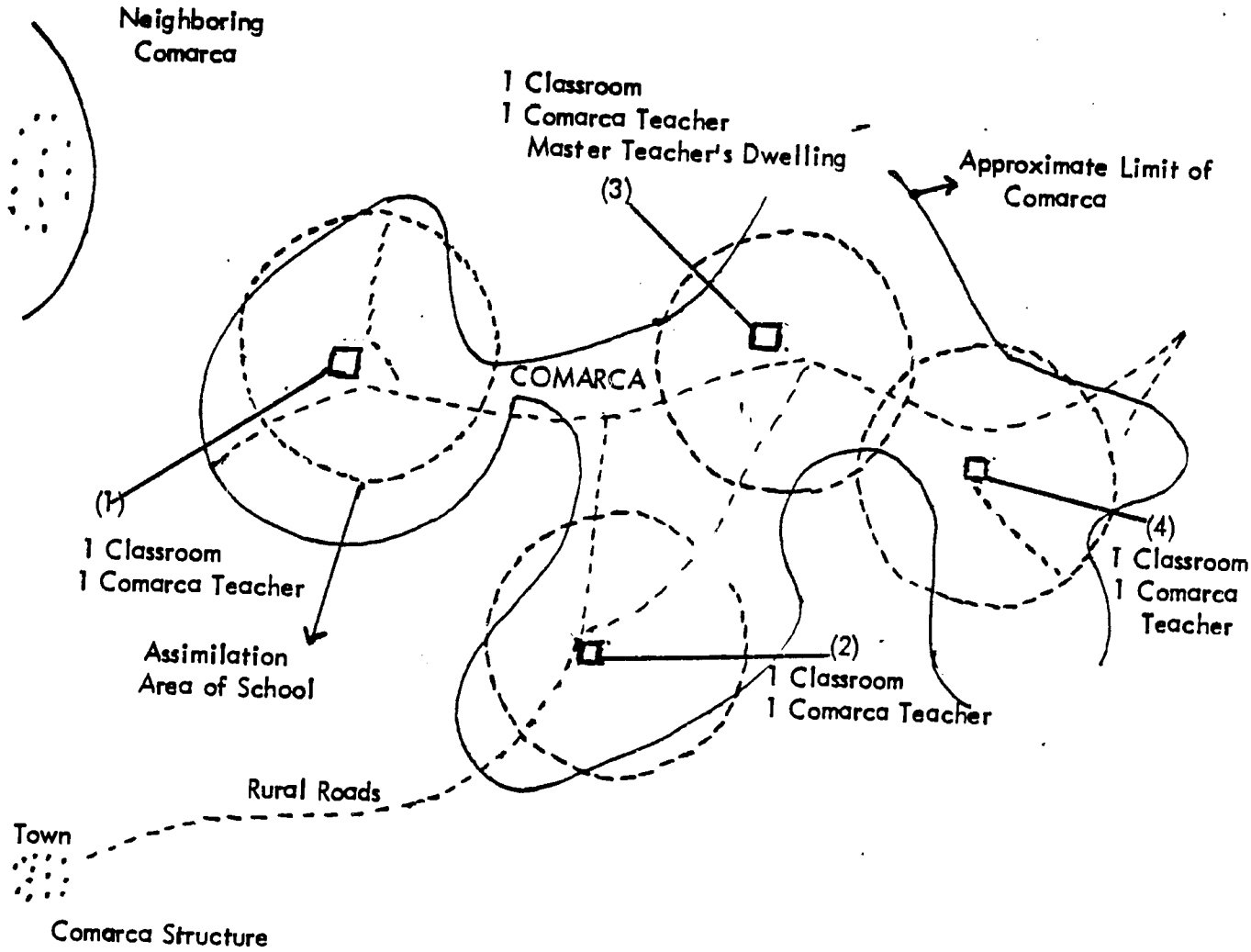
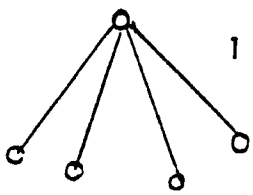


ILLUSTRATION 2

PROPOSED SYSTEM WITH THE MASTER TEACHER AS A BASE



Comarca Structure



WORK WEEK OF THE MASTER TEACHER

MON	TUES	WED	THURS	FRI
Gives Class in School (1)	Gives Class in School (2)	Workswith Teachers of other Co-marcas Prepares Material	Gives Class in School (3)	Gives Class in School (4)

supported full-time teacher. In lieu of a full-time teacher, the LSC will select a comarca teacher from the local area. This teacher will use the same radio-supported curriculum and student materials as are used in the larger schools to provide basic primary education to both children and adults.

The status of primary education at the Comarca or localidad level at the present time is such that often only one or two classrooms exist to service a large area. Many families are left out of the absorption or coverage area and, therefore, find it physically impossible to send their children to school. The teacher lives in the nearest municipio because there is access to better housing and basic services. In the present situation, the teacher cannot teach in both schools at the same time; therefore, one school lacks a teacher. Even the serviced school may not be fully served for two reasons: (i) inadequate social identification and understanding between the teacher and the isolated community, and (ii) the long distance the teacher has to travel to the school which makes teacher attendance sporadic during the rainy season.

Under the CSC system an expansion of rural educational services will be financially feasible. With the CSC there would be four schools in the same area, four comarca teachers and a master teacher. The objectives of this system are to: (i) deliver primary educational services to the isolated rural areas, (ii) break the isolation in which many rural teachers operate, and (iii) integrate the teacher and school with the community.

3. Comarca Teacher.

The Comarca Teacher will be a person from the local area who has had some formal schooling and can read and write. He/She will be selected by the community and, if qualified, approved by the MPE. The comarca teacher will be responsible for the daily teaching and operation of the school. He/She will have between 20 - 25 children per shift and will be paid approximately $60 a month by the MPE which is about 1/3 the salary of a regular teacher. These three individuals will receive six weeks' training prior to initiation of their services and will receive in-service training for another six weeks after their first year and two weeks each year thereafter during the life of the project.

4. Master Teacher.

This individual will be a rural school teacher with a minimum of a bachelor's degree from a normal school. He/She will receive a 10% pay incentive for the added responsibility, plus a free house of satisfactory quality valued at $3,700. The master teachers will be recruited from those teachers with some rural teaching experience. The master teacher will have the following responsibilities:

- Teach one day a week at each of the community schools.
- Prepare instructional materials for the community teachers one day a week.
- Seek, acquire and coordinate services from the MPH, INVIERNO and other governmental agencies.

In summary, the master teacher will support and capacitate the LSC, coordinate a multi-grade teaching system in the community schools based on the new radio-supported curriculum, train the community teachers in teaching approaches such as demonstration and problem-solving, and assist in the delivery and utilization of student materials.

5. Supervision and Management.

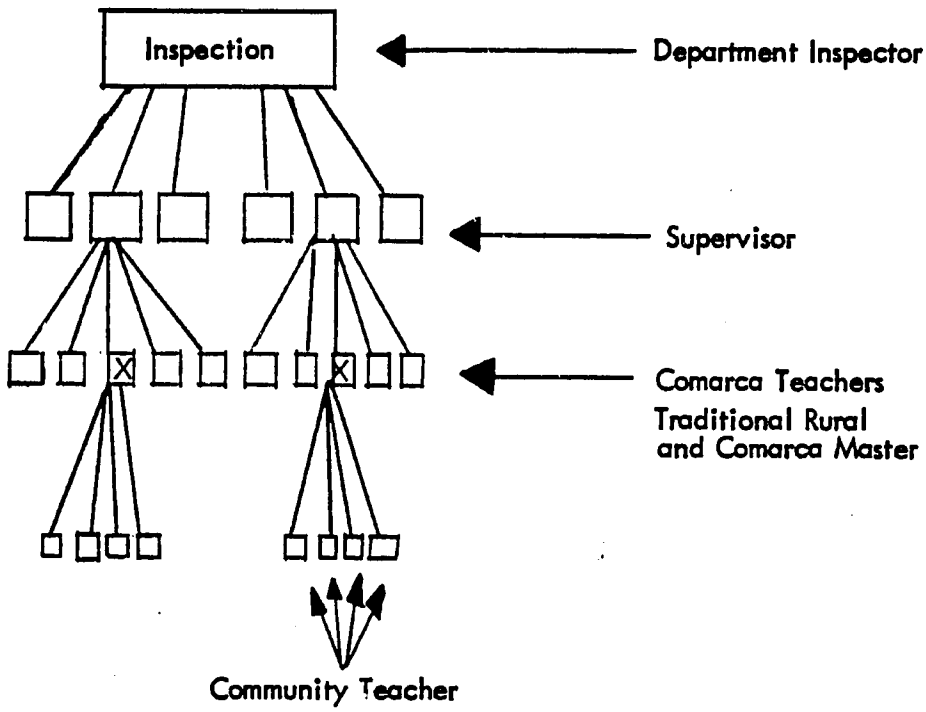
The master teacher will be the link between the MPE and the community teachers and LCSs. The following organizational structure (Illustration 3) demonstrates how the various groups relate.

The supervisor will have at least monthly contact with the master teacher who in turn will have weekly contact with the community teacher and the LSC.

6. Relationship to Existing Rural Schools.

The establishment of Comarca School Circuits is one of the key components in the GON/AID project strategy. However, it complements and folds into a much larger program component which is the improvement of the

ILLUSTRATION NO. 3



educational services provided by existing rural primary schools. This component is a qualitative and not a quantitative expansion of the existing system. It will make better use of available resources that are in place and involve the local communities in support of and contribution to the public schools program. In essence, this improvement is based upon the revised curriculum, improved teacher training, radio supported delivery system and student materials discussed above.

The new Comarca or community schools and the existing rural primary schools could be linked in many varied ways. An existing rural school, with a teacher that meets the requirements for a Master Teacher, could become the base community for a CSC. A community teacher could be appointed for the existing school and the existing teacher would become a Master Teacher. Surrounding localidades could integrate themselves into the circuit as they organize and solicit assistance from the MPE. The Comarca Master Teacher would remain at the same organizational level as before but would be assigned to a circuit instead of a single school.

Another example of linkage is where there may be two schools in reasonable proximity of one another but without teachers or with only one. A CSC could be established after the LCSs have organized in those two communities and in other nearby localidades. The teachers would be new but new buildings would not have to be constructed in every community.

In summary, the GON/AID program strategy is to improve the existing rural educational system and expand it into areas where educational services have previously been unavailable. The CSCs and the existing schools are the infrastructure mechanism through which the improved administration and supervision, teacher training and the new radio-supported curriculum and student materials will impact on the lives of the rural poor.

Before the end of the project, it is anticipated that funding will be allocated for a follow-on loan, a major portion of which will be used for curriculum development and teacher training on the fifth and sixth grade levels. The results of evaluation studies under this project will be considered very carefully to determine the feasibility of an additional educational emphasis in the rural areas of Regions II and V.

H. Integration with the IBRD Loan

The major distinction between the A.I.D. and IBRD projects is geographical in nature. The program financed by IBRD will be directed at all the Regions of Nicaragua, except Regions II and V where the A.I.D. project will be directed. Although there is no major duplication between the two programs, areas of complementarity and coordination will exist during the life of both projects and well into the 1980's. By summarizing the project elements of the IBRD program these areas are easily identified.

1. Rural Education Nuclei. Eighteen rural education nuclei will be constructed, furnished and equipped. Each educational nucleus will constitute a technical and administrative education unit composed of a "base school," two or more "sub-base schools," and several "associated schools." The "associated schools" are four-grade primary schools while the "base and sub-base schools" are six-grade primary schools. (See Illustration 4).

There is substantial complementarity between the Nuclear (IBRD) and Comarca (A.I.D.) systems. The Nuclear system proposes a network of base centers (grades 1 - 6), sub-base centers (grade 1 - 6) and one-room "associate" schools (grades 1 - 4). If the Nuclear system is expanded nationwide the existing rural primary schools receiving assistance under the A.I.D. loan will fold nicely into the Nuclear program. The CSCs, or 20% of the schools involved under the A.I.D. loan, would also integrate into the Nuclear system because the Comarca units will be schools located where the IBRD program has no intention of constructing rural schools. The "associate" school under the Nuclear system could become the base for the CSC with three community schools located in more isolated areas. The MPE and A.I.D. have studied the IBRD program and find no potential conflict between the Nuclear school system and the proposed Comarca School Circuit under the GON/AID project. In fact, the Comarca School Circuits would easily be integrated into the Nuclear system if it were to be replicated in Regions II and V. The Comarca system will be implemented in areas where no educational services are now available. The Nuclear system will be developed in more densely populated areas where many educational services already exist.

2. Agricultural Training Centers. Nine agricultural training centers will be constructed, furnished and equipped. These centers would train about 2,500 youths and adults annually. Training programs will focus on agricultural production techniques, farm planning, health, nutrition, child care and home management.

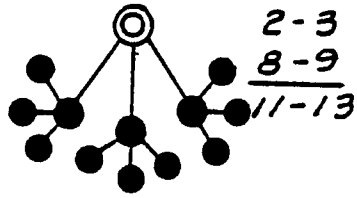
The GON/AID project will develop twelve similar centers in Regions II and V in support of the GON's strategy to provide non-formal education to rural youth and adults. The A.I.D. financed effort complements what the IBRD is doing in other regions of Nicaragua

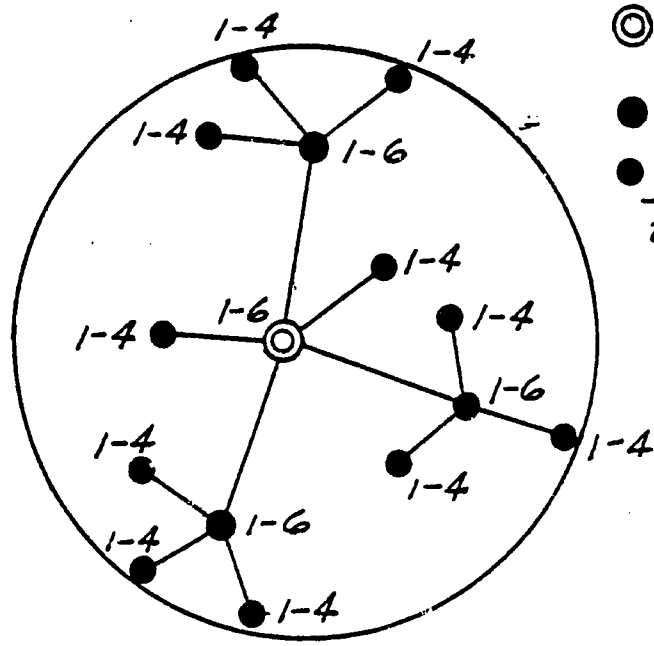
3. Secondary Schools. The IBRD loan will construct, furnish and equip four agricultural secondary schools and 18 lower secondary schools. Few primary graduates

ILLUSTRATION 4

PROPOSED INTEGRATION OF NUCLEAR AND COMARCA SCHOOL SYSTEMS

NUCLEI SYSTEM (WORLD BANK (LOAN)





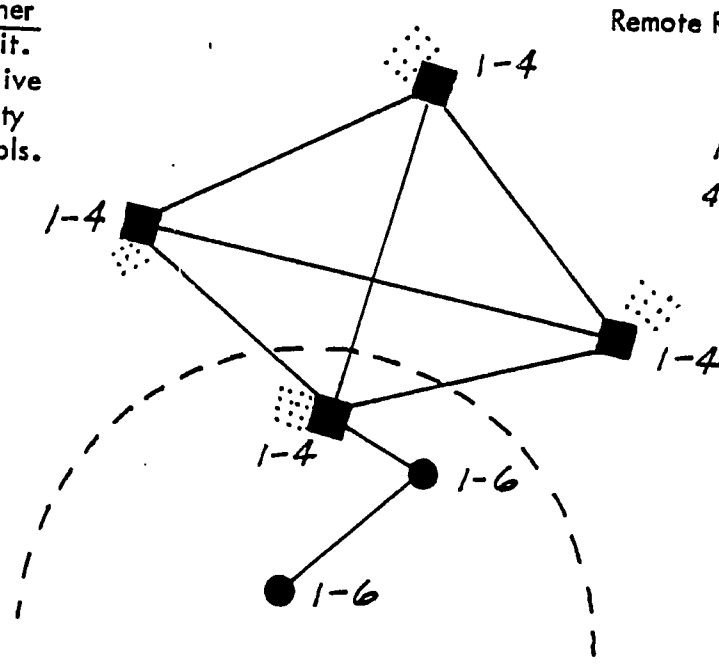
◎ -18 Base centers +Gr. 1-6
● -52 Sub-base centers Gr. 1-
● 152 One Room Schools Gr. 1-
222 = Total

COMARCA SCHOOL CIRCUIT (A.I.D. LOAN)

Comarca Master Teacher lives within the circuit. Community Teachers live within Local community clusters near the schools.

Remote Regional Clusters

100 → Circuits
400 → Schools



from the GON/AID program will attend these primary schools because they will be built in Regions other than II and V. The MPE and A.I.D. see this IBRD program element as complementary to GON educational strategy but not duplicative in any way to the A.I.D. program.

4. Teacher Upgrading Program. Under the IBRD program teachers from rural primary, secondary and agricultural schools will be trained at the National Education Center (NEC). Upgrading courses will be offered in multi-grade teaching techniques for existing and new rural primary teachers as well as training courses for secondary teachers.

Teacher and supervisor training will be coordinated with the NEC under the A.I.D. financed program. NEC staff will work closely in developing training plans and curriculum, and some NEC personnel will actually participate in the training programs to be offered in the Departmental Capitals.

5. Technical Assistance. IBRD financed technical assistance will be in the areas of primary school administration, teacher training, student evaluation, secondary school administration, and agricultural education.

The majority of A.I.D. funded technical assistance is in the areas of management, curriculum development and teacher training. Teacher training under the A.I.D. project is specifically oriented to training the adapted curriculum and how this curriculum can be used in a multi-grade classroom. This assistance is complementary to what IBRD is doing and does not significantly duplicate efforts in any specific area.

I. Program Beneficiaries

The Education Sector Program is designed to benefit the rural poor in two geographic regions, Regions II and V. The GON has selected, and A.I.D. has programmed assistance to the same regions for the initiation of integrated rural development activities in agriculture and health. This project will serve the same prime beneficiaries and will assume the important complementary role of delivering improved and expanded primary level educational services to children, youth, young adults, and adults in the two target regions. Development assistance had previously been approved for these areas and beneficiaries by virtue of their meeting GON and A.I.D. development objectives criteria: they constitute some of the poorest of the poor majority. (See Annex Q for details).

J. Impact of the Project on Women

1. Background

Nicaragua rural women attend and teach in rural and urban schools. In education, females from rural communities have about the same opportunities as males - very limited.

The number of females aged 6 - 14 enrolled in and attending school is about the same as males of those ages, when comparing by age and grade. In the higher grades, there are relatively more girls, but there is also a higher dropout rate.

The high dropout rate is due, for the most part, to the same factors that affect the boys, including economic factors, physical distance and a curriculum irrelevant to rural needs. The curriculum remains the same for both boys and girls until grade 4 when vocational courses based on expected role differences are introduced.

Women form 81% of the primary teaching corps; yet less than 1% of the inspectors are female, ostensibly due to "lack of training." In other public and private programs, women continue in traditional roles such as nurses, home extension workers and social workers, but they seldom hold supervisory level positions. Women consume family income, and they produce family income. In marketing, women are the primary processors of grains as well as the renders of unprocessed crops; they prepare and sell a variety of food products. With training in basic home cash management, rudimentary accounting, and principles of marketing, these women could raise their incomes appreciably and contribute to greater economic growth in rural areas.

At present, women play an important role in crop production; they form nearly half (40%) of the labor force. However, assuming that more efficient and improved farming techniques reduce the demand for female labor in such activities as planting, field clearing, harvesting and producing seed, there will be an increasing need for employment for women in rural areas.

Many rural women contribute to the support of their families by migrating to the cities. An increasingly large body of evidence indicates that "mothering" is done by grandmothers and aunts, while mothers leave home to work to support the family. Sixty-one percent of migrants to Managua from Region V are women, and they send 50% of their wages home to their families (See Cruz-Rappaccioli Report on Women in the Economy of Nicaragua and PCI Report). They are primarily employed as domestics.

Women have primary influence over health and nutrition in the family; yet their influence is not always the most effective, due to the mother's lack of education and understanding of food values and nutritional needs.

Women are the primary targets of a number of programs relating to health, nutrition, marketing and community improvements. INVIERNO has programs for women, emphasizing their role as housewives and nurturers. FUNDE develops market cooperatives whose membership is primarily female; the Ministry of Health training programs place a great deal of emphasis on child-bearing women and their health problems. Recent conclusions about the relationship between malnutrition and mental development make the education of women even more important in this area.

Women's role in public life in rural areas in Nicaragua is not limited to sitting beside their husbands at civic meetings. In Region II, which is the most developed of the two regions, women are mayors or treasurers of several municipalities, and in Region V, women hold an even larger number of public offices, from mayor of the largest municipality in Matagalpa to mayor of the smallest municipality in Esteli. Given the existing high level of participation in civic government, women would seem to be prime targets for community development and management training programs.

The activities of this project will positively affect both women and men as receivers and deliverers of educational services. However, to say there will be no negative impact of this project on women is not to suggest any measures of the positive impact the project could have.

2. Measures of Positive Impact

a. Administrative Reform and Management Improvement

The number and percentage of women as departmental supervisors will increase to better reflect the percentage of women who are primary teachers. This will be accomplished through the establishment of criteria for selection of supervisors and master teachers that will require experience in teaching at the primary level in rural areas, among other criteria.

b. Integrated Community Development

1) Local School Committees will include women as well as men; and,

in order to assure that hiring is not based on a stereotype of only women as community aides, training for promoters, supervisors, master teachers and local school committees will emphasize that either men or women could be selected, provided they meet the requirements of literacy and interest in teaching.

2) Enrollment of girls and women in primary and adult programs will keep pace with the enrollment of boys and men, and dropout rates for both sexes will decrease by at least 10%.

c. Curriculum Development and Related Educational Materials

Curriculum content will have a balanced appeal for both sexes.

1) Women's voices and men's voices will be used in about equal proportions on broadcast tapes, and care will be taken to cast women at times in non-traditional roles.

2) Participation in classroom learning activities will not be segregated according to sex-role stereotypes: e.g., boys will be encouraged to participate in nutrition/food preparation activities, and girls will be encouraged to participate in decision making and planning activities.

d. Training for Supervisors and Teachers

Training, which will in its own methods exemplify the action-oriented participation emphasis of the new classroom practices, will be carried out by teams of trainers which include women as well as men.

e. Strengthening Rural Education Delivery Systems

Hiring practices of contractors for school construction and repair will not exclude female applicants.

PART III - PROGRAM DESCRIPTION

A. Program Goal and Purposes

1. Sector Goal

The overall goal of the education sector is to help improve the socio-economic welfare of the rural poor in Regions II and V of Nicaragua. By expanding and improving educational services in these regions, the GON intends to increase the well-being of the rural population. This sector goal is consistent with the GON's Integrated Rural Development goals and USAID's Development Assistance Program. Specifically, the GON's Rural Policy and Strategy Statement sets as a prime objective the increased participation of the rural poor in the Nicaraguan economy and society through, among other activities, expanded literacy training, basic primary education and non-formal skills training. Both the National Reconstruction and Development Plan 1975-1979 and the National Plan for Educational Development, 1971-1980 state that the first priority of the educational system is to meet the educational needs of the rural areas.

The GON projects a resultant increase in the per capita income of the rural poor as more resources and personnel are made available to this sector. In addition, the improved capability to be economically productive should lend to improvement in general living conditions, especially in the areas of health and nutrition.

2. Program Purpose

The GON/A.I.D. program purpose is to insure that the rural population receives a greater number of relevant educational services in an improved learning environment using cost-effective educational methods. Intermediate indicators of the attainment of this purpose will be an increased number of primary aged children enrolled in school, an increase in student retention rates, and an increased number of adolescents and adults receiving basic primary education and occupational and vocational training. An ultimate indicator of program goal attainment, an increase in literacy and numeracy in the rural area, will demonstrate in a global manner the attainment of the program goal.

3. Component Purposes

a. Component One - Administrative Reform and Management Improvement.

The purpose of this component is to strengthen the institutional and management capacities of the Ministry of Public Education (MPE) in the areas of planning, organization, staffing, coordination, operations and budgeting. In addition, the Administrative Reform will bring about a restructuring of the MPE so that it will be more responsive to the educational needs of Nicaragua. These reforms are highly critical to the success of the loan-assisted rural education development program and satisfactory progress toward their fulfillment will be a condition precedent to proceeding with the operational Component Five.

Attainment of this purpose and/or progress in that direction will be evaluated qualitatively through expert examination of the improvement in MPE operational capabilities.

b. Component Two - Integrated Community Development.

Since community participation will be the anchoring force for most of the educational programs to be implemented in this project, the purpose of this project activity is to establish effective local school committees (LSC) to promote a demand for and utilization of skills and knowledge and to monitor the performance of MPE personnel in their community.

The effectiveness of the MPE, with the assistance of INVIERNO and MOH, in forming and training these committees will be reflected directly in the number of committees functioning and indirectly in the number of existing schools that are repaired and furnished and new schools built, since the LSCs must solicit assistance from the MPE before any of the mentioned activities can take place.

c. Component Three - Development of Curriculum and Related Educational Materials.

The purpose of this component is to enable the system to meet basic skill and knowledge needs of the rural population through improved curriculum and educational materials.

Attainment of this purpose will be reflected in part by a decrease in educational wastage. A long term indication of the effectiveness of the curriculum and supporting materials will be the transformation of learned skills and knowledge into productive activities of the society.

d. Component Four - Training for Supervision and Teaching.

The purpose of the training component is to improve teaching and supervisory performance in rural education.

Performance in fulfilling this purpose will be evaluated partly through direct professional evaluation of teacher effectiveness and partly through the indirect method of reviewing the progress of the educational programs presented in this project, which are to some substantial degree dependent on improved teacher/supervisor performance; i.e., community educational involvement, improved curriculum being used in rural schools, and existing schools being improved while new schools are being built in previously unserved areas.

e. Component Five - Strengthening Rural Educational Delivery Systems.

The GON, under this activity, plans to provide improved mechanisms through which a greater number of relevant educational services can be provided to the rural population. A new school system (Comarca School Circuit) will be established through self-help means to extend educational services to previously unserved areas. Existing rural primary schools will be repaired and maintained so that the students will have an improved learning environment. To complement the schools, this component will provide educational support in the form of improved supervision and school garden kits. Finally, the radio transmitting and receiving capability established under this loan will provide the mechanism through which the improved curriculum will be transmitted to and received in the rural schools.

Since this is the "bottom line" part of the project, to which all the prior components were largely (though not exclusively, since each would have its own impact even standing alone) contributory, its evaluation will be subsumed within the overall project evaluation cited above and discussed at length in Part V.D.

B. Program Elements

1. Administrative Reform and Management Improvement (Component One)

a. Background

1) The Problem. The Ministry of Public Education (MPE) must develop an improved administrative and management capability if it is to implement efficiently an expanded rural education program. In recent years, the educational system in Nicaragua has been expanded and extended far beyond the MPE's existing capacity to plan, manage, operate and control. Conditions in the rural schools reflect the problems found in the Ministry. For example, while there are a significant number of highly dedicated teachers working in the rural areas, they are often demoralized and frustrated because of the lack of supervisory and material support they receive from the MPE.

There is inadequate management capacity within the MPE to systematically establish educational goals, objectives and priorities. A planning-management information base does not exist, and existing information regarding the educational system is frequently incomplete, contradictory and out-of-date. Only recently has the MPE taken steps to determine the location, capacity, utilization, and condition of school buildings under its jurisdiction.

In terms of organization, the Ministry lacks basic handbooks outlining administrative policies, rules, and procedures. In addition, the organizational structure of the MPE is not clearly defined which has led to unnecessary centralization of decision-making.

Competent and effective personnel are the basis for a responsive organization. There is no program at the present time for training of MPE top and middle-level personnel. No set selection, evaluation, or placement procedures exist, nor are there position descriptions for professional employees. Training of rural supervisors is sporadic, and as a result, rural teachers are provided little logistical or supervisory support.

The success of the GON's Integrated Rural Development Strategy will require coordination of program planning and implementation between the Ministry of

Public Education and other Ministries and agencies providing educational-agricultural-health-community programs and services. At the present time there is only informal cooperation between these organizations. An effective, integrated program will require that formal agreement is reached between the MPE, INVIERNO, and MOH on their roles and responsibilities, and the procedures that will govern the interactions.

Within the MPE there is a general inefficiency in its day-to-day operations at all levels. Specific problems experienced by the central office include: (i) very little interdepartmental communication or understanding, (ii) inadequate interdepartmental coordination on programs requiring unified efforts, (iii) inadequate professional and pupil personnel records system, (iv) a relatively closed system for employment and (v) little relationship between work outputs to pay received. The management logistics of supplying schools with the required supplies and furnishings also remains a problem, as does MPE's school maintenance program.

A final area of concern is the existing budget and financial system employed by the MPE. The budgeting system is inflexible as it is not only difficult to transfer funds between programs, but even disbursements of allocated funds experience unnecessary bottlenecks and red tape. In addition, the budgeting system is not informative as to simple program budgeting data and accurate cost-benefit information on existing programs.

2) GON/A.I.D. Administrative Reform Strategy. The Ministry of Public Education is well aware of its management problems and is willing to invest the necessary resources to carry out a major administrative reform. The first component of this project is designed to help the MPE correct existing organizational deficiencies and increase internal management skills and expertise. A new Minister of Education was installed in May, 1976. Since that time, many personnel changes have been made which tend to maximize the capacity in terms of implementation of this loan and grant program. Specific actions will be carried out in the following areas:

a) Planning

i. A single set of educational goals, objectives, and priorities will be developed. These objectives and priorities will be stated in measurable terms and include an implementation plan and time-line for achievements.

ii. A single coordinated planning-management information system will be established to provide accurate information that can be utilized in making planning and management decisions.

b) Organization

i. A "Policy-Rules-Procedures Handbook" will be developed.

ii. A new organizational structure, which will reduce centralization of decision-making, will be established in the Ministry of Public Education.

c) Staffing

i. Personnel position descriptions, roles and responsibilities will be written and approved.

ii. Personnel rights, benefits, and salary scales will be developed and approved. Incentives for recruitment and retention of rural teachers will be developed and approved.

iii. A series of short-term management training programs for top level management personnel will be carried out, along with a short and long-term training program for middle-level management and technicians.

iv. An improved school supervisory system will be developed which will include a procedures manual and periodic in-service training for supervisors.

d) Coordination

i. A formal agreement between the MPE, INVIERNO and the MOH will be reached describing respective roles and responsibilities, and the procedures that will govern their interactions under the ingetrated program.

ii. An operational mechanism will be established to facilitate the day-to-day collaboration between these institutions in planning and implementing coordinated educational-agriculture-health-social programs in Regions II and V.

e) Operations

i. An interdepartmental communication system will be established.

ii. Existing records systems will be reorganized.

iii. A decentralized distribution system for school supplies and equipment will be developed.

iv. The MPE's school maintenance program will be strengthened.

f) Budgeting

i. Efforts will be made to reduce the ratio of salaries/operating expenditures.

ii. Budgeting and disbursement operations will be revised in order to facilitate a flexible and responsive financial system.

iii. A maintenance budget will be developed and approved.

b. Inputs and Budget

Inputs to the first component of this program will be financed from budgetary allocations from the GON to the MPE and from A.I.D. project funds. Inputs by source and the estimated budget for the component are as follows:

1) MPE Inputs. A portion of the GON counterpart for this portion of the project is composed of operating costs and some equipment costs.

Operating costs include personnel that will participate in the administrative reform and the expenses associated with office space, secretarial services, office supplies, vehicle maintenance, etc.

The MPE will finance $600,000 of increased operating costs over the life of the first component. The MPE counterpart also includes $175,000 for commodities such as office equipment and furniture. Upon completion of A.I.D. funding, continuing operating costs of this project component are estimated to be at least $200,000 per year.

2) Joint GON/A.I.D. Inputs

a) Technical Assistance. A coordinated technical assistance program of substantial scope is required to assist the MPE in reorganizing and strengthening its management systems and capability. To provide this needed coordination, an institutional contract will be essential to acquire the needed personnel. Both the GON and A.I.D. will finance the salaries of technical advisors. Technical assistance within the contract will be distributed as follows:

i. Education Management Advisor (24 months). Will act as team leader for the advisors under the first component of the project. This individual will assist the MPE to define educational objectives and priorities, advise the MPE personnel in the areas of Ministry reorganization, assist in coordination activities with other Ministries and agencies, and assist in preparing implementation plans and documents for meeting conditions precedent to the loan. Estimated cost: $144,000. Funding: A.I.D. (Grant): $130,000, GON: $14,000.

ii. Planning-Management Information Systems Advisor (18 months). This advisor will be a systems designer who will work with MPE personnel in developing an integrated management-oriented planning-monitoring-evaluation system. The system must focus attention on specific management problems within the Ministry and orient all the systems to generate timely, accurate information for analysis and management decisions. After the initial design, the advisor will refine the system and train MPE personnel to operate it. Estimated cost: $108,000. Funding: A.I.D. (Grant) $100,000, GON: $8,000.

iii. Evaluation Advisor (12 months). Initially, this individual will assist the MPE's evaluation office in developing internal

evaluations for existing and new programs. He/She will also coordinate the gathering of baseline data for the GON/A.I.D. Rural Educational Development Program (see Special Studies). In 1978, when there will be fewer new evaluations to be designed, the advisor will concentrate on in-service training of management personnel, systems development, and modifying the evaluation process to the management style of MPE personnel. Estimated cost: $60,000. Funding: A.I.D. (Grant) $50,000, GON: $10,000.

iv. School Construction and Repair Advisor (12 months). This individual will assist the Ministry in its continued effort to develop an inventory of schools in Regions II and V and later for the entire country. Assistance in planning and management of facilities investment will also be a prime responsibility. In the area of repair, the advisor will help MPE personnel clarify how to divide repair responsibilities between the community and the Ministry and to develop a practical system for initiating action, contracting specialized work, etc. Estimated cost: $60,000. Funding: A.I.D. (Grant) $50,000, GON: $10,000.

v. Short-Term Technical Assistance (18 months). Various advisors will be needed for one to six months to work on specialized problem areas within the Ministry. Some of the areas of concern will be:

- Materials Distribution
- Records System
- Budgeting and Finance
- Communications
- Computer Programming

Estimated total cost for short-term advisors, $93,000. Funding: A.I.D. (Grant) $80,000, GON: $13,000.

3) A.I.D. Inputs

(a) Special Studies. Two special studies will be performed during the initial stages of the administrative reform in order to build a solid informational base from which the reform and the Rural Education Program can begin. The first study will be an indepth investigation of how the Ministry of Public Education functions at the present time. MPE and USAID personnel feel that such a study is necessary if the Ministry is to be reorganized in the most effective manner. In depth analyses will be carried out in the areas of planning, evaluation, internal communication and coordination, decision-making and interdepartmental operations. Estimated cost: $50,000. Funding: Grant.

The second study, to be carried out concurrently, will develop baseline data on the specific educational needs of the rural population in Regions II and V. Information, both primary and secondary in nature, will be gathered and analyzed in the following specific areas of interest, (i) adolescent and adult educational needs, (ii) socio-economic characteristics of Regions II and V, (iii) existing education curriculum available, (iv) basic curriculum needs, and (v) most favorable hours for educational radio broadcasts. Estimated cost: $50,000. Funding: Grant.

b) Training. Many MPE top-level and mid-level professionals will require training in management skills to become more effective managers. The training should be conducted in Nicaragua or Central America to the greatest extent feasible, to ensure that training is convenient and relevant to the Ministry. Both long and short term training will be necessary for selected technicians who must develop specific skills that require extended training in a foreign country.

i. In-Country Training. Short-term training opportunities exist within Nicaragua which will permit Ministry personnel to upgrade their managerial and technical capabilities. The Central American Institute of Business Administration (INCAE), the two local universities and local business institutes all provide 1 - 4 week seminars in the management and operations fields that would be relevant to the MPE's problems. MPE personnel will attend short-courses in such subject areas as follows: Motivation Training, Community Development, Planning and Project Design, Statistical Analysis and Presentation, Computer Programming, Program Budgeting and Evaluation, Public Administration and Personnel Management. Estimated cost: $110,000. Funding: Loan.

ii. International Training. Relevant short-courses and long term training that are offered abroad will be financed under this grant. This training abroad will be in such areas as radio education, rural education, measurement and evaluation, primary curriculum development, educational planning/management, computer programming, radio-supported education technology, material development and production, population education. Approximately 120 person/months of training out-of-country will be programmed. Estimated cost: $130,000. Funding: Loan.

(d) Computer Expenses (including software and time). A.I.D. will grant finance $75,000 of computer software and time for the MPE. The

availability of computer capability will be essential to provide an accurate and accessible listing of the numbers of teachers, schools, pupils and central office personnel. In addition, the computer time will facilitate information such as school building quality, number of students per school, personnel salaries, etc.

d) Commodity Assistance. Commodity requirements consist primarily of office equipment for the central office. Upgrading of some key offices (i.e., Evaluation, Investment) will be necessary to adequately begin the administrative reform. A.I.D. loan funds of up to $100,000 will be available for office equipment such as duplicating machines, copiers, typewriters, calculators and any other necessary office equipment expense.

4) Budget. Aggregating inputs from the above sources, the budget for this component is:

SOURCE OF FUNDS
(In U.S.$.000)

Uses of Funds	A.I.D. Grant	A.I.D. Loan	GON	TOTAL
Technical Assistance	410,000		55,000	465,000
Special Studies	100,000			100,000
Training		240,000		240,000
Commodities		100,000	175,000	275,000
Computer Services	75,000			75,000
Operating Costs			600,000	600,000
TOTAL:	585,000	340,000	830,000	1,755,000

A.I.D. Funding Total: $925,000.

(5) Component Timetable: (See Annex R).

c. Outputs and End of Component Status.

1) Outputs. The MPE and A.I.D. financed inputs will go to achieving the following outputs:

- An up-to-date, flexible and competent planning and evaluation unit within the MPE.
- An effective system to coordinate MPE activities with INVIERNO, Ministry of Health, Ministry of Agriculture and other agencies.
- An integrated management-oriented planning-monitoring-evaluation system which generates timely accurate information for analysis and management decisions.
- The application of more effective operational methods in the areas of communications, records, budget, distribution of materials, etc.
- A revised organizational structure of the MPE which has been formally agreed upon and implemented.

2) End of Component Status. The end of component status is an efficiently operating Ministry of Public Education which has the flexibility and responsiveness to meet the educational needs of the rural poor.

d. Justification for Partial Grant Financing. This project component is oriented towards improving the management and technical capabilities of education sector personnel and bringing about a restructuring of the Ministry of Public Education so that it will be more responsive to actual needs. These reforms are highly critical to the success of the Rural Education Development program. Only if substantial changes are made in the day-to-day operations of the Ministry can it expect to efficiently manage its existing and new rural and urban education programs. Management skills and knowledge must be acquired early if loan resources are to achieve maximum impact and if a full measure of support is to be given to the radio-supported curriculum, teacher training, Comarca School Circuits, and the existing rural primary schools. Not only do these activities require long lead times but some of them are fraught with potential political difficulty for the MPE. The availability of a substantial measure of grant funding for this key project component is viewed as an important form of support to the new MPE management team in its efforts to bring about the needed reforms.

2. Integrated Community Development (Component Two).

a. Background. Among the key constraints working against the MPE in its efforts to provide primary education to rural inhabitants are (i) the geographic dispersion of the population, (ii) the limited resources devoted to education from the central government or from external sources, and (iii) the inadequate quality of both teacher preparation and teaching materials.

To deal with certain aspects of these constraints, a strategy was developed that calls for the increasing involvement of the target communities in their own development and the establishment of an institutional link at the community level between the demand for educational services and the supply of these services.

The MPE recognizes that the present system of rural primary education does not accomplish even traditional objectives. The option of increasing access to primary education by simply expanding the number of rural schools without, in addition, making certain fundamental valuative changes in the overall system, has been determined to be ineffectual for various reasons. Rural schools built under the present system often have no teachers to fill them. Inappropriate curriculum or no applied curriculum also result in high repeater and drop out rates during the early years of school. Teachers often live outside of their communities, thus fostering mutual uninterest and, frequently, distrust. School maintenance tends to fall between the cracks because MPE is too distant and the local people uninvolved.

This project provides an alternative approach to satisfying the educational needs of local communities (localidades or Comarcas) which relies on active community involvement and responsibility. The only successful educational programs in rural Nicaragua have invariably counted on local resources. (See AED, Nicaragua Education Sector Assessment, 1975). Thus, to deliver educational services that are meaningful to a student's actual values and experiences, and useful in his or her daily life, concerted action based on community demand for relevant education will be needed to assure that the supply of educational services actually promotes learning. Active local community organizations thus are among the keys to success of both the formal and non-formal educational improvements proposed in this project. Testing and evaluation of new curriculum at the local

level require teachers receptive to, and communicating with, the communities they serve. There must be mechanisms through which the community can require accountability of both teachers and the MPE itself.

b. Local School Committees. Community participation will be the anchoring force for the successful implementation of this project. Local school committees (LSCs) will be formed in the rural areas of Regions II and V. The LSCs will be the mechanism through which the community will communicate with MPE personnel, establish cooperating links with other communities, identify the educational needs of their area, and monitor educational progress.

Two types of LSCs will be developed under this program. LSCs will be formed in some 400 communities where the approximately 100 Comarca Circuits will be operating. The other committees will be organized where an existing primary school is functioning, or should be functioning but has not due to the absence of a teacher. The members of the LSC will be persons of the community that demonstrate an interest in the educational well-being of the area. These persons will normally be individuals who have also shown previous leadership ability. The number of people on the LSC will vary with the level of human resources in the area, but it is projected that 3 - 7 people will perform the tasks described below. The LSC will elect a chairperson and meet regularly once a month.

The responsibilities of the LSCs in both the Comarca and existing schools are the following:

1) Understand the regulations and standards governing primary education in Nicaragua.

2) Establish mutually supporting relationships with the personnel of the MPE, INVIERNO and the Ministry of Public Health (MPH).

3) Understand the procedures for soliciting technical and financial assistance.

4) Solicit and organize community support in constructing new, or repairing existing, classroom facilities.

5) Supervise physical plant maintenance.

6) Advise MPE personnel on the degree to which the content of the curriculum meets or does not meet community and student needs.

7) Serve as an example to the community of civic spirit.

The Comarca LSC will have additional responsibilities to those listed above. The LSC will choose the community teacher from the community and support this person in his/her activities. A candidate for this position must be functionally literate. The LSC will meet monthly to discuss and assess the community teacher's performance. The Chairperson of the LSC will be in charge of receiving the paycheck for the community teacher ($60/month) from the MPE Master teacher. Based on a favorable assessment of the community teacher's performance by the LSC, the Chairperson will countersign the check and deliver it to the community teacher. The check can be cashed only by the community teacher. If the performance of the community teacher is considered very poor, the LSC can return the check within a week to the Ministry with an explanation of its return. The Department of Primary Education of the MPE will take the necessary steps to rectify the unsatisfactory situation by sending a supervisor to investigate and report on the school conditions in the subject community. If this system of checks and balances proves workable at the comarca level, a natural consequence will be community pressure for its expansion to the regular system.

c. Interministerial Cooperation. The MPE will not be the first or only governmental agency carrying out community development work in Regions II and V. In 1976, the Institute for Campesino Welfare (INVIERNO) initiated activities directed at increasing the economic well-being of the rural poor in these two regions. Through its Agromocs, INVIERNO has made substantial contacts in the rural areas. Each Agromoc reaches an average of 50 producers, supplying them with technical assistance and community development services. He also serves as a link for the credit delivery service and for the marketing operations related with outputs and inputs. Other INVIERNO experts support the work carried out by the Agromoc, providing him with technical advisory services in areas related to his work. The Agromocs have contacts in over 500 localidades or Comarcas (See Annex G). In these areas they are forming and training local groups. The purpose of promoting local groups is to encourage the social and cultural development of the individual

and to achieve a greater degree of social unity in the local area. With a trained and organized rural population, INVIERNO sees the increased probabilities of success for all development programs.

The Ministry of Health (MOH) is also beginning to expand its grassroots based health program from the successful pilot program in Esteli to a regional program in Region V and later into Region II. A key component of the MPH program, as well, is the development of community participation mechanisms such as village collaborators and community health committees. This rural extension arm of the MOH, referred to as PLANSAR, will assist communities in reducing basic health problems and in carrying out specific health improvement projects. The core activities are preventive in natura and include environmental sanitation - potable water and latrines - and immunizations, plus sanitary education like hand washing and food handling. (See Rural Health Services Project Paper for more detail).

Under the MOH program, thirty-four trained health promoters are establishing health committees in communities in which INVIERNO's Agromocs are presently working. The MOH and INVIERNO have signed a formal working agreement where each organization's respective responsibilities are clear and understood. The health promoters will work with the Agromocs in identifying and organizing the communities.

The health committees will choose a rural health collaborator who will coordinate the dissemination of health materials, information and some medicines. The collaborator must have an interest in health matters and be able to read and write.

The MPE does not wish to duplicate the efforts of INVIERNO and MOH in Region V and later in Region II. An additional group of promoters would saturate the area and duplicate unnecessarily the number of government efforts in one concentrated area. Therefore, the MPE has reached an informal agreement with INVIERNO and MOH under which MPE efforts to form LSCs will build upon the organizational base that the other two institutions have already developed. It is realized that local leadership capability cannot be spread too thin or it will weaken all governmental efforts in the rural area. By using committees that are already formed, the MPE can further train those people who have a proven track record in community action programs.

The MPE considers all rural primary teachers and their supervisors as potential community developers. Four MPE community development promoters will provide special support to existing MPE personnel in the field (teachers and supervisors), and coordinate their efforts with INVIERNO and MOH personnel. With the MPE promoters supporting and reinforcing their activities, the three groups can adequately organize and train the LSCs that will be formed over the life of this project. Interministerial cooperation will work in the following manner. The MPE promoter will contact the Agromoc and health promoter who are working in a particular area. They will identify localidades where a school needs to be built or repaired and where community organizations are in place. The MPE will then set up a date through the Agromoc and/or the health promoter to meet with the local committee. The MPE promoter could represent the MPE or he/she could send a local supervisor or teacher who has received community development training (see Section III.B.4) to assist communities organize LSCs. Follow-up will be provided by the promoter, supervisor, or the teacher who will assist the LSCs in identifying community educational needs, constructing and maintaining physical facilities, monitoring educational programs and coordinating support of other GON agencies. The responsibility for community educational development will eventually be passed on to the local teacher as soon as he/she is named and trained. The MPE promoter will then function primarily as a support and resource person for the teacher.

Formal cooperative agreements with INVIERNO and the MOH will be conditions precedent to the other proposed loan activities. These agreements should be negotiated and signed as one of the first steps under the Administrative Reform Component of this program.

d. Inputs and Budget. Inputs to Component Two of the program will be financed from three sources: budgetary allocations from the GON to the MPE, A.I.D. grant funds and A.I.D. loan funds. Inputs by source and the estimated budget for Component Two are as follows:

1) MPE Inputs. The Department of Non-Formal Education will be responsible for the MPE's community development efforts.

a) Personnel. The central MPE office will be staffed with two permanent employees who will support and monitor all community development efforts in Regions II and V. They will also be responsible for maintaining good working relationships with the governmental and private institutions which are

involved in community development in the same regions. Four promoters will be hired who will receive a general orientation in the central office and then placed in Region V. In 1980, one of the promoters will be transferred to Region II to begin working with the MPE's supervisors and teachers in organizing local communities. Personnel costs for this activity for the life of the project are estimated at $206,000.

b) Operating Expenses. The MPE will cover the operating expenses of the program which are estimated at $155,000. They include material costs for designing and printing community development materials, office supplies, traveling expenses for the central staff and the foreign expert in their support roles, and maintenance and fuel for the MPE vehicles. Ongoing costs of $81,000 per year after project completion will be met by the MPE.

2) Joint GON/A.I.D. Inputs

Technical Assistance. The GON and A.I.D. will finance the services of a community development expert. This individual will cooperate with MPE personnel in establishing a permanent community development capability within the MPE. For a period of 24 months this advisor will work to orient the MPE promoters, assist in the institutionalization of a working relationship in the areas of community organization, group dynamics and leadership development with other appropriate ministries, develop promotional field materials, organize the central support office and monitor and evaluate field progress. This advisor and the central office will also develop the section of the proposed training program for MPE personnel dealing with community development. The cost of the advisor is estimated at $120,000. Funding: A.I.D.: 108,000, GON: $12,000.

3) A.I.D. Inputs

Vehicles. A.I.D. will finance the purchase of six (6) four-wheel drive Jeep-type vehicles at a cost of $7,000/unit. Four, 4-wheel drive promotional vehicles, equipped with an electric generator, movie and slide projector, microphones and a sound system, will also be purchased over the first two years of the project for use in community development activities. The unit cost of these vehicles is estimated at $12,500. These promotional vehicles and the Jeeps will be available to all MPE personnel in Regions II and V who assist in community development work. The MPE as condition precedent to the loan will plan and implement arrangements for local maintenance and fueling of these vehicles. The promoters will be responsible for scheduling their use. These vehicles will be loan funded.

4) Component Budget

SOURCE OF FUNDS
(In US$ 000)

Use of Funds	A.I.D. Grant	A.I.D. Loan	GON	TOTAL
Technical Assistance	105,000		15,000	120,000
Operating Costs			361,000	361,000
Vehicles		92,000		92,000
TOTAL:	105,000	92,000	376,000	573,000

A.I.D. Funding Total: $197,000

e. Component Timetable (See Annex R).

f. Outputs and End of Component Status

1) Outputs. The major expected outputs will be a trained central office staff within the MPE which will efficiently support the MPE promoters in the field. Plus, the promoters will be forming and training local school committees with the assistance of INVIERNO and MOH personnel.

2) End of Component Status. Effective local school committees which are actively promoting demand for and utilization of skills and knowledge will be the end of component status. These LSCs will be actively involved in building and/or repairing schools, equipping classrooms, monitoring teachers and working to upgrade the general well-being of the community. LSCs will be the mechanism to insure that relevant educational services be delivered to their area.

3. Development of Curriculum and Related Educational Materials (Component Three).

a. Background

The MPE recognizes that the limited educational services in the rural areas of Nicaragua are not meeting the needs of local communities. Not only is there a lack of teachers and, in some communities, a lack of schools, but student absenteeism and attrition point to problems beyond the solutions offered by more schools and more teachers.

The record is not good for either urban or rural schools, but the extremely poor showing of the latter is an indicator of problems specific to rural areas. The Ministry of Education has, in the fairly recent past, engaged in curriculum development and textbook production activities. But the results of these efforts have not been effective in the rural areas. Some reasons for this ineffectiveness are surface problems such as the expense and difficulty of training teachers from outlying areas, the absence of supply depots in rural areas which could deliver sufficient textbooks to meet the demand, and the expense of producing up to date texts coordinated with the curriculum guidelines. All too frequently, when a rural school does have textbooks, they are outmoded editions which bear little or no relationship to the curriculum guide in use.

However, there are deeper reasons for the failure of the schools to hold the interest of rural students. Curriculum content bears little relationship to the experience of rural children or their parents, and a rote memorization teaching method is antithetical to children whose entire outside of school experience is to learn by doing. Aside from the chalkboard and notebooks into which students copy lessons written on the board, rural schools offer no worksheets, manipulative materials, or other action-oriented activities.

A third level of reasons for the failure of the rural curriculum to meet student needs is the reluctance of parents to send their children to school. One of the unfortunate ironies of the Nicaraguan situation is the campesino's mistrust of formal education. Formal education has been sold to the campesino here, as it must have been sold everywhere in the developing world, as the surest road

from rags to riches. Indeed many poor farmers have sacrificed to send their children through the full six years of rural primary school. The products of this system quickly became luminaries among the rural poor, and joyous, hopeful parents watched as their progeny, in search of new opportunities, marched off to increase the overswollen ranks of the unskilled and unemployed in urban centers. An even greater irony is the fact that these students could have made meaningful contributions in the rural areas.

The advent of INVIERNO and the Rural Health program is beginning to change this outlook. The rural poor are renewing their faith in education. They are the beneficiaries of the training and demonstration programs sponsored by INVIERNO, and a direct result has been that several communities have asked INVIERNO for assistance in building new schools and acquiring teachers. Moreover, as their incomes increase, new horizons are opening, and undoubtedly the poor want to be able to take full advantage of these opportunities, not only for their children, but for themselves.

In the INVIERNO communities, the most pressing need perceived by the adult campesino is to acquire a basic education. The purpose is not literacy per se, but the ability to use the tools of a basic education to learn better production technologies such as irrigation, double cropping in the dry lands and mixed cropping in humid areas, to organize and maintain his own accounts, purchase and repair equipment, become increasingly effective in financing production and in marketing his crops, and ultimately join new ventures in farming and small farm enterprise.

b. Component Strategy

In consideration of the differing needs of the rural adult and the rural child and the levels of difficulty of the constraints, this project proposes a three pronged curriculum strategy.

The first prong of the strategy is to counter the surface problems with improved teacher training brought directly to the rural areas (see Training Component), re-organized departmental support systems which will include decentralized supply centers (see Administrative and Management Reform), a rural radio

system to supplement and provide a structure for teacher-based classroom instruction, and guides and student worksheets coordinated with curriculum content.

1) Radio and Tape Cassettes. The use of radio broadcast and/or tape cassettes, combined with consumable worksheets, was judged to be the least costly, most effective medium for not only improving student performance, but assisting teachers to achieve a logically sequenced presentation of material. The teacher-assisted radio or tape lesson has a flexibility which the traditional teacher's guide/text book approach does not possess. If the evaluation of a taped lesson in the radio sequence shows that it needs improving, the changes can be retaped in that single lesson, the individual student work sheet changed, and the teacher informed through the supervisor or master teacher, or even through radio broadcast, without the expense of printing an entire text.

Radio is already in use in Nicaragua in both formal and non-formal education. The model for the effective use of radio in the traditional school system in Nicaragua is the A.I.D.-sponsored MPE/Stanford University Radio-Mathematics Project based in the Region II Department of Masaya (See USAID Bulk File).* The 1976 evaluation of the curriculum for second grade shows that students in the radio-assisted program did twice as well on standardized tests as the control group of students.** In addition to these significant gains in student performance, the project required only two 3-hour teacher training sessions instead of the 2-weeks originally scheduled. Teacher response to the program has been excellent. Math lessons for Grades 1 and 2 are now broadcast in 85 classrooms in the Departments of Masaya, Granada and Carazo in Region II. By 1978, the program will cover all primary schools in the country with lessons through the fourth grade. MPE is clearly in favor of expanding the radio program in the light of its excellent success in a subject area where results have usually been poor.

Primary lessons will be broadcast in the mornings, and adult classes will be broadcast on a regular schedule in the evenings. However, to provide greater flexibility in scheduling in communities where the regular broadcast time is not convenient, or a broadcast is missed because of power failure or other interference, the supervisors in charge of each 20 teachers will have a duplicate set of all taped lessons for both primary and adult education. In addition, each rural adolescent center will have a set of the adult education tapes. Teachers will be able to borrow these tapes and use them as needed.

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* For further evaluation of radio-supported educational programs, see the World Bank case studies of the use of radio and television in education in developing countries, completed in 1977.

** This was a preliminary study.

The radio provided each classroom will be a combination radio/recorder/player so that teachers may also record lessons from the broadcast and replay them later as necessary. Each teacher will be provided five blank tapes for this purpose.

2) Primary Curriculum. The next level of problem is to be countered by basic education curriculum revised to meet the needs of rural primary school age children, to be presented through radio broadcasts and/or tape cassettes with extensive printed materials for in-classroom followup activities which the teacher will carry out with the students.

The curriculum development procedure used in the Masaya Radio Math Project offers a viable method for other subjects as well. The official primary curriculum was used as a base for the radio lessons developed by a team composed of professionals in curriculum, guide and script writing, research and evaluation, graphic arts, tape production and teacher training. Curriculum content was re-sequenced and material relevant to student needs was introduced as each broadcast lesson was developed. Feedback from teachers and field evaluators provided a basis for further revision of curriculum.

Curriculum development for this project will be concentrated on reading, health/nutrition and agriculture. MPE staff will also adapt for radio the basic curriculum for social studies.

Reading lessons will be evolved from the official curriculum for language arts, with the content being changed to include health, nutrition, and agriculture messages as well as imaginative literature. Not only will reading specialists develop this curriculum, but there will also be inputs from the experts in the other subject areas.

Health/Nutrition curriculum for primary school age rural children is presently being developed by a joint MPE/MOH committee. This material will serve as the basis for radio lessons, but other material pertinent to conditions in Regions II and V, derived from the baseline study conducted under the grant and other available INVIERNO data, will also be included.

Agriculture curriculum for primary school is presently very scanty and is, for the most part, derived from the secondary school curriculum. Therefore, a major effort will be mounted to develop appropriate curriculum in this area. Much of the agriculture classroom activity will be concentrated on the school garden which corresponds to the home gardens for which INVIERNO provides technical assistance. The school garden will not only serve as a student demonstration plot in agriculture, but it will play a similar role in nutrition education.

Curriculum developers for this area will work closely with experts from INVIERNO, MOH, MAG and the agricultural schools.

Number of Primary Radio Curriculum Broadcast Lessons

Because a radio-supported curriculum provides a structure and sequence for teachers, and results are more easily measured, the math and reading curricula, where results are crucial, will be broadcast five days a week for grades 1 - 4. There will be approximately 170 lessons (broadcasts) for each grade, each year.

To conform to present MPE scheduling for the primary science curriculum (See Annex J.), health and nutrition will be broadcast once (1) a week for grades 1 - 2 combined and twice (2) a week for grades 3 - 4, or a total of 120 lessons per year.

Agriculture in the primary curriculum is to be basically a concrete learning experience based on activities related to the school gardens. Therefore, broadcasts on agriculture will be limited to once a week with the same broadcast providing information for all grades. Total broadcast tapes prepared will be 40,*but there will be activity guides for all four grades.

Primary Social Studies lessons will also be prepared for broadcast to grades 1 - 4 at the same time, once a week. Teachers' post-broadcast classroom activities will vary according to grade level (see Multi-Grade Teaching Annex), and teachers' guides and worksheets will be prepared for all four grades for the 40 lessons. *

Except for math, (grades one and two), which is already prepared, lessons will be twenty minutes long, with a ten minute teacher supervised follow-up. Then, as the next broadcast begins, students who received the previous broadcast can continue, using their worksheets.

The Stanford Radio Math Project lessons will be used in the primary schools in Regions II and V. Although Stanford will have developed lessons for grades 1 - 4 by the second year of this project, and, therefore, the cost of developing

* Per year.

this curriculum is not included in the budget, materials for teachers and students will have to be printed to serve the rural education project schools; therefore, those costs and the cost of additional tapes are included.

3) Adult Education. The third problem level, adult involvement in the educational process, will be addressed through a coordinated strategy for providing adult educational services, and adult involvement in the local school committees.

The key to the adult education strategy is to follow INVIERNO and the Rural Health programs into the communities in Regions V and II. It will not lead into other communities at least in the short to medium term. The purpose of this approach is twofold: First, community infrastructures will have been established by INVIERNO's Agromocs who will expressly serve in confirming or in better articulating the perceived needs of the campesinos, as indicated in existing INVIERNO baseline studies; and second, the availability of the Agromocs and Health promoters will facilitate the curricula development, testing and correction process.

The second step will be to initiate the process of adapting and programming curricula to suit the perceptions and needs of the campesinos. Several sources are readily available for this process. The most obvious is the set of INVIERNO objectives in any given community. These materials will be available, inter alia, in the form of crop calendars with specific time phased objectives to be achieved each cropping season. A second source of materials readily available for adaptation is in the Ministry of Agriculture demonstration centers and a third in the rural agricultural schools. Finally, the Health promoters will also have materials which could and should be used for accelerated basic training and to assure that health messages are widely disseminated.

The third step will be to conduct follow-up baseline studies of the needs and desires of non-INVIERNO communities. This step will be used over time to determine the coincidence or difference in the needs perceived by other communities. The findings are intended to serve as a means of ascertaining the extent to which the curricula developed in the INVIERNO communities can be adapted to other areas, and, more importantly, to determine whether or not it makes sense to try new areas before INVIERNO has the opportunity to develop some of its programs.

If the results are positive, INVIERNO and the MPE will organize new techniques to increase access to rural education and to accelerate the development process in Regions V and II.

a) Curriculum for Adult and Adolescent Education. Both curriculum needs and broadcast scheduling will be investigated as part of the baseline study carried out under the grant section of the grant/loan project. This survey will also provide information on socio/economic characteristics of the target audience and existing adult education curricula available from other institutions such as the Regional Agricultural Schools, INVIERNO, the National Agricultural Institute, the Ministry of Health, and MPE's own Adult Education Division. From these sources, and based on educational objectives derived from the needs assessment, a significantly expanded MPE adult education staff, aided by technical assistance, will develop sequenced radio messages.

b) Curriculum Areas. As the study of possible alternatives for rural adults indicates (see PCI Report), there is a need for practical, process oriented adult education that can broaden agricultural skills and which can be immediately useful, such as instruction in basic health and nutrition practices, small-plot agricultural skills, basic reading, basic economic concepts and applied mathematics.

Technical assistance will be provided MPE to train a professional staff capable of designing, producing, and evaluating curriculum for adult education at the same time that they design and produce curriculum packages (taped lessons for broadcast, teachers guides, printed student work sheets) for adult education in the above mentioned major subject areas over a 5-year period.

Accelerated basic education is the foundation of the present MPE adult education curriculum. Numeracy and literacy in 3-years, the primary goal of the MPE, would continue to be a goal of the proposed new curriculum, but adaptation of the existing materials in these two important areas will be a thorough going re-working of lessons in content and sequence of material in order to produce meaningful, attractive broadcast lessons.

Lessons developed in the various subject areas will keep pace with each other, but because of the greater complexity of curriculum

development for adults, development of the full complement of subjects for an accelerated 2-year program will take 4-years (see Annex J).

c). Number of Adult/Adolescent Educational Lessons. A baseline study will provide information as to the best hour of day and length of time for adult education broadcasts as well as the maximum number of times per week lessons should be broadcast and what subject areas are most in demand and most needed.

However, in order to estimate approximate costs of curriculum development for accelerated basic education, the following assumptions were made:

- Applied mathematics and basic literacy will require the most time to teach and should, therefore, be broadcast three times a week, or 120 lessons per year. Development of these lessons is spread over four years to allow sufficient time to prepare new reading and math lessons' content which will relate to rural health, nutrition, family planning and agriculture/economic concerns.

- Although health and nutrition content will be included in the basic math and reading lessons, additional health, nutrition, and family planning lessons are needed, especially to meet the interests and needs of rural women. Therefore additional health and nutrition lessons are estimated at one (1) a week or 40 per year for a total of 160 specialized lessons covering a variety of topics.

- Agriculture information can be divided into general agricultural practices, cash-crop farming and animal husbandry for family use. Therefore, agriculture broadcasts are estimated at two a week or 80 per year, for a total of 320 broadcast lessons offering information in all three areas.

- Basic economics for the rural dweller includes financing and marketing practices, concepts of home cash management, investment and savings and other topics as they relate to the economic activities of men and women. Therefore, one basic economics lesson is to be scheduled each week for a total of 40 lessons per year. 240 lessons will be developed over four years to give a balanced presentation appealing to both men and women.

Guides and student activity sheets will also be provided for each lesson in all subjects.

d). Delivery System for Adult Education. The delivery system for adult education will take the form of a radio forum, or half-hour broadcast, followed by discussion or other appropriate monitored activities. Monitors of the radio-forums will be teachers salaried by MPE. They will be assisted in curriculum evaluation activities by INVIERNO Agromocs and health promotors.

Program participants who successfully complete the sequence of lessons in basic education and receive an acceptable score on a standardized literacy/numeracy test, will receive a certificate of 6th Grade equivalency from the MPE.

e) Delivery System for Rural Adolescent Centers (RACs). Adolescents and adults are grouped together under this activity although the curriculum delivery systems will be different for the two groups. The rural adolescent center (RAC) provides a semi-formal education program offering both formal course work and on-the-job training in agriculture (see Strengthening Rural Educational Delivery Systems). The curriculum in these centers overlaps projected adult education curriculum in at least three areas: agricultural practices, basic education (numeracy and literacy) and health/nutrition. However, broadcast times which might suit the out-of-school adult population, would be inconvenient for these centers which alternate 2-weeks in and 2-weeks out of school. Therefore, recorders and cassettes will be used in these schools to offer opportunity for more flexible scheduling. Tape duplicates of the radio broadcast lessons can be made at a relatively low cost, and cassette recorders will be provided to each of the RAC centers in Regions II and V.

4) Materials. A major component activity, integral to curriculum development for both adults and primary students, is the production of materials related to the taped lessons.

Teachers' guides will be prepared in the form of a complete step-by-step plan for each lesson with suggested activities for followup. These guides will not be bound, but will be issued in loose leaf form each month at the supervisors' workshops for primary teachers. This system of printing and issuing lesson guides separately allows curriculum to be introduced into schools as soon as it is ready and also permits changes to be made easily.

Most taped lessons will also have accompanying student work sheets. Lessons addressed to all grade levels will have different worksheets for each level.

c. Inputs and Budget

1) GON Inputs

Personnel. Additional staff will be required in the following sections: Curriculum, Radio and TV, Primary Education, Materials Production, Agriculture Education, Adult and Non-Formal Education and Evaluation. MPE will provide 29 new staff members for the curriculum development team, in addition to 15 staff members presently working in the Masaya Radio Math Project. Cost of MPE personnel over the 5-year project period will be $1,584,000.

Materials. MPE will also contribute a gradually increasing amount of the cost of curriculum materials - tapes, guides and worksheets, assuming a greater proportion of the cost each subsequent year. Operating costs will be entirely MPE input.

Recurring Operating Costs. The combination of highly paid personnel qualified to continue the process of curriculum development plus extensive production of consumable student materials such as worksheets (giving the students for the first time something other than hand-copied notebooks for visual reference) will result in recurring operational costs of $1,684,000 per year, which the MPE has agreed to provide.

2) Joint GON/A.I.D. Funds

Personnel. Technical assistance will be needed in almost all curriculum areas, but particularly in broadcast script writing, reading and adult education. 24 person/years of technical assistance will be provided over the life of the project. (See Annex J for financial details.) Total cost A.I.D.: $1,570,000. Funding: A.I.D.: Grant, $200,000; Loan, $1,205,000; GON, $165,000.

3) A.I.D. Inputs

Materials. Cost of broadcast tapes, guides and worksheets will be shared with the GON during the 5-year project period. Total cost A.I.D.: $1,740,000. Funding: Loan.

3) Component Budget

SOURCE OF FUNDS

(In U.S.$000)

Uses of Funds	A.I.D. Grant	A.I.D. Loan	GON	TOTAL
Technical Assistance	200,000	1,205,000	165,000	1,570,000
Operating Costs			1,747,000	1,747,000
Materials		1,740,000	1,684,000	3,424,000
TOTAL:	200,000	2,945,000	3,596,000	6,741,000

Total A.I.D. Funding: 3,145,000

d. Component Timetable: (See Annex R)

e. Outputs and End of Component Status

1) Outputs

a) Output 1.

Improved primary curricula for grades 1 - 4 which meets the needs of rural students ages 6 - 12. Curricula content will include the following areas: Mathematics, Reading, Agriculture, Health/Nutrition, and Social Studies.

b) Output 2.

Adult education curricula directly related to the job skill needs of rural adolescents and adults, based on data provided by MOH and INVIERNO and a comprehensive baseline study to be carried out under the Grant portion of this project. Curricula areas will include: Basic literacy and numeracy, agriculture, health and nutrition, and basic economics.

c) Output 3.

Training curriculum to prepare three groups of educators:

i. Supervisors and master teachers - a sequenced training to cover not only revised curriculum content but methods of supervision and assistance to classroom teachers.

ii. Regular and Comarca Teachers. Curriculum for two levels of training. Those with some normal school background and those without any teaching background, to cover curriculum content, methods of multi-grade teaching, Grades 1-4 , preparation of classroom materials, human growth and development, lesson planning, rural curriculum methods and human relations training as applied to community development and classroom teaching.

iii. Teachers of Adolescents and Adults. A training curriculum to cover not only techniques of radio-forum teaching, but curriculum evaluation and principles of adult education.

d) Output 4.

Teachers' guides, student worksheets, and tape cassettes to accompany each lesson developed for both primary and adult/adolescent education.

e) Output 5.

Evaluation of the effectiveness of the new curriculum, both in terms of summative evaluation involving pre and post testing to determine effectiveness of curriculum for an entire subject area and the developmental evaluation involving revision of individual lessons. Technical assistance will be provided to MPE to carry out the design and implementation of curriculum education as part of the curriculum development process. A written summative evaluation will be produced at the end of the first two years and at the end of the fifth year of the project.

2) End of Component Status

a) Improved primary curricula for grades 1 - 4 in use in primary rural classrooms in Regions II and V in INVIERNO - MOH communities.

b) Adult education curricula being taught through radio broadcasts followed by community forum and/or tape cassette presentation in over half the rural communities reached by INVIERNO and the MOH.

c) Supervisors, master teachers, regular and comarca teachers and adult education monitors using new methods of teaching in their educational activities in rural schools in INVIERNO and MOH communities.

d) Primary and adult education lessons are broadcast on a daily schedule. The lessons are in use in EAC and CFER schools, and supervisors have duplicate sets of tapes available for lending to teachers.

e) A written evaluation of the educational effectiveness of the new radio and tape cassette assisted curriculum.

4. Training for Supervision and Teaching (Component Four)

a. Background. A school system can only be as good as its teachers. However, the Education Sector Assessment has indicated that many rural schools are without teachers, and those teachers who are assigned to rural areas are in most cases poorly trained. Seventy-five per cent of the teachers in primary schools have the title, "maestro de educación primaria." One way of attaining this title is to complete six years of normal school training in addition to six years of primary education. However, in-service teachers with no degrees but with five years of training in professional training courses held on Saturdays and during vacations also fall in this category. Only 1% of all primary teachers have any university training. The present minimum normal school training required for primary teachers is three years; yet normal schools themselves have a relatively high percentage of failures and dropouts during the first two years, and the primary program curriculum is not taught until the third year.

Primary teachers earn a basic monthly salary of $107 to $121 U.S. (See Education Sector Assessment).

In addition to poor and insufficient training, few rural teachers have adequate support from the Ministry of Public Education. Books and teachers' guides are not available in numbers adequate for the student population; over 75% of rural schools do not have sufficient furniture; curriculum content is oriented toward urban students; and teaching methods emphasize rote learning. Supervision on the departmental level often takes the form of sporadic visits from the supervisor who collects attendance records and relays occasional administrative messages from the Central Office in Managua. Small wonder, then, that teacher absenteeism is high in rural areas and that 139 out of 979 schools in Regions II and V are presently closed due to lack of teachers.

This project activity proposes to meet the need for well-trained, committed teachers through a continuing program of pre-service and in-service orientation and training for supervisors, master teachers, regular teachers, and

Comarca teachers (for the Comarca School Circuit Schools is to be described below) who will teach in the restructured school system in Regions V and II. Teaching personnel from the rural adolescent training centers, EAG and CFERs who will be implementing the accelerated basic education radio-supported based curriculum to be developed under this loan, will also receive in-service training on the content and teaching methology of the revised curriculum. Teachers are motivated to teach when they feel confident of their classroom skills, which is a major goal of this project component. (See Annex J Multi-Grade Teaching).

In the initial stages of the project, personnel will be drawn primarily from the present pool of primary teachers. However, as the number of schools in the program expand, new teachers will be added to the system. To assure that their pre-service training is relevant, teaching personnel from the four normal schools operating in Regions V and II will participate in a series of orientation and curriculum workshops. These workshops will also be open to personnel from the education departments of UCA and UNAN to keep them apprised of teacher training trends in the Ministry of Public Education. The inclusion of national and private University staff in these workshops will be a first step toward addressing the need for articulation and coordination of curriculum development programs at all levels of the education system.

b. Role of the National Education Center. In June of 1972, USAID Loan 524-L-027 provided funds for the establishment of the National Education Center. This center has been given responsibility for in-service training of personnel employed at the primary and secondary education levels, such as teachers, school directors, supervisors, and inspectors, in order to increase their ability to carry out proposed new changes in curriculum, teaching methodology and new administrative procedures and to enable them to develop and carry out action oriented educational research, evaluation, innovations and experiments.

In accord with the purposes of this center, this project proposes to make use of both the physical facilities of the center and the teacher training curriculum the center is presently preparing under the World Bank Loan. The

24 trainers who will have the major responsibility for carrying out in-service training activities under this project will be considered part of the NEC staff.

Technical assistance will be provided not only to train the team of trainers, but to help the center design and carry out an adequate evaluation of the training aspects of the project.

c. Component Strategy.

1) Training of Trainers. The first activity of this component will be to train a cadre of 24 teacher trainers and 100 supervisors who can carry out the necessary orientation and training or re-training of 2,200 rural education personnel in Regions II and V. All training under this project component is time-phased with the complementary activities of other components. As more local school committees begin to function, schools are repaired, new teachers assigned or Comarca School Circuit teachers selected, training of larger groups of teachers will take place each year.

Groups of schools will be brought into the new system according to the plan developed as part of the Administrative Reform. Part of the curriculum for this training is currently being developed by MPE's Curriculum Division with technical assistance provided under the World Bank Loan. Curriculum pertaining to other aspects of the activities required for the restructuring of curriculum and school administration in Regions V and II will be prepared under the curriculum sub-project of this loan.

Because the improvement of training and improvement of supervision are complementary activities, supervisors must not only be retrained, but their role must be redefined to include the training of others.

During the first year, 12 teacher trainers and 10 supervisors will be trained in intensive six week seminars to be held at the National Education Center in Managua. They will receive motivation and human relations training, and will learn group process methods as well as techniques of

multi-grade teaching, supervision, and methods of teaching using radio-supported instruction. They will be taught how to use video-tape recorders and other audio-visual materials as teacher training tools.

Trainers will form part of the NEC staff, but they will carry out their training functions in the training locations selected in each department. These locations will be near enough to trainees' homes so that travel to and from workshops will not be costly and trainees may return home on weekends.

Normal Schools, Secondary Schools and Institutes with boarding facilities will be used for the training. MPE will be able to provide this type of facility in all departments of Regions II and V. No training group will have more than 20 members.

During the second year, the first 12 trainers plus 10 supervisors will train two additional trainers and 10 supervisors.

During the third year two more trainers and 10 supervisors will be trained in training methods. In the 4th year, four trainers and 24 supervisors will be trained to take care of the increasing numbers of teachers to be trained. In the 5th year, the last four trainers and remaining 46 supervisors will be trained.

Number of 4-Person Training Teams Functioning each year (Cumulative)

Year	1	2	3	4	5
	5	8	12	19	31

Upon completion of their training programs, the teacher trainers will be grouped in teams of 4 persons each. At least one full-time trainer will be in each team; other team members will be departmental supervisors.

The teams will perform the following functions:

a) Train during periodic six week sessions other teacher trainers who will be needed as the program expands.

b) Train during intensive 6-week sessions, master teachers in skills neded for administration of the Comarca School Circuits.

c) Conduct initial 6-week orientation sessions for regular and Comarca teachers, and 6-week follow up sessions for Comarca teachers after their first year's teaching experience.

d) Conduct on-going training, in 2-week sessions, for regular and comarca teachers.

e) Provide additional specialized and on-going training, in 2-week sessions, for teachers monitoring the Accelerated Basic Education Program, including EAC and CFER teachers. Some of these teachers will be primary school teachers. The specialized training is in techniques of adult education.

f) Carry out 5-week re-orientation sessions for normal school personnel in Regions V and II.

Supervisors will perform additional functionas as part of their specific role as supervisors:

g) Once a month, one-day workshops will be held for the 20 teachers under each supervisor.

h) Twice yearly, classroom demonstrations will be provided for each of the teachers they supervise.

2) Training for Master Teachers. Over the five years of the project, 100 master teachers will be trained in techniques of teacher supervision/assistance, in-service training, new teaching methods, program evaluation and data gathering, materials preparation, and the administration of Comarca School systems.

Master teachers will be responsible for the quality of the teaching in each of the four Comarca schools under their supervision. The assistance to the Comarca teachers will include one classroom visit per week for observation,

demonstration teaching, and assistance with lesson plans and preparation of visual materials. They will also participate in the monthly group sessions conducted by supervisors for primary teachers.

Training for master teachers will take place in 6-week intensive workshops in the departmental capital cities and will be carried out by training teams composed of training staff members from NEC, departmental supervisors already trained under Output I and MEP Central Office advisors who will provide guidance in such areas as research and evaluation and new record keeping practices.

Number of Master Teachers Trained in 6-week Sessions Each Year

Year	1	2	3	4	5	Total
Master Teacher	-	2	20	30	48	100

3) Training of Regular and Comarca Teachers. The third component task is the re-orientation of 1,477 regular teachers and initial training of 400 Comarca teachers and their on-going training over the period of curriculum development.

There will be no more than 20 teachers in each training group, and 4 trainers/supervisors will work with each group. Training sessions will be held as close to the teachers' community as possible, both to reduce costs and to provide a setting as close as possible to the one in which the teachers will work.

Decentralized supply points have been suggested as part of the administrative reform. Training held near the new departmental supply centers would provide an opportunity for teachers to learn how to use the new system.

Teachers' entry into the radio-supported rural education program will be spread over five (5) years, based on the completion of school repair and construction, curriculum development, and preparation and pre-testing of radio messages.

Each teacher will receive an initial 6-week orientation, which will be carried out by the training teams formed as part of Output 1. This orientation will include community development and group leadership training, and instruction in new teaching methods, to include the use of the new radio-supported curriculum, and methods of adapting curriculum to suit community and student needs. Community teachers, who for the most part, are literate laypersons with no teaching experience, will receive an additional 6 weeks' follow-up training after their first year's teaching experience.

During each subsequent year of the program, the trainers will conduct 2-week curriculum workshops for all teachers actively participating in the program to date. These workshops will be held for groups not exceeding 20 teachers to give as much opportunity as possible for interaction between teachers and trainers. To augment the initial 6-week training, Comarca School Circuit teachers will also be visited once a week by the master teacher who will teach demonstration classes, assist with the preparation of weekly plans, and provide additional teaching materials to the Comarca teacher. The Ministry of Public Education will grant credentials to these Comarca teachers based on criteria established by the Ministry so that it will be possible for a Comarca teacher eventually to move up into the regular MPE teaching salary scale.

All teachers, regular, master and Comarca will also meet once a month for a 1-day workshop with their departmental supervisors (1 supervisor for every 20 teachers). In addition to providing an opportunity to impart new information to teachers, these workshops will provide a forum for teacher-feed-back and evaluation of the new curriculum

4) Preparation of Teachers for Accelerated Basic Education (ABE)

Another training activity is the preparation of teachers who will monitor the radio forum accelerated basic education programs and teachers who will teach in the EAC/CFER schools (defined in Component 5).

Accelerated Basic Education (ABE), as presently carried out by MPE, is a literacy/numeracy program leading to Primary Certification for out-of-school persons 14 years of age and over. At present the program is carried out in urban primary schools during evening sessions. Teachers are drawn from the Division of Primary Education.

A modification of the Accelerated Basic Education Program is used in the rural adolescent education centers established by FUNDE, a private voluntary/ organization, and the Ministry of Public Education (CFER/EAC).

The MPE intends to further extend these programs in rural areas through an adaptation of the basic primary curriculum for radio broadcast and the gradual development of a technical training curriculum to meet the needs of the rural population (See Curriculum Component). Each radio broadcast will be followed by a forum led by a MPE teacher who may occasionally be aided by an INVIERNO Agromoc or health promotor.

The Accelerated Basic Education Program will be established initially in communities already organized by INVIERNO technicians, who have requested this type of educational assistance. Teachers who are willing to accept teaching positions in this program will be salaried by the MPE. For teachers already teaching in the primary school, salary supplements will be provided.

Special additional training for both EAC/CFER staff and the ABE locality teachers will be provided by the training teams. The initial 2-week training sessions will broaden teachers' monitoring and group discussion skills and increase their capacity to assess community needs. Curriculum development in the technical skill areas of this program will build upon baseline data and training needs assessment carried out by local community teachers. Teachers participating in the Accelerated Basic Education Program will assume the following functions:

a) Student record keeping,

b) Presentation of material to supplement radio broadcasts,

c) Evaluation of student progress,

d) Participation in community education needs analysis and goal setting,

e) Feedback to curriculum development team,

f) Cooperation with other agencies providing adult education services, such as the Ministry of Health and INVIERNO.

As each new curriculum area is developed, additional -week workshops will be provided for these teachers.

5) Normal School Staff Training. While the first phases of this project will be carried out by the present corps of retrained primary teachers, additional teachers required by an expanded system will be drawn from the normal schools. To avoid costly repetition of training, it will be necessary to develop a permanent pre-service training capability within Nicaragua's normal school system to orient new teachers to the revised curriculum and delivery systems which will be introduced in Regions II and V. Thus, a series of workshops will be held to expose normal school professors in the four (4) normal schools in Regions V and II to the new methods, materials and curriculum being introduced into the system. Professors from the education departments of the two universities will also be invited to attend the normal school workshops so that their preparation of secondary normal school teachers can also reflect the new approaches to education.

These workshops will emphasize community leadership, lesson planning, multi-grade teaching of four (4) grades in one room, visual material development, child growth and development, and principles of teaching and learning. Six week workshops will be offered in each of the four (4) normal schools in Regions II and V over the life of the project. An expected 40 to 60 professors will be trained.

d. Inputs and Budget

1) GON Inputs

The Ministry of Education will provide per diem costs for in-service training, calculated on the basis of $5.00 per day times the total number of persons involved in the project each year and the average number of training days received. MPE input will also include incremental salaries of trainees, and transportation for training teams. The estimated GON counterpart for operating costs under the training component is $1,770,000. Detailed cost estimates are provided in Annex K. Recurring annual costs of $525,000 will continue to be met by the MPE subsequent to Project completion.

2) Joint GON/A.I.D. Inputs

While all training of teachers and supervisors will be done by MPE personnel, technical assistance will be needed during the first phases of the project to train the trainers. Other inputs include materials and equipment for training and per diem costs of teacher workshop participation. The National Education Center's present efforts in devising a teacher training curriculum under the Work Bank Loan will provide a base for this project's activities in teacher training. The World Bank will have provided technical assistance to the National Education Center to develop training curriculum for primary school administration and supervision, primary teacher training and student evaluation. The A.I.D./GON will provide 48 person/months of technical assistance for human relations training applied to community development and education, radio-supported teaching methods, and adult education teacher training. The estimated cost is $220,000. A.I.D. will loan finance $220,000 of these costs while the GON will pick-up $20,000 of the costs.

3) A.I.D. Inputs

A.I.D. will finance other training costs which include video tape recording equipment and tapes. These costs amount to $42,000 over the life of the project.

4) Budget

SOURCE OF FUNDS
(In US$ 000)

Use of Funds	A.I.D. (Loan)	GON	TOTAL
Technical Assistance	220,000	20,000	240,000
Materials and Equipment	42,000	-	42,000
Operating Costs	-	1,770,000	1,770,000
TOTAL:	262,000	1,790,000	2,052,000

e. Component Timetable: (See Annex R.)

f. Outputs and End of Component Status

1) Outputs

a) Output 1

The first output is a trained cadre of 24 teacher trainers and 100 supervisors who can carry out the necessary orientation and training or re-training of 2,200 rural education personnel in Regions II and V.

b) Output 2

One hundred master teachers will be trained in techniques of teacher supervision/assistance, in-service training, teaching methods, program evaluation and data gathering, materials preparation and the administration of Comarca School Systems.

c) Output 3

The third output is the re-orientation of 1,477 regular teachers and initial training of 400 Comarca teachers, and their on-going in-service training over the period of Curriculum Development.

d) Output 4

The fourth output is the specialized training of 1,100 teachers for the Accelerated Basic Education Program. Training will take place in centralized localities within each region.

e) Output 5

The fifth output is the training of normal school staff capable of providing pre-service training in the skills and knowledge required by the restructured primary system and the rural primary curriculum adapted for radio presentation.

2) End of Component Status

(a) A trained cadre of teacher trainers, based in the

National Education Center, is conducting teacher training workshops in Regions II and V.

b) Supervisors in Regions II and V are actively assisting with teacher training, administering the restructured primary schools in their departments, and providing in-service support for education teachers.

c) Master teachers in the Comarca system are providing assistance and guidance to Comarca teachers as planned.

d) Regular and Comarca teachers are trained in the use of radio-based curriculum and other skills necessary to the improvement of rural education and are functioning at an improved level in rural schools.

e) Teachers are trained to teach accelerated basic education and are conducting classes for adults and adolescents in both the EAC/CFER centers and in the rural schools.

f) Normal school staff members are trained in the new teacher training content and are putting it to use in their normal school classes.

5. Strengthening Rural Educational Delivery Systems (Component Five).

a. Background. The rural educational system in Nicaragua suffers from a lack of adequate infrastructure to efficiently deliver relevant educational services services to the rural poor. Many rural communities in Regions II and V have no schools. It has been estimated (PCI Report) that approximately 40,000 children in these regions have no access to primary schooling due to the lack of schools. Two-thirds of these children come from the departments of Matagalpa and Jinotega in Region V.

Even if a school exists, it does not mean that it will be providing educational services to the local children. Often there are no teachers, due to the lack of management capability and/or financial resources on the part of the MPE. In 1976 there were 139 primary schools in Regions II and V where there were students and a building but no teacher.

In some cases the school buildings are in need of major repair and therefore are closed until the repairs can be made. Most of these repairs require substantial inputs of frequently unavailable human and financial resources. In 1976, a survey was undertaken by the MPE to determine the condition of existing rural primary schools in Regions II and V. (Summary of the Study in the PCI Report). The following table is a summary of the school repair needs in the rural areas.

Table 1

PHYSICAL STATUS OF EXISTING RURAL PRIMARY SCHOOLS

Description	Region II	Region V	TOTAL
Operating Schools	341	390	731
Closed Schools	82	166	248
Available Classrooms (Operating and Closed)	866	611	1,477
Schools in Need of Repair	162	235	397
Schoolrooms in Need of Repair	272	258	530

Of the available classrooms in Region II, 31% are in need of major repair. In Region V, 42% of the available classrooms are in need of the same repair, with major repairs including but not limited to the following: Putting on a new roof, replacing a wall that is a safety hazard, laying a cement floor, etc.

An additional problem in the rural schools is that the classrooms do not have sufficient furniture for the number of students that attend classes. Some classrooms are without furniture while others have only 50% of the desks and chairs they need. Table 2 provides a summary of furniture availability in the rural areas.

Table 2

FURNITURE AVAILABILITY IN RURAL PRIMARY SCHOOLS

Description	Region II	Region V	Total
Classrooms w/o Furniture	189	179	368
Classrooms with only 50% of the needed furniture	549	212	761

Over 80% of the available classrooms in Region II are without school furniture or have only 50% of the desks and chairs that they need. The problem is equally acute in Region V where 64% of the classrooms are without adequate furniture.

The MPE has no institutionalized maintenance program which goes to explain, at least partially, the large number of schools in need of repair. Maintenance of existing rural schools is virtually non-existent. Where a major repair is required, the MPE usually contracts with the Ministry of Public Works (MPW) to perform the repair. This is often a time consuming process for even urban schools, with rural schools actually receiving very little assistance from either MPE or MPW. Minor repairs do get done but only if the teacher takes pride in his/her teaching environment.

Component Five will address the major infrastructure constraints that hinder the delivery of rural educational services. In addition, this component

will deal with the human resources needed to complement the new and improved infrastructure and the mechanism through which the adapted curriculum will be transmitted to the rural areas, that is, by radio. This major component has seven activities which will be described in detail below.

b. Activity A - Comarca School Circuits (CSC)

1) Description. Comarca School Circuits (CSC) will be established in areas where rural primary schools are nonexistent and needed. It is estimated that approximately 100 circuits will be established. On the average, each circuit will have four classrooms. Therefore this activity will finance the construction of 400 classrooms. (See Annex "L" for detailed costs of classrooms, house and furniture).

The local communities will be actively involved in building their schools. With the help and supervision of CARE technicians, the community will erect schools of stabilized adobe, using local materials wherever possible. The community is responsible for providing unskilled labor to work with the project-financed personnel, i.e. maestro de obra, mason, etc. See the Engineering Analysis for more detail on the self-help approach to construction. (Annex W)

In addition to building classrooms, the CSC will provide a house for the master teacher. The house will be the property of the MPE and be located in one of the communities in the CSC. The provision of the house, along with the 10% pay differential, are essential for the success of the Comarca system, as it provides incentive for the master teacher to live and stay in the community. Since the Comarca community teachers are chosen from within their communities, they are also expected to constitute a reasonably stable project element.

The selection of the CSC will be a coordinated effort between the MPE supervisors, MPE central office personnel and the promoters (MPE, INVIERNO, MOH) working in the rural areas. As a condition precedent to any primary school construction or repair activity, the MPE will gather data on the location of communities without schools, student population density, accessibility to a central location, etc. Through this process, areas will be chosen for CSCs. Each Comarca School will have a coverage radius of 2 - 4 kilometers depending on the geographical layout and student population of the area. It is estimated by the end of the project that each Comarca classroom will have 50 students. A student density of this magnitude is justified in Annex G where the average number of primary school aged children has been determined for INVIERNO served communities.

2) Inputs and Budget. Inputs to Activity A will be financed from two sources: The MPE budget, and the A.I.D. loan. Inputs by source and the estimated budget for Activity A are as follows:

a) A.I.D. Inputs. The A.I.D. loan will finance 100% of the CSC materials construction costs. All construction cost figures have taken into account the cost of the management firm that will coordinate construction activities (See Section IV.D) and the cost increases due to inflation. Total construction costs that will be financed by A.I.D. are estimated at $1,970,000.

b) GON Inputs. The GON must supply the Master Teachers and pay the LSC - chosen community Comarca teacher. This represents an increase in MPE personnel of 500 people which will require a budget outlay of $866,000 over the life of this project, and will require a recurring outlay of $492,000 per year thereafter, which the MPE has agreed to provide.

c) Activity Budget.

Use of Funds	A.I.D.	GON	TOTAL
Construction	1,970,000	-	1,970,000
Operating Costs	-	866,000	866,000
TOTAL:	$1,970,000	$866,000	$2,836,000

3) Activity Timetable. The following schedule illustrates an incremental rate of implementation under this activity. This timetable assumes that (1) local school committees have been formed on schedule and have requested a school, (2) appropriate CSC areas have been identified, and (3) a school maintenance plan has been adopted by MPE.

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Number of CSCs	-	2	20	30	48	100
Number of Class-rooms	-	8	80	120	192	400
Number of Circuits	-	2	20	30	48	100

4) Outputs and End of Activity Status.

a) Outputs. The major outputs expected under this activity are 100 Comarca School Circuits that have the infrastructure necessary to provide relevant education to the local communities.

b) End of Activity Status. Students in Regions II and V are receiving an education whereas previous to this loan educational services were not available to them due to the fact that they lived in isolated communities.

c. Activity B - Improving Existing Rural Primary Schools.

1) Description. The GON/A.I.D. rural education strategy is to extend education into previously unserved areas and improve the quality of the primary education in existing schools. The majority of the schools that will be assisted under this loan come under this second category, improving existing rural schools.

As was demonstrated in the background section of this component, a significant number of schools in Regions II and V are in need of repair. A 1976 MPE study of school repair needs shows that the majority (60%) of the approximately 750 schools operating in the area have been constructed by the local communities (Annex S). A.I.D. has only funded sixty (8%) of these schools and much of that construction was done in cooperation with the Ministry of Public Education. If these schools are to continue serving the rural areas they must be brought up to acceptable standards.

This activity will address the poor condition of the large number of rural schools. Local communities will be encouraged by the MPE and CARE to repair their schools through self-help means. This activity will also bring about permanent funding on the part of the GON to supply teachers in the 139 primary schools in Regions II and V which do not have teachers. This is also considered to be an improvement of existing rural primary schools as it makes the physical facility a functional entity. The possible need to provide additional incentives for regular teachers to teach in rural areas will be studied under the Administrative Reform Component of this project.

2) Inputs and Budget

a) A.I.D. Inputs. A.I.D. will loan finance the Architectural and Engineering supervision and inspection costs of repairing and reconstructing existing rural primary schools. These costs are estimated at $100,000.

b) GON Inputs. One-hundred percent of the costs for repairing and reconstructing existing schools will be financed by the GON. It is estimated that these costs will amount to $795,000. The GON will also finance 139 new regular teachers who will work in the schools that do not have a teacher at the present time. The MPE realizes that improved salaries and benefits for regular teachers working in rural areas must be an important part of its rural education program; they have agreed to finance a projected annual recurring cost hereunder of $252,000.

c) Activity Budget

Use of Funds	A.I.D.	GON	TOTAL
Repair and Reconstruction	-	795,000	795,000
Operating Costs	-	847,000	847,000
Supervision Costs	100,000		100,000
TOTAL:	100,000	1,642,000	1,741,000

3) Activity Timetable. Classrooms will be repaired based on the following timetable. It is assumed that LSCs will have been formed to formally request GON/A.I.D. resources and that all conditions precedent to this activity have been met.

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Classroom Repaired or Reconstructed	-	30	100	200	200	530

4) Outputs and End of Activity Status

a) Outputs. Improved school facilities will be the major output of this activity.

b) End of Activity Status. By upgrading the physical condition of existing classrooms in the rural areas, it is projected that the local teacher will be able to present educational material to the students in a more congenial learning environment. In addition, communities will be able to use these facilities for local social activities and meetings.

d. Activity C - Furnishing New and Existing Primary Schools.

1) Description. The lack of adequate desks and chairs in rural primary schools was discussed in the introductory material for this project component. The majority of schools in both Regions II and V do not have the school furniture needed to handle the number of students which attend classes. Students sit on the floor for their lessons with some paying little attention to the teacher and others actually leaving the classroom to play outside.

Furnishings include tables and chairs, a teacher's desk, a blackboard and the transportation cost to get the materials to the school. Based on local prices for these commodities, the Ministry of Public Education has estimated that it will cost on the average $340 to furnish each new Comarca schools and existing primary schools. It will cost $170 per school for these schools which have 50% of the needed furniture. (For more details, see PCI Report).

Furnishings can be provided from at least three sources: (1) the community, where the furnishings are made by local persons with carpentry skills; (2) local carpentry shops which could be contracted to do the work; or (3) Ministry of Labor vocational schools which teach carpentry as an occupational skill and have produced school furniture for the MPE in the past. Given the large number of tables and chairs that will be needed under this activity, the MPE will most likely contract with a number of different entities. Preference will be given to competent local craftsmen in order to generate income producing employment in the rural areas.

2) Inputs and Budget

a) A.I.D. Inputs. The A.I.D. loan will finance all furnishing costs for new and existing rural primary schools. The estimated cost of this activity is approximately $398,000.

b) Activity Budget

Use of Funds	A.I.D.	GON	TOTAL
School Furnishings	398,000	-	398,000

3) Activity Timetable. Classrooms will be furnished based on the following timetable. This schedule is dependent upon the completion of the Comarca schools, the repair of existing rural schools and the formation of LSCs.

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
New and Existing Classrooms w/o Furniture	-	54	100	260	354	768
Existing Classrooms where Furnishings are 50% Incomplete	-	50	100	260	351	761

4) Outputs and End of Activity Status

a) Outputs. Adequately furnished school facilities will be the major output of this activity.

b) End of Activity Status. By increasing the quantity of tables and chairs within the primary schools, it is projected that the local teacher will be able to more effectively present educational material to the students.

e. Activity D - Ongoing School Maintenance

1) Description. A major factor that contributes to the large number of rural schools needing repair is an inadequate or nonexisting school maintenance program. Teachers often take it upon themselves to repair their classrooms; but due to constraints such as money and carpentry skills, only small, minor repairs ever get done.

The local school committees will be responsible for the upkeep of their schools under the new GON strategy. However, the communities need a fund from which to draw the necessary financial resources to make the repairs and replace or buy new furniture. As the LSCs become more informed of their responsibilities and begin to operate as dynamic community organizations, it is hoped that eventually more of the financial responsibility for maintaining schools will fall on the LSC. At present, and for the planable future, however, the MPE must play the major financial role.

Under the Administrative Reform component of this program, a construction/maintenance advisor will work with the MPE in establishing a school maintenance plan for the primary schools in Regions II and V. The plan should be ready for implementation early in the second year of the program and its implementation will be a condition precedent to all school construction and repair activities under the loan. A proposed maintenance plan is included in Annex L.12. This plan provides maintenance fund to each school on a per student basis with 10% of all schools receiving major financial assistance each year for major repair. Estimates for the maintenance funds were made based on this proposed plan. The MPE and USAID expect that substantial modifications will take place when a maintenance

plan is formally adopted and implemented by the MPE. Nevertheless, it provides a mechanism for estimating reasonable budget levels for this activity over the life of the project.

2) Inputs and Budget

a) GON Inputs. The GON will provide a line item in its budget beginning in the second year of implementation of this project for maintenance of existing schools. These funds will be disbursed in accordance with the MPE's School Maintenance Plan. It is estimated that the plan will be funded with $955,000 over the life of the project and entail annual recurring costs thereafter of $255,000. All such maintenance costs will be financed by the GON.

b) Activity Budget

Uses of Funds	A.I.D.	GON	TOTAL
School Maintenance	-	955,000	$955,000

3) Activity Timetable. Funds will be available for school maintenance over the life of the project as follows:

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
School Maintenance Budget Line Item	-	225,000	230,000	245,000	255,000	$955,000

4) Outputs and End of Activity Status

a) Output. The principal output of this activity will be an institutionalized mechanism through which rural schools can receive financial assistance to maintain their school buildings.

b) End of Activity Status. An operating school maintenance program will help the LSC in maintaining rural schools, thereby reducing the number of schools that need to be closed due to a dilapidated physical structure or inadequate school furniture.

f. Activity E - Educational Support and Service

1) Description. Inefficient educational support from supervisors and central office personnel has often been cited as another major problem in rural education in Nicaragua. Supervisors cannot reach many of the isolated communities because they lack adequate transportation. Central office personnel often have an urban orientation because they do not have ready access to the countryside.

Thirty-five 4-wheel drive vehicles will be purchased under the A.I.D. loan for supervisory use on a shared basis. Five 4-wheel drive vehicles will be purchased for the MPE central office staff, three for the Department of Investments and two for the Non-Formal Education Division, where the community development activities will be monitored. The Department of Investments will use the vehicles for regular building inspection trips to Regions II and V.

An additional form of transportation financed under this loan is the acquisition of twenty mules for use by the supervisors in the most isolated areas, primarily in Region V. Four-wheel drive vehicles will not have access to many of the Comarca School Circuits or even to some of the existing rural primary schools. Mules will facilitate educational supervision especially in these areas and hopefully reduce rural teacher isolation.

An additional MPE support activity will be the provision of school garden kits to rural primary schools. An integral part of the GON/A.I.D. educational strategy is to provide students relevant educational experiences that will impact upon their daily lives. School gardens will provide a supporting aid for teaching the health/nutrition and agriculture curriculum in the Comarca and existing rural schools. These gardens will be developed with the cooperation of the INVIERNO Agromocs and the MOH promoters. These individuals will also be available to be guest teachers, using the school garden or its produce as their subject and/or teaching aid.

When the local school committee and the local teacher have decided to establish a school garden, the LSC can ask that the MPE deliver to them a tool kit with the necessary agricultural implements to cultivate a garden. These implements include shovels, rakes, hoes, machetes, etc.

2) Inputs and Budget. Inputs to Activity E will be financed from two sources: GON budget allocations to the MPE and the A.I.D. loan. Inputs by source and the estimated budget for Activity E are as follows:

a) GON Inputs. The GON will finance the increased number of supervisors that will be needed to support and service the extended and improved rural education system. Thirty-two new supervisors are programmed into this activity. In addition, all operating costs of the programmed vehicles (except the mules) will be financed by the GON. The mules will be maintained by local school committees whose communities are accessible by a four-wheel drive vehicle and located near schools which are not accessible by a vehicle. Total operating costs for this activity over the five-year period of the loan are estimated at $1,042,000, to be followed by annual recurring costs of $258,000 which the MPE has agreed to provide.

b) A.I.D. Inputs. The A.I.D. loan will finance the purchase of 40 four-wheel drive jeep-type vehicles at an estimated price of $7,000/vehicle. These vehicles will be procured and delivered to the field and central office staff over the first three years of the project. Total motorized vehicle cost is estimated at $280,000. The mules (20) will be purchased locally during the second and third years of the project. It is estimated that the twenty mules will cost $7,000.

The garden kits will be distributed after the school has been built or repaired, and is operational. Gardens will be most relevant when the agriculture and health/nutrition curriculums begin to be used in the primary schools in 1979. Estimated cost of the A.I.D. financed garden kits is $187,700 with each kit costing $100.

c) Activity Budget

Use of Funds	A.I.D.	GON	TOTALS
Garden Kits	188,000	-	188,000
Vehicles (including mules)	287,000	-	287,000
Operating Costs	-	1,042,000	1,042,000
	475,000	1,042,000	1,517,000

3) Activity Timetable. This timetable assumes that local school committees are actively involved in the educational process and that the conditions precedent for this activity have been met.

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Number of School Kits Distributed	-	200	477	600	600	1,877
A.I.D. Financed Motorized Vehicles in the Field	14	11	15	-	-	40
New MPE Supervisors Working in Regions II and V	10	10	12	-	-	32

4) Outputs and End of Activity Status

a) Outputs. There will be two major outputs under this activity. The first will be an improvement in the service and support of rural educational programs on the part of the MPE's supervisors and central staff. Secondly, the school garden kits will facilitate learning by providing an environment where learning by doing can be the teaching methodology in some subject areas.

b) End of Activity Status. Supervisors and Managua-based staff will be assisting to a greater degree in the rural areas, thereby improving the quality of basic education being received by the rural poor. In addition, the school gardens, through what is learned in agriculture and health/nutrition by the students, will have a positive impact upon the nutritional habits of the rural populace.

g. Activity F - Rural Adolescent Centers

1) Description. The need to increase adolescent literacy and numeracy was demonstrated in an earlier section of this paper. To complement the basic primary educational program, the MPE is proposing that the present inadequate system of rural adolescent centers be greatly expanded and improved. The purpose of these centers is to provide an environment where rural adolescents (ages 14 - 20) can live and learn basic skills that are relevant and applicable to their occupations when they return to their rural environment. The RAC curriculum concentrates on six major subject areas: (1) Agriculture, (2) Rural Marketable Skills (e.g. carpentry, vehicle maintenance, etc.), (3) Home Economics, (4) Community Organization, (5) Basic Education (e.g. basic literacy and numeracy) and (6) Health Education.

The essential features of the RAC model have been sufficiently tested in Nicaragua so that this expansion can go ahead without extended experimentation. The model for the RACs was developed by FUNDE (Fundación Nicaraguense de Desarrollo) with assistance from the French Rural Development Mission. The first CFERs (Centros Familiares de Educación Rural) opened in 1973. At present there are eight CFERs functioning in Nicaragua, but only two of these centers are located in Regions II and V. The Ministry of Public Education also operates eightEACs (Escuela Agricola del Campesinado), but only three are in Regions II and V. The Ministry of Agriculture and the MPE provide staff and materials for the centers. FUNDE monitors the CFERs, and the EACs are operated directly by the MPE. Under the proposed program, FUNDE will continue to take an active part in the construction and operations of the CFERs as will the MAG in regard to the EACs.

Evaluation of the CFER/EAC model has pointed out the following advantages this approach has for adolescent education:

a) Participants come from communities within 25 km. of the centers. Generally, they are children of owners or renters of small

agricultural properties (10 manzanas or less). Nearly half are illiterate when they begin the program.

b) The program lasts two years, with the school calendar arranged so that the students attend when they are least needed for farm work at home.

c) A system of "alternation" provides one to two weeks' study at the center followed by one to two weeks at home, practising what was learned at school and sharing this learning with the family.

d) During the period at home, the center's monitors visit the family, reinforce the application of the new skills, and consciously involve the parents in the learning and the curriculum design.

The major difference between the CFERs and EACs is that the EACs put more emphasis on teaching job skills that require a workshop (e.g. carpentry, mechanics). The CFERs concentrate on more basic skills and knowledge such as agriculture, home economics and basic education, and less on rural marketable skills. Therefore, the EAC is a more sophisticated operation with higher quality buildings and equipment. The CFER is more rustic and is often located in the smaller communities. The two types of centers have integrated programs because those students that graduate from a CFER often transfer to an EAC for a limited time period to gain those additional job skills the EAC offers. Therefore, the CFER frequently serves as a feeder school to the EACs.

Both centers are multi-functional and are used by the local community for meetings and celebrations. For a center to be built in a particular town the community must formally request that it be a recipient and demonstrate a willingness to actively support and monitor its operation. The community must also provide the land on which the center will be constructed.

2) Inputs and Budget

a) MPE Inputs. The MPE will finance 100% of the construction costs which is estimated at $1,080,000. This covers the construction of six (6) CFERs and six (6) EACs. The major MPE cost under this activity

will be the staffing requirements of these centers. Personnel and operating costs, to be totally financed by the MPE, are estimated at $636,000 over the life of this project. They have also agreed to fund the recurring operational costs of $318,000 per year.

b) A.I.D. Inputs. A.I.D. will finance A&E supervision costs which are estimated at $120,000. In addition A.I.D. will cover all furnishing and equipment costs of these new centers which amounts to $188,000.

c) Activity Budget.

Use of Funds	A.I.D.	GON	TOTAL
Construction	-	1,080,000	1,080,000
Supervision Costs	120,000		120,000
Equipment and Furnishings	188,000		188,000
Operating Costs	-	636,000	636,000
TOTAL:	$308,000	$1,716,000	$2,024,000

3) Activity Timetable. This timetable assumes that sufficient communities have requested CFERs or EACs to be located in their town and that these communities are willing to support their operations. Successful compliance with the conditions precedent for this activity are also assumed to have been met.

Description	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
CFERs Constructed	-	-	2	2	2	6
EACS Constructed	-	-	2	2	2	6

4) Outputs and End of Activity Status

a) Outputs. The major outputs of this activity are six newly constructed EACs, and six newly constructed CFERs. Overall, six EACs will be added to the three existing in Regions II and V. An additional six CFERs will complement those two that are already functioning in the target areas.

b) End of Activity Status. As a result of the larger number of RACs in Regions II and V, rural adolescent will have greater access to skills and knowledge relevant to their daily lives. Increased numbers of students participating in the RAC programs and applying their acquired skills in their work will indicate the success or failure of this activity.

h. Activity G - Radio Transmitting and Receiving Capability

1) Description. The MPE has chosen radio as one of the primary transmitting mechanisms for delivering the adopted curriculum to the rural area. Given the geographically dispersed nature of the rural population, radio forms a key part of the most effective means through which to channel educational services. Although the human factor of the teacher also remains pivotal, most

rural primary teachers do not have the educational background or training to be particularly innovative in regard to the types of materials and lessons they prepare. Therefore, quality teaching assistance from other sources is an improvement over what is being offered at the present time. The visual materials aspect has been covered in the Curriculum Component.

The Masaya Radio Math Program, partially financed by A.I.D./W/TAB has shown that radio-supported education can be a major improvement over traditional teaching methods. Results of the first evaluation of the Masaya program shows that children learning math with the radio-supported curriculum test 25% higher than those students learning by traditional methods. (See Bulk File) It is recognized that mathematics is a subject for which a radio-supported curriculum can be more easily developed than a subject such as language arts (reading, writing). Nevertheless, the MPE and A.I.D are confident that all the programmed subjects can be developed given the lead times involved and the adaptive nature of the curriculum.

All educational-based radio programs in Nicaragua face one major constraint in their efforts to reach their target group. Large blocks of time for educational purposes are not available on either the commercial or governmental stations. Commercial stations are willing to sell time but a time block of 1 - 2 hours is the maximum available. The powerful (100 KW) governmental radio station, Radio Nacional, can only provide up to three hours a day because of its other programming commitments.

Even if Radio Nacional, or some other powerful radio station, were available, the MPE strategy under this program precludes their long term use. The MPE considers rural education as proposed in this program to be somewhat region specific. The announcers, financed under the curriculum development component, must be from Regions II and V. The agricultural information that is transmitted must also be as region specific as possible. For these reasons a single large transmitter was ruled out as an alternative.

Under this program the MPE is planning to install two radio stations. One will be located in Jinotega (Region V) and the other in Masaya (Region II). Each station will have 10 KW of power output and broadcast in the AM frequency. The Jinotega station will become operational in December, 1979 and

begin broadcasting lessons in February, 1980. The Masaya station will be brought on line in December, 1980 and will begin broadcasting for Region II in February the following year. The Masaya Radio Math Program will be absorbed into this program.

From February, 1979 till February, 1980 in Region V and till February, 1981 in Region II, the MPE will purchase commercial time for broadcasting the curriculum that will be developed. After February, 1981 sufficient curriculum will be developed to necessitate a separate radio transmitting capacity for the MPE in Region II and V. Region II is being phased in to the program at a slower rate than Region V because of the coordinated strategy with INVIERNO and MOH who will not be involved significantly in Region II until that time.

MPE and A.I.D. technicians traveled throughout Regions II and V to determine the transmitting requirements for a MPE station or stations. The results of their field strength measurements are presented in Annex L. The measurements show that the mountainous terrain of Region V does not act as a major obstacle for radio transmissions as was originally thought. Region II is less mountainous and the technicians saw no problem with receiving an adequate signal in any community in this area.

Preliminary discussions have been carried out between the MPE and the Director of Communications in regard to available frequencies and the general regulations that govern the broadcast media. The channel available for use under the MPE/A.I.D. project is 1,580 KH2 near the end of the band. Another possible channel would be 780 KH2 but this would only be used for the Jinotega station and then only if Costa Rica does not object because a Costa Rican signal does reach Region V at this frequency. The Director of Communications felt that both channels could be used in this program.

In addition to transmitting capability, the primary schools will need radios for every classroom involved in this project. Past experience in Nicaragua under the Masaya program demonstrates that schools take good care of their radio equipment. Under this program, the teachers will have the day-to-day responsibility of the radios while the LSC will assume the responsibility of replacing the batteries or the radio should it be damaged beyond repair.

2) Activity Inputs and Budget

a) MPE Inputs. The MPE will finance the operating costs of the two radio stations. Detailed calculations of operating costs have been included in Annex L.13. It is estimated that these recurring expenses will be $180,000 per year per station. The total cost over the life of the project is $927,000. In addition, the MPE will purchase the two parcels of land for the station and build the two buildings where the offices and studies will be housed. The estimated costs of the land is $20,000 and the two buildings will cost approximately $40,000.

b) A.I.D. Inputs. All radio transmitting and receiving equipment will be financed with A.I.D. loan funds. Annex L. 10 provides a detailed breakdown of component costs for the installed radio station equipment. With inflation and contingency factors included, the total cost of the two stations is $450,000 or $225,000 for each installation. A.I.D. will also finance the purchase of approximately 2,000 radio/recorders at a unit price estimated at $80.00. These units will be distributed to each rural classroom and to the EACs and CFERs participating in the accelerated basic education program. The radio/recorder combination will provide flexibility for the teacher in case he/she misses a lesson or the radio transmitter breaks down. Blank tapes will be made available through the master teacher and a master set of tapes will also be available so that any particular lesson can be recorded. The estimated cost of these radio/recorders is $160,000. The extra tapes have been budgeted under Component Three.

c) Activity Budget

Use of Funds	A.I.D.	GON	TOTAL
Land	-	20,000	20,000
Buildings	-	40,000	40,000
Operating Costs	-	927,000	927,000
Equipment			
Radio Stations	450,000	-	450,000
Radio/Recorders	160,000	-	160,000
TOTAL:	610,000	987,000	1,597,000

3) Activity Timetable

Description	Date
Bids submitted for turn-key design and installation of two 10 KW radio stations.	January, 1979
Land purchased by the MPE in Jinotega and Masaya.	May, 1979
First group of MPE radio technicians returns from training.	August, 1979
Jinotega station operational with staff.	December, 1979
Programming begins in Region V over MPE radio station.	February, 1980
Second group of MPE technicians returns from training.	August, 1980
Masaya station operational with staff.	December, 1980
Programming begins in Region II over MPE radio station.	February, 1981

4) Outputs and End of Activity Status

a) Outputs. The major outputs of this activity will be two 10 KW radio stations transmitting educational programs to Regions II and V. In addition, there will be receiving capability in the rural primary schools for these educational programs.

b) End of Activity Status. The radio stations will become a focal point for the GON's integrated rural development strategy as information from participating Ministries, and other agencies active in these two regions, can be broadcast through these stations. More specifically, the radio transmitting and receiving capability will serve as the teaching mechanism for reaching

the rural poor with a relevant, basic curriculum which will provide them with the basic skills and knowledge needed for a more productive life.

Summary Budget. GON, A.I.D. and community funding can be summarized in the following manner for Component Five, Strengthening Rural Educational Delivery Systems.

	Activity	A.I.D. (Loan)	GON	TOTAL
A.	Comarca School Circuits	1,970,000	866,000	2,836,000
B.	Improving Existing Rural Primary Schools	100,000	1,642,000	1,742,000
C.	Furnishing New and Existing Primary Schools	398,000	-	398,000
D.	Ongoing School Maintenance	-	955,000	955,000
E.	Educational Support and Services	475,000	1,042,000	1,517,000
F.	Rural Adolescent Centers	308,000	1,716,000	2,024,000
G.	Radio Transmitting and Receiving Capability	610,000	987,000	1,597,000
	TOTAL:	3,861,000	7,208,000	11,069,000

PART IV. ANALYSIS OF SECTOR PROGRAM

A. Financial Plan and Analysis

1. Financial Plan and Timing. Based on the Component Budgets shown in Part III. B. above - as further detailed and supported in Annexes I, J, K, and L - it is expected that A.I.D. grant and loan and GON counterpart resources will be allocated to the sector program approximately as follows:

Summary Cost by Project Inputs

(In U. S. $000s)

	A.I.D.		GON	Total
Component	Grant	Loan		
1. Administrative Reform and Management Improvement	585	340	830	1,755
2. Integrated Community Development	105	92	376	573
3. Curriculum Development & Related Materials Production	200	2,945	3,596	6,741
4. Training for Supervision and Teaching		262	1,790	2,052
5. Strengthening the Rural Education Delivery System				
a. Comarca School Circuits		1,970	866	2,836
b. Improving Existing Schools		100	1,642	1,742
c. Furnishing New and Existing Schools		398	-	398
d. School Maintenance			955	955

Component		A.I.D. Grant	A.I.D. Loan	GON	TOTAL
e.	Education Support and Service		475	1,042	1,517
f.	Rural Adolescent Centers		308	1,716	2,024
g.	Radio Education Delivery		610	987	1,597
	Sub-Total		3,861	7,208	11,069
	Total	890,000	7,500	13,800	22,190
	Grand Total:		8,390	13,800	22,190

The Rural Education project to be financed will be dynamic, and it is expected that both opportunities and problems will arise during the implementation period. For this reason, up to five percent of the loan amount will be available for re-allocation in accordance with project purposes.

Based upon GON-AID estimates, previous experience and the approximate Component Timetables shown in Section III. B. above, it has been determined that five years is a reasonable period in which to implement a program of this complexity and magnitude. The program will thus be executed in calendar years 1977 through 1982.

Summary Cost Estimate By Cost Components

(000s of US$)

	A.I.D.			
	Grant	Loan	GON	TOTAL
Technical Assistance	715	1,425	255	2,395
Special Studies	100	-0-	-0-	100
Training		240	-0-	240
Commodities and Materials		3,645	1,859	5,504
Construction Services		2,190	1,935	4,125
Operating Costs	75	-0-	9,751	9,826
TOTAL:	890	7,500	13,800	22,190

Of the above amounts shown as GON counterpart, approximately $10,964,000 should be considered as an increment to the present MPE budget. This amount represents the costs for commodities and materials, construction services, and operating costs. The amount shown for operating costs represents an increment to the MPE budget since it represents the salaries of the 700 new teachers and supervisors, the salary increase in administrative and management positions, per diem and travel expenses for the teacher trainees, new maintenance of school facilities and other increases for new personnel and supplies needed for the project.

(Disbursement Schedules are in Annex T).

2. Historical Budget Analysis

Detailed budgets and explanations for the MPE during the period 1972-1977 are presented in Annex N and provide the supporting data for the historical budget analysis.

The MPE budget has increased from C$ 156 million in 1972 to C$ 338 million in 1977, representing an absolute increase of 117% (C$ 7 = US$ 1). This increase corresponds to an average annual growth rate of 16.7%. This rate of growth has exceeded the combined effects of both inflation and population. The real average annual growth rate per capita for the period 1972-1977 is 2.7%. In 1972, the MPE budget fell to 14.3% of the GON budget. This lower relative amount is due primarily to the increased debt servicing as a result of the 1972 Managua earthquake and an increase in external funding for non-education projects. The MPE budget remains the largest of all the GON Ministries.

The table below shows the line budget items for the MPE in 1972 and 1977.

MPE BUDGET

	1972		1977		
	C$ 000s	%	C$ 000s	%	% Change
Central Administration	2,070	1.3	4,016	1.2	94
Planning and Assessment	859	.6	2,455	.7	185
Primary Education	86,470	55.5	153,560	45.5	78
Secondary Education	22,987	14.8	61,725	18.3	168
Ag. Education	2,005	1.3	4,311	1.3	115
Physical Education	963	.6	2,481	.7	158
Industrial Arts	1,136	.7	3,507	1.0	208
Labor Training	-	-	7,217	2.2	-
Cultural Extension	2,491	1.6	3,624	1.1	45
Higher Education	13,601	8.7	38,155	11.3	180
School Construction	21,146	13.6	24,287	7.2	15
Capital Transfers	2,014	1.3	32,175	9.5	1400
Total	155,742	100.0	337,513	100.0	117

Primary Education, which includes the staffing and operations of the urban and rural primary (Grades 1-6) schools and adult literacy programs charts is the largest category in the budget. However, this category has made a relative decline in the 1972 - 1977 period. In 1972, this category accounted for over C$86 million or 55.5% of the total MPE budget. In 1977 Primary Education rose to C$ 154 million, but declined to 45.5% of the total MPE budget, a relative decline of 10% in the five year period.

In contrast to the relative decline in Primary Education, Secondary Education and Higher Education, the next two largest operating budget categories, have experienced relative increases in the period 1972-1977. Secondary Education has increased from C$23 million to C$62 million with a relative increase of 3.5% of the total MPE budget. Higher Education has increased from C$14 million to C$38 million with a relative increase of 2.6% of the total MPE Budget. Nationwide, both Secondary and Higher Education enrollments have increased more rapidly than Primary Education enrollments.

The MPE budget classified by current and capital expenditures is shown in the table below.

	1972		1977	
	C$ 000	%	C$ 000	%
Current	132,216	84.8	278,525	82.5
Capital	23,526	15.2	58,980	17.5
Total	155,742	100.0	337,513	100.0

As the amounts indicate, the mix of capital costs to current costs has increased only slightly from 1972 to 1977. During the intervening period, however, capital costs were considerably higher due to the reconstruction of the Managua schools.

The MPE budget, divided into personnel, operating and capital costs is presented below.

	1972		1977		
	C$ 000	%	C$ 000	%	% Change
Personnel	109,420	70.3	213,946	63.4	95.5
Operating*	25,169	16.2	66,148	19.6	163.0
Capital	21,153	13.5	57,369	17.0	171.2
	155,742	100.0	337,513	100.0	

* Includes grants and transfers to non-public schools and institutions, some of which are included as capital costs in the current/capital budget expenditure analysis above.

The above table shows a more favorable mix of personnel costs to operating expenses. This ratio was 4.3:1 in 1972 and decreased to 2.9:1 in 1977. The increase in personnel costs is due to a greater number of employees (9,235 fixed positions in 1972 vs. 13,701 in 1977) and salary increases. The increase in operating costs is in part a reflection of the general inflation during the period, but far exceeds this inflation. This indicates that the MPE is putting more emphasis on providing the materials and supplies to operate more effectively.

The following table shows average monthly salaries for various classes of MPE employees. These averages are based on samples taken from the MPE fixed position listing. These amounts do not include vacations and other allowances and benefits.

Employee Classification	1972	1977	% Change
Administrative			
Program Directors	C$3,690	C$3,950	8.5
Section Chiefs	2,135	3,025	41.7
Collaborators	1,306	1,305	(0.0)
Secretaries	990	1,024	3.4
Typists	503	681	16.8

	1972	1977	% Change
Operating			
School Directors	723	1,007	39.3
Asst. Directors	671	902	34.4
Teachers (Primary)	715	769	7.6
Teachers (Secondary)	2,400	2,400	0.0
Inspectors	963	1,075	11.6

The average MPE salary has increased 63% from 1972 ro 1977. However, as can be seen from above, only a small amount of this increase has come from general salary increases. Most of the increase is due to a greater mix of higher paid employees, most notably the secondary school teachers. Not one of the above employee classes has kept up with inflation during the five-year period 1972-1977.

In summary, the historical MPE budget analysis shows the following:

a. The MPE has the largest budget of any GON Ministry and accounts for 14.3% of the total GON budget for 1977.

b. The MPE budget has grown more rapidly than the combined inflation/population effect with a real per capita growth rate of 2.1% per year for the period of 1972-1977.

c. Primary Education is the largest budget item in the MPE budget, but has declined from 55.5% to 45.5% of the MPE budget during the period 1972-1977. In contrast, both Secondary and Higher Education have made relative increases.

d. The 1977 budget shows a more favorable mix of personnel to operating expenses than the 1972 budget (2.9:1 for 1977 vs. 4.3:1 for 1972).

e. Salary increases for MPE employees have not kept up with inflation and appear inadequate.

f. Although the average MPE salary increased 63% from 1972 to 1977, this increase is due mostly to a greater mix of higher-paid employees, most notably secondary school teachers.

3. Financial Impact of Project on MPE

a. Project Cost. As noted in Section B.2., the increment to MPE budget for counterpart expenditures is estimated at $10,964,000.

The anticipated time-phasing of this increment by MPE budget classification is shown below:

MPE Counterpart Budget Increments

(000s US$)

Budget Item	Total	1st Year	2nd Year	3rd Year	4th Year	5th Year
Central Administration	345	115	115	115	-	-
Planning and Assessment	2,724	200	225	324	654	1,321
Primary Education	3,273	133	281	656	983	1,220
Agricultural Education	636	-	-	106	212	318
Construction	1,935	-	120	570	585	660
School Maintenance 1/	955	-	225	230	245	255
Superior Education 2/	1,096	34	71	160	331	500
Total Increment:	10,464	482	1,037	2,161	3,010	4,274

1/ New budget line item required by the loan agreement.
2/ Teacher Training.

The average annual rate of growth for the MPE budget to provide this incremental counterpart is approximately 2% at the current budget level. Since the historical rate growth of the MPE budget is 16.7%, the provision for adequate counterpart funds should not be very difficult.

b. Recurring Costs. The recurring costs' analysis assumes that the activities established during the life of the project will be continued at their anticipated levels (i.e., no replication in the other regions.) As noted in sub-section (a) above, GON counterpart funding rose, steadily, during the life of the project. During the fifth year of the project, the incremental counterpart requirement is expected to amount to $4,274,000. The annual estimated recurring costs to MPE are shown below.

MPE Recurring Cost Analysis
(000s of US$)

Project Activity		Annual Recurring Costs
Administrative Reform		225
Integrated Community Development		81
Curriculum Development and Related Materials		1,842
Training for Supervision and Teaching		525
Strengthening the Rural Education Delivery System:		
(1)	Comarca School Circuits	492
(2)	Improving Existing Schools	252
(3)	Furnishing New and Existing Schools	-
(4)	School Maintenance	255
(5)	Education Support and Service	258
(6)	Rural Adolescent Centers	318
(7)	Radio Education Delivery System	360
	Sub-Total	1,935
	Total	4,608

To maintain the various project activities, the MPE will have to provide $4,608,000 annually beyond the current MPE budget level. In addition, any inflation after the project life must also be considered. The ancitipated recurring costs by MPE are described below.

c. Replication Costs. The replication costs' analysis is an attempt to determine the cost to the MPE of expanding the project activities nationwide (i.e., outside of Regions II and V). It should be noted, however, that since this is a rural education project, the assumed expansion is only to those rural areas outside of Regions II and V. No urban expansion is assumed.

The basic assumption used in the replication costs' analysis is that the per capita rural education costs which are estimated for Regions II and V hold for the other rural areas of the country. The only project element which was not calculated on this basis is the Radio Education Delivery System since it is more dependent upon geography than population. The determination of replication costs has also assumed a five-year implementation period similar to the project. These costs would be somewhat changed if shorter or longer implementation periods were used. Annex U shows the replication costs of the various project activities (assuming no inflation during the replication period which begins immediately after the project period).

If the project were to be replicated nationwide, at year 10, the MPE budget would be incremented by $11,577,000. To meet this increment would mean that MPE budget must be increased on an average of 2.3% in each of the first ten years following the project initiation. As noted in Section A.2., the historic MPE budget growth rate is 16.7%. Therefore, the completion, maintenance and replication of the project activities by the MPE appear reasonable at this time.

B. Economic Analysis of Program

1. Macroeconomical Analysis.

a. Summary. (For detailed Analysis see Annex P).

Nicaragua's overall economic picture at the end of 1976 is bright, and prospects for 1977 are good. The country enjoyed both trade and balance of payment surpluses in 1976, due primarily to high prices for its cotton and coffee exports and to a slow-down in imports. The local private sector has been cautious about making new investments, but increased domestic savings and lower import expenditures have enabled Nicaragua to reduce somewhat its short-term foreign debts. The Government, moreover, has negotiated over $200 million in new loans during 1976 from international, governmental and private lending institutions. Nicaragua's debt service ratio, with regard to export, though creeping upward, remains manageable. A squeeze, however, may come toward the end of the decade unless both Nicaragua's public savings and balance of payments situation continues to improve and international money and commodity markets remain favorable. The coffee blight discovered in late 1976, if not controlled, could hit export earnings from that commodity in 1978 and beyond. On the fiscal side, the Central Government's revenues continued their moderate rate of increase but fell short of the 1976 estimates of revenues needed to finance an ambitious public investment program. Central Government expenditures were more or less on target.

b. Availability of Funds for Counterpart

Given the GON's tighter fiscal situation, we have examined carefully the potential current account surpluses of the Central Government to assure the availability of counterpart to this program. Most counterpart will be

in the form of new operating (i.e., current) costs and is considered to draw on the suplus in the sense that it would increase current expenditures and reduce the surplus:

CON	(C$ Million)	1977	1978	1979	1980	1981
1.	Current Revenues 1/	1,695.2	1,898.6	2,126.4	2,381.5	2,857.8
2.	Current Expend 1/	1,413.3	1,554.3	1,710.1	1,881.1	2,069.2
3.	Current Balance Before Loan	281.9	344.0	416.3	500.4	788.6
4.	Counterpart to Loan 2/	3.0	10.0	14.5	23.4	29.8
5.	4) as % of 3)	1.0%	2.9%	3.5%	4.7%	3.8%

1/ Revenues projected at 12% average annual increase, and expenditures at 10% (before the loan); rates are based on recent historical trends, and current tax structure.

2/ Counterpart here includes only new increments to operating expenses:

MPE Counterpart Budget Increments
(000s US$)

Budget Item	Total	1st Year	2nd Year	3rd Year	4th Year	5th Year
Central Administration	345	115	115	115	-	-
Planning and Assessment	2,724	200	225	324	654	1,321
Primary Education	3,273	133	281	656	983	1,220
Agricultural Education	636	-	-	106	212	318
Construction	1,935	-	120	570	585	660
School Maintenance	955	-	225	230	245	255
Superior Education	1,096	34	71	160	331	500
Total Increment:	10,964	482	1,037	2,161	3,010	4,274
C$ Total (millions)	76.8	3.4	7.3	15.1	21.0	30.0

As can be noted, the counterpart is a very small fraction of the estimated surplus, and taking into account the high priority the GON is giving to integrated rural development, as demonstrated by their support of INVIERNO and PRACS (health) programs, we can safely assume that both the capacity and the will exist to allocate the necessary funds to this project. This is confirmed in the letter soliciting the loan of US$2.5 million for rural education (see Annex E).

2. Debt Service Capability. In general terms, the GON is maintaining its debt service within manageable proportions as compared to exports (i.e., the generation of foreign exchange). High world market prices for export crops have permitted the GON some breathing space in this regard, as the table below indicates:

Nicaragua: Debt Service/exports ratio
(US$ millions)

		1975	1976(p)	1977(e)
1.	Export goods	376	541	651
2.	Est. Export non-factor services	55	60	65
3.	Total Exports	431	601	716
4.	Debt Service	59	84	104
5.	4 ÷ 3 =	13.7%	14.0%	14.5%

Source: Central Bank for exports; USAID Estimates and other.

Note, however, that despite significant increases in exports, debt service payments are rising slightly faster. The GON has begun to pay off large commercial borrowings negotiated in 1973 and 1974. Although they contracted over $100 million from commercial and export banks in 1976, terms tended to be somewhat softer, and some borrowing was for consolidation of debts, and other loans potentially for export product financing. New lines of credit for road building equipment exceeded $60 million.

The weight of debt servicing is being felt more heavily as diversion of Central Government resources rather than as diversion of foreign exchange. As the table below shoes, interest and amortization of Central Government internal and

external borrowing will absorb 18% of total expenditures in 1977, due, in part, to the Central Government's absorption of public banks' debts (BNN).

Nicaragua: Central Government Debt Service

	1975	1976	1977
Interest as % current exp.	15.5%	13.7%	14.9%
Amortization as % capital exp.	13.0%	18.0%	22.5%
Total Debt service as % total exp.	14.4%	15.7%	18.0%

Source: Annex P, plus interest data from Central Bank.

The GON has tightened its current spending for 1977 in order to cover interest payments; only absolutely essential new positions were to be established. It also continues to seek concessional financing wherever appropriate. Debt service is expected to stabilize below 18% of exports over the next few years and then increase more slowly in absolute terms, as the average demands are offset by debt consolidation. Furthermore, interest payments to A.I.D. are a relatively small share of total public sector interest payments (under 6% in 1977), and the same is true of amortization of A.I.D. loans compared to total amortization (under 4% for 1977). The GON has historically been concerned about its credit image with donor agencies, has sought to make timely payments and is expected to continue to do so with this loan.

3. Internal/External Efficiency

a. Internal Efficiency

1) Introduction

As detailed in the sector assessment, the formal Nicaraguan education system, particularly the rural schools, have very low efficiency, caused by high drop-out and failure rates, as well as a bulky and expensive administrative system. The fact that 96% of rural first grade

enrollees never finish sixth grade (AED, p. 42) and that drop-out costs in the first three grades alone account for 68% of national allocations to education indicate that past methods of achieving the old goal of universal access to primary education are expensive, unproductive and ultimately wasteful for a developing country. In Nicaragua, it recently was taking over forty pupil years to produce one sixth grade graduate, an efficiency rate of .15 (AED, p. 121). This loan program is designed to attack some of the causes of failure and desertion to support a new goal of assuring completion of basic education for the largest possible share of the rural population. The Integrated Rural Development Program (described in Part II A) is directed toward reducing other factors affecting drop-outs. The first project component is aimed at reducing administrative inefficiencies.

2) Reducing Desertion Rates

There are three types of constraints to completing basic primary school in the rural areas:

a) The sheer physical difficulty of daily school attendance by a highly dispersed population with migratory customs, limited roads, often inclement weather and frequent illnesses,

b) The cost and opportunity cost to a family of a child or adolescent in school and therefore not available for work on farm or in the home; and yet requiring school supplies, clothes and food; and

c) Low motivation on the part of the parent, potential students and teachers due to the following:

- inadequately equipped schools,
- little clearly relevant curriculum,
- high absenteeism (on part of teachers and students),
- little pay, support or supervision from MPE,
- no sense of community participation,
- most importantly, often limited opportunity for employment and/or increased production once education is complete.

In other words, if a family manages, through sacrifice, to overcome the first two kinds of problems and actually starts a child in first grade, the child may never have a proper desk, receive appropriate information in a skillfully presented manner, or indeed even see the teacher on a regular basis.

There is sufficient evidence that rural families have the will to better their children's future by at least attempting to send them to school, despite constraints noted in (a) and (b). The high level of enrollment in first grade is an indication of that strong will and of a better-late-than-never attitude among very impoverished families. Thus, if the GON can correct some of the problems noted in (c), and stop the deterioration of the educational process, we can assume a much improved completion rate, and efficiency ratio. Correction measures to be taken under this rural education program respond, point by point, to these problems:

-- Improved and better utilized physical facilities, including existing structures now inadequately equipped,

-- reoriented curriculum for rural areas,

-- incentives (housing, opportunities for additional income by teaching adults) for master teachers in rural areas,

-- better refresher training and constructive supervision of teachers,

-- integration of teacher and community through organization of the latter,

-- use of auxiliaries and radio technology in remote areas where master teachers could not be induced to go, traditionally.

The final point of (a) above -- lack of employment or production opportunities -- cannot be addressed within just this loan program, but, uniquely, in Nicaragua, this is to be addressed by the broader Integrated Rural Development program, particularly those INVIERNO activities already begun by the GON. These activities are to provide agricultural inputs, and more on-farm and off-farm employment.

These ongoing rural development activities in Region V of Nicaragua are the basis for our assumption that the ultimate disincentive to school attendance (un-employment) can be removed or at least reduced and pave the way for lower desertion and greater internal efficiency.

Although the combine effects of all these improvements on current desertion and repetition rates may still be only arbitrarily measured, we suggest an initial goal of improving the rural primary efficiency ratio from .15 (as tentatively calculated in the sector assessment) to .40 for Region V, or fifteen pupil years used to produce a sixth grade finisher. A Region V specific baseline study will be conducted to verify the actual efficiency ratio for that region, and the initial goal adjusted if necessary.

3) Making Administration More Efficient

The complement to decreasing desertion and failure rates to improve internal efficiency is to strengthen the administration of educational services provided. Constraints have been described in the Administrative Reform section of this paper and can be summarized as: overcentralization of decision-making, inadequate data, weak coordination (internal and external), poor supervision and support. The measures needed to correct these problems tend to be either 1) planning or 2) implementation oriented. Planned improvement in the information systems and evaluation process is directed toward better planning, while the conversion of the current inspection system to a true "supervision" system and the upgrading of the MPE staff's professional qualifications through training and management assistance are both directed at better implementation. The proposed streamlining of the MPE decision-making process, by reducing the number of department heads and decentralizing decision-making, is aimed at both planning and implementation. We predict that this will better the output (well-planned and administered educational services for rural population), at the same or reduced costs, and thus increase efficiency.

b. External Efficiency

Much has been said of "relevance" and of the difficulty of measuring it, but therein lies most of the determination of external efficiency. An educational system (formal, non-formal, and work-related) must be designed to supply

the human resources necessary to meet national and individual development needs, in the quantities needed. Both versatility and high productivity are essential characteristics of an efficient labor force, (including self-employed producers).

The GON has no general manpower inventory nor a manpower development element in their National Plan. However, the concepts are understood; awareness and concern are expressed by GON officials, and initial human resources planning programs are underway. A new Human Resource Division in the Ministry of Labor is still essentially urban and industry-oriented but is developing skills at projecting manpower needs and devising short-term training responses. An inventory of all research in employment is also being prepared for national planning as a basis for future manpower planning. The sector assessment reviewed supply and demand of human resources for three sectors: education, health, and agriculture. Not suprisingly, they noted shortfalls of health professionals and certain middle level agricultural technicians, and an underutilization of teachers trained.

This program -- intended to provide basic (primary) education to two age groups 2/ -- will not impact on external efficiency as immediately as a strictly vocational training program. Nevertheless, it is intended to provide to the rural population a basic education with content that can help increase productivity for those ages engaged in economic activity, or soon to be, and improve health and nutrition habits for all ages. It will also provide the essential basic education to permit people to go and study more job-related skills. If we confine our analysis to the rural poor, and do not accept the assumption that they would automatically benefit from the trickling down of modern sector growth, then we may not want to just improve efficiency of the economy of "society" as a whole, but rather seek to give priority to those professionals who directly service the rural poor. This program includes an element to train and equip with new technology those rural teachers (and new community) who will most directly service the target population. Other A.I.D. loans are simultaneously preparing agricultural and health promoters also dealing with the target group. Thus we hope to bias the improvements in

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2/ "basic" signifies numeracy, literacy and primary level certification, with content of these and additional subjects stressing rural health, nutrition and agriculture. The age groups are 6 to 14 years and 14 and over.

external efficiency of the Nicaraguan learning system in favor of the rural poor.

External efficiency can also be improved through better utilization of existing human resources. Through greater employment and production increase opportunities. The core of Nicaragua's rural development experiment is to create a situation where out-puts of one element become inputs of another. In the case of education and agriculture, the link is double: better education can provide skilled workers/farmers needed for rural production, and the increased production opportunities in turn can generate more highly motivated students. As Harbison recently hypothesized, 1/ "priority should be given to expansion of formal education in those areas where concentrated efforts are already being made to bring about broadly based rural development, where progress is being made in raising agriculture incomes, expanding small-scale industry and commerce, and improving the infrastructure of roads and "communication." This education element is part of a broader rural development program in Nicaragua which seeks to improve efficiency of an entire sector (rural) by reducing bottlenecks to utilization of all resources, and ultimately increasing rural incomes.

4. Cost Effectiveness Analysis

a. Introduction

Inputs into this proposed education program include activities for construction, equipment, curriculum development including radio programming and materials, teacher training, and inputs for community organization. These inputs will be translated into programs intended to alleviate problems of planning, urban oriented rural primary education, lack of trained teachers, and maintenance as set forth in the project description (Part III). The end of project status against which the costs of this project must ultimately be evaluated in terms of economic viability are increased competency, improved retention of students, increased access to schools by students, improved performance of teachers and supervisors, and better facilities.

1/ Frederick Harbison "The Education - Income Connection" Paper prepared for Princeton - Brookings Income Distribution project, November, 1974.

Given the experimental nature of this project, final EOPS cannot be quantified with a degree of certainty that allows firm comparisons of the cost-benefit ratio or cost-effectiveness of this project versus alternative, more traditional forms of educational expansion and improvement. However, the delivery mechanism chosen for this project was based upon the experience of the Stanford/AID Radio Mathematics program in Nicaragua. Careful analyses based on the costs of that program against present educational costs actually being incurred by the educational system indicate that the proposed system will be cost-effective.

In this section we examine three comparisons between estimated project costs and costs of the present system in order to demonstrate the economic viability of the project and suggest an approach that can be refined and used in the ongoing evaluation of the program. They are tests of (1) the cost-efficiency of using radio technology in already existing classrooms and (2) the cost-effectiveness of leading additional students through the Comarca circuit mechanism.

b. The Stanford/AID Radio Mathematics Program

Preliminary evaluations of the program have been undertaken by Stanford and their findings are used in this economic analysis wherever appropriate. Because of the experimental nature of the Stanford project, U. S. technicians were deeply involved in the design and development of instructional radio programs. Evaluation assumed a larger than normal role, and the group of students receiving instruction was much smaller than the potential region-wide student body proposed in this education loan. Therefore, owing to economies of scale, unit costs appear higher in the pilot project evaluations than they are assumed to be when applying this mechanism on a broader scale. With greater use of Nicaraguan technicians and less intensive evaluation, all indications are that costs of the radio delivery system will continue to decline.

To summarize program results, the technology used in the Stanford project resulted in significantly higher student achievement than that of traditional schools. For 1975, mean post-test scores for the experimental group of 571 first grade students were 25% higher than a control group of 438 students. Some cost-saving changes were instituted in 1976, following evaluation of the 1975 results.

This method of estimating costs demonstrates the major economies of scale in the program. For example, one course given to 10,000 students for a 180 day school-year results in an annual per pupil cost estimate of $16.18 for the program. 1,800 half-hours of programming delivered to approximately 90,000 students (as envisioned by the proposed program) would result in an annual cost per pupil of $8.37 if the same costs applied. It is expected that future costs will be lower as the MPE develops the technology to produce radio programming. However, a cost of $8.37 per pupil will be used in this analysis as representing a reasonable long-run cost estimate for the program. Both the financial plans of this project paper and the Leslie and Jamision study are based on data generated by the Stanford/AID Radio Mathematics Program and comparable GON cost data. As a result, although the economic analysis presented here was not derived in total from financial tables in this paper (which were developed simultaneously) the general costs in both sections correspond. See Annex V.

c. Cost-Efficiency of Radio Instruction

Improving retention and performance of students is a major objective of this project. The cost of radio programs and equipment as well as the retraining of teachers is an additional input over and above the cost of operating existing rural schools. By using the assumption that four completed years of education is generally required to achieve literacy 2/ we have concrete, though somewhat arbitrary, performance criteria against which to measure the increased efficiency in the proposed system as against the present one.

For the present system, the Nicaragua Education Sector Assessment (AED) shows that, due to high repetition and drop-out rate, 24.6 pupil years are required to produce one student with a fourth-grade education (AED, p. 120). Of the 20.6 excess student years, 15 percent is due to repetition (ESA, p. 124). That is, an average 3.1 years of repetition occur per fourth grade graduate. The average cost per pupil enrolled in primary school for 1974 was $53.69 (AED, p. 133).

2/ UNESCO A System of Education Indicators, December, 1974

According to the deflator index for National Product, costs have risen approximately 12% since 1974. Adjusting by this index, the present average cost per pupil enrolled in primary school is estimated at $60.13 per year. A reasonable estimate of the cost of repeating grades in the present system can be safely assumed at $186.40 per fourth-grade graduate. In all likelihood, this cost is higher, due to the fact that many drop-outs occur as a result of grade failure.

By assuming that the marginal costs of keeping a student repeator in a classroom an additional year is approximately equal to the average cost per primary pupil given above, a comparison can be made between the potential savings to the primary education system of the proposed program and the cost of adding the proposed program to that system. That is, if students learn more quickly, and better, they are less likely to fail each grade, and thus improved retention rates will result for any given standard.

The table below quantifies reduced wastage possible and estimates savings for potential increases in performance.

(1) Percent reduction of repetition	(2) Years repetition avoided per 4th grade graduate (1) x 3.1	(3) Savings per 4th grade graduate (2) x $60.13
.25	.78 yrs.	$ 46.90
.20	.62	37.28
.15	.47	28.26
.10	.31	18.64
.05	.16	9.62

If educational standards for passing a grade remain constant, only a 5% reduction in repetition rates would be necessary for the program costs (estimated at $8.37 per student by 1981) to be more than offset by savings in the system. Evidence on radio education presented in Part III of this paper supports the conclusion that the proposed program as presently designed can operate at a higher efficiency than 5% and therefore meets cost-efficiency criteria.

d. Cost-Effectiveness of the Comarca School Circuit Method.

The Comarca system is intended to reach additional students as opposed to expanding the traditional system into sparsely settled isolated areas. The relative educational efficiency of this system cannot be measured until after the program has been operating for some time. However, access to educational instruction would be the same for both the Comarca and a traditional system even though teacher quality will be lower in the former. Tables 4 and 5 below show the derivation of annual per student costs for a Comarca system and a traditional system. Although these are rough cost estimates, they include almost all of primary school costs. The traditional system includes incentives such as housing for master teachers and teacher incentive pay in order to (1) make it comparable to Comarca System and (2) overcome the problem of attracting normal school graduates to teach in rural areas. A Comarca area is assumed to have a potential of 50 students per classroom or 200 per Comarca area.

Table 4

Comarca System: Cost per Student

A. Salaries:			
Supervisor Cost: $300/mo x 1/4 x 12 mo	=	$ 900	
Community Teachers: $60/mo x 4 x 12 mo	=	2,880	
Master Teacher: $170/mo x 1 x 12 mo	=	2,040	
Total		$ 5,820	
	÷	200	
Annual Salary Cost per Student:			$ 29.10
B. Transport: No provision			
Supervisor Cost: $20/mo x ¼ x 12 mo	=	$ 60	
Master Teacher: $15/mo x 1 x 12 mo	=	180	
		240	
	÷	200	
Annual Transport Cost per Student:			$ 1.20

Brought Forward			$30.30
C. Capital Costs*			
4 School Buildings: $4,000x4	=	$ 16,000	
1 Teacher's Building: $3,700x1	=	$ 3,700	
		$ 19,700	
Annual Cost of Capital Assuming 30 Year Life, 7.5% Interest Rate		$ 1,668	
		200	
Annual Capital Cost per Student			$ 8.34
D. Estimated Delivery Cost of Radio Program per Student Based on Stanford Math. Program			$ 8.37
			$47.01

* Capital costs of General Education of Master Teacher and Supervisor excluded. They are a very small percent of costs when annualized. The 7.5% interest rate is chosen to maintain comparability with estimates based on the Leslie and Jamieson studies.

Table 5

Traditional System with Incentives to Induce Teachers into Comarca Areas

A. Salaries			
"Master" Teachers $170/mo x 4 x 12 mo	=	$8,160	
		200	
Annual salary cost per student			$40.80
B. Transport: No costs incurred.			

Brought Forward		$ 40.80
C. Capital Costs:		
4 School Buildings $4,000 x 4	= $16,000	
4 Teacher's Buildings $3,700 x 4	= 14,800	
	$30,800	
Annual Cost of Capital Assuming 30 Year Life, 7.5% Interest Rate	$ 2,607	
	÷ 200	
Annual Capital Cost per Student		$ 13.04
D. Estimated Cost of Materials, etc., per Student:		$ 2.40
Cost to Expand Traditional System in Comarca Area		$ 56.24

Using the above cost estimate, the following comparison can be made. The estimate of per pupil costs of the Comarca system (Table 4) is 11% lower than the traditional system estimated, including incentives (Table 5). Therefore, the Comarca syste is expected to be cost-effective. The real additional savings to the economy in both labor and capital costs can be considerable.

The estimates of the Comarca system cost, the present average cost per pupil enrolled in primary school, and the traditional system expanded to Comarca areas with incentives are $47.01, $60.13 and $56.24 respectively. It should not be concluded from these figures that the Comarca system will operate at a cost comparable to general primary education systems elsewhere in Nicaragua even though it is the least-cost method of expanding into the Comarca areas. That is because cost estimates of the Comarca system are based on the assumption that schools will operate at peak efficiency of 50 students per classroom. That may not prove to be the case once the program is in operation. Therefore, cost of expanding into Comarca areas may be higher than education costs in general. However, even if the Comarca system operates at 50% efficiency, the per pupil costs will still be low enough to justify reaching a target group of isolated rural poor on the basis of equity considerations.

C. Engineering Analysis

(See Annex W for details).

1. General. The engineering component of this project involves the design and construction of 532 new classroom units (CSC + CFER + EAC) and 100 houses. As pointed out in Part III, 400 classroom units and 100 houses will be constructed in support of the COMARCA scheme. The remainder of the classroom units will be for the CFER and EAC centers whose basic functions are described in Part IV of this paper.

2. Engineering Analysis Summary. The results of this analysis show that the physical infrastructure proposed in support of this loan is feasible and within the capabilities of the GON, MPE, CARE, the private sector, and the proposed Local Communities.

D. Social Analysis

(See Annex X)

E. Environmental Impact Statement

An initial Environmental Examination was carried out for this project which identified and described the nature, scope and magnitude of the foreseeable effects of this project on the human environment (Annex M). It was determined that the proposed Rural Education Program would not adversely affect the environment. Therefore, it was recommended in the IEE that this project receive a negative determination and that no additional environmental examinations be carried out on this project. The appropriate officials in AID/W have studied the IEE and have concurred that a negative threshold decision is in order.

F. Project Timing

1. Implementation

As indicated previously, the Ministry of Public Education has a limited administrative/management capability to effectively implement this project at the present time. For this reason, the timing of project implementation becomes an important factor in reaching successful project outcomes. This program is time-phased to enable a gradual increase in the intensity of implementation activity over its five year life.

The first two years will focus primarily on the long-lead activities which are essential for the successful development of the program. Component One, Administrative Reform and Management Improvement, will be implemented as soon as this project is authorized and a Project Agreement is signed. Improving the administrative/management capabilities of the MPE is the key factor to successful project implementation.

Community development activities will also begin in the first year so that the MPE can begin forming an organization base on which the major (and most costly) activities of the program will depend.

Curriculum development activities will begin in year one and continue throughout the life of the project. The production of curriculum materials will begin to become a major effort in the third year of project implementation. Materials production is the major cost of Component Three.

The training of teacher trainers will be a long lead time activity, and for this reason the majority of the professional teacher trainers are trained in year one. The remainder of the training activities are directly related to the development of curricula. Therefore the number of training workshops gradually increases over the life of the project.

The final major activity is the infrastructure, support and service component. Major efforts in the construction and repair of rural schools will not begin until year three of the project, with the majority of the schools being repaired, constructed and furnished in the fourth and fifth years.

As a further strategy to increase the MPE capability to successfully implement this project, it is planned that the Ministry will work with CARE and FUNDE to provide construction management services in the construction of the Comarca Schools and the Rural Adolescent Centers. This will reduce the necessity for the MPE to channel scarce personnel and resources into the construction activities under this program. It is also expected that the MPE will contract with the large number of private printing shops for the production of learning materials.

The MPE and USAID are confident that this program can be implemented given the implementation plan briefly discussed above. A shorter implementation period would strain the MPE's managerial capability while a longer project period would weaken the linkages between the various project components.

2. Justification for Five-Year Project Period

The GON/AID education strategy is to expand and improve the delivery of educational services to the rural poor. It is clearly understood that expansion and improvement can only come about if the Ministry of Public Education is capable of implementing the program. For this reason, a phased program has been designed to allow the MPE the opportunity to slowly work into the position of managing a complex project.

The development of a relevant rural, primary curriculum that is radio-supported will take the full five years. Curriculum for grades one through four will be completed and ready to broadcast by January, 1982. A shorter project period would threaten the curriculum and the teacher training components because each of these activities requires a substantial amount of testing and evaluation to insure effectiveness and relevancy.

Finally, the linkages between all five components create a program that must establish an institutional base before the operational aspects can be fully implemented. A five-year program is necessary to enable the various project components the opportunity to interrelate and develop into a unified approach to rural education.

G. Population Impact Statement. (See Annex Y).

PART V - IMPLEMENTATION ARRANGEMENTS

A. Borrower Arrangements

1. Internal MPE Arrangements. The Minister of Public Education will direct the execution of all program components. She will designate a full-time Executive Director of the Program, acceptable to A.I.D., who will be a highly capable person with a sound background of graduate training in Administration and/or Economics and a minimum of three years' successful experience. A full-time Project Manager acceptable to the MPE and A.I.D. will be appointed for each component of the Rural Education Development Program, directly responsible to the Executive Director. The Executive Director of the Program, the Project Managers of the several components and the Directors of the Departments of Primary Education, Curriculum, Materials Production, Investments, Planning and Evaluation will constitute a Program Advisory Council to be chaired by the Director of Planning who will have overall responsibility for the Program and will report directly to the Minister.

The Program Advisory Council will meet weekly to review progress and problems and to decide on actions required. The Council will be the focus for setting targets, assigning roles and responsibilities, setting schedules and priorities and coordinating activities with other agencies. Contract advisors will participate in the Council to the extent that the Nicaraguan counterparts consider it an efficient use of their time. However, the Educational Management Advisor funded under Component One will be a regular participant at Council meetings to ensure effective coordination of external assistance with program goals.

The foregoing arrangement is seen as appropriate in view of the fact that the Rural Education Development Program will involve activities on the part of the several departments of the Ministry to be represented on the Advisory Council, and several distinct delivery systems will be developed, evaluated and refined during the course of the program.

2. GON Inter-Agency Coordination. Since major emphasis is being placed on the integrated nature of the GON's rural development programs, the MPE recognizes that effective coordination among the several ministries and

and other public and private entities involved in such programs is indispensable if conflict, duplication and friction are to be avoided and efficiency maintained.

An Inter-Institutional Coordinating Committee is planned to coordinate the inter-agency aspects of the Rural Education Development Program. A carefully developed and formally agreed upon plan of operations will be designed to ensure such coordination in the areas of health, agriculture, nutrition and education. The MPE, MOH and INVIERNO will be regular members and representatives of other entities, both public and private, will participate as necessary. The Executive Director of the Program will chair regular monthly meetings and special meetings as necessary. The Educational Management Advisor will serve as the principal advisor to the Coordinating Committee throughout his assignment to the program.

3. The USAID judgment is that the above GON arrangements will be satisfactory to administer the five year program, including procurement, contracting, direction of the program to rural beneficiaries, etc. In this regard, the USAID will encourage GON selection of the best qualified individuals to direct the several components of the Program as well as to serve in the position of Executive Director. Appropriate technical assistance and training will be provided with funds from both the grant and the loan.

4. These arrangements will be reviewed during the first annual project evaluation, and any changes that appear necessary or desirable as a result will be promptly put into effect.

B. A.I.D. Arrangements

1. USAID Administrative Responsibilities. Mission monitoring of the rural education program will be carried out by the Education and Human Resources Division, Capital Development Office, Controller Office, Engineering Office and Rural Development Division. The Chief of USAID's Education and Human Resources Division will be the full-time Program Manager and will chair the Mission Program Committee consisting of representatives from the Divisions and Offices named above. In addition, the Regional Legal Advisor, the Procurement/Contracting Officer and the Program Economist will assist as needed with implementation activities on the USAID side. Finally, the USAID expects that AID/W will actively

backstop program operations, including when appropriate the preparation and processing of documentation (e.g., PIOs), etc.

2. Disbursement Procedures. All A.I.D. funds will be earmarked to specific project inputs through the PIO procedure. USAID will choose appropriate disbursement procedures for the specific requirements of the goods and services being financed. This process should help facilitate disbursements and avoid procurement delays. Examples of these procedures are discussed below.

a. Disbursement for U.S. Dollar Costs

1) U.S. Bank Letter of Commitment. A.I.D. has substantially revised its regulations concerning the use of U.S. Bank Letters of Commitment. However, it is hoped that this procedure will be an option in the financing of commodities from non-CACM Code 941 countries. If this procedure is not available, the remaining alternative would be dollar advances for commodity procurement.

2) Dollar DRAS. A.I.D. financing for the dollar cost of foreign training and technical assistance will be made on a reimbursement basis under a dollar DRA. Per PD-68, the MPE will be encouraged to do the contracting for these costs.

b. Disbursement for Local Currency Costs. Disbursements for local currency costs will be made on a reimbursement basis under a local currency DRA. The Ministry of Finance will be requested to establish a revolving fund for project expenditures. If this proves unfeasible, USAID will consider making an advance to a revolving fund for project expenditures. The MPE does not have sufficient resources to maintain a revolving fund large enough to meet anticipated project activity expenditure rates.

Since the 400 rural classrooms to be constructed or reconstructed under the loan will be of similar design and will be constructed by communities under CARE supervision, USAID will negotiate with the MPE for the use of a modified Fixed Amount Reimbursement (FAR) procedure. A.I.D. will establish at the time of approval of each construction sub-project a fixed reimbursement amount. In all cases of new construction, the community will donate the land.

3. Procurement Procedures. Loan financed items will have their source and origin in Geographic Code 941 countries, including Nicaragua. Items of Geographic Code 935 source and origin may be financed if purchased off-the-shelf and their cost is less than $2,500. It is estimated that approximately $3,337 million of the combined grant/loan project will be utilized for dollar costs while approximately $5,053 million will be provided for local currency procurement (Nicaragua and CACM). Per PD-68, the MPE will contract for nearly all the financed goods and services itself. However, it is anticipated that A.I.D. may be called on to contract for some foreign participant training. With respect to procurement for technical services, it is expected that the MPE will give preference to consultants with prior successful work experience in Nicaragua.

4. Accounting Procedures. This project will be accounted for and reported on an accrual basis by project specific inputs. (See Financial Section). A table of accrual basis is presented below.

Type of Expenditures	Accrual Basis
Commodities	Constructive Delivery
Technical Services	Person-months completed
Training	Person-months completed
Construction Services	% of Completion

C. Implementation Plan

It is planned that the Rural Educational Development grant-loan program will be implemented in accordance with the following appropriate schedule:

Activity	Estimated Date
Grant Project Agreement Signed and Loan Authorized.	By 9-30-77
Loan Agreement Signed.	By 11-30-77
Grant Funded Services Begin.	By 2-28-78
Conditions Precedent to Initial Disbursement met.	By 3-31-78

Activity	Estimated Date
First Loan Disbursement for Program.	By 5-31-78
First Evaluation of Program Completed.	By 1 -31-79
Other Special Conditions Precedent to Disbursement Met.	By 3-31-79
Second Evaluation of Program Completed.	By 1-31-80
Third Evaluation of Program Completed.	By 1-31-81
Fourth Evaluation of Program Completed.	By 1-31-82
Fifth Evaluation of Program Completed.	By 9-31-82
Terminal Date for Requesting Disbursement.	By 11-31-82

Taken together with the Component Timetables in Annex R, the above schedule represents the GON/A.I.D. best estimate as to program timing. Detailed implementation plans for the curriculum, training and infrastructure components will be Conditions Precedent to Disbursement of loan funds for those activities.

D. Evaluation Plan

The Evaluation Department of the MPE's Division of Planning has the major responsibility for evaluation in the Education Sector. Under the Rural Education Development Program, this office will be strengthened to assure that (1) evaluation becomes a continuous source of feedback into the Ministry's Planning Office and (2) that progress towards the achievements of the project's indicators is measured in a timely, professional manner.

The principal evaluation activities which have been budgeted under this program are (1) an institution building program, (2) a studies and specialized systems development program, and (3) yearly management reviews during the life of the project. In practice, these categories will overlap heavily since the latter two

categories will provide "learning by doing" opportunities for the MPE's Evaluation Office. Approximately $310,000 of project grant funds have been budgeted for support of MPE evaluation activities.

Under the institution building program, project funded technical assistance will be used to conduct workshops and to assist MPE personnel in their evaluation activities. The workshops will be function-specific, e.g. statistical methods for education as well as sub-component-specific, e.g. evaluation systems for teacher training, curriculum evaluation, evaluation of administrative and management procedures, etc. This technical assistance will be grant financed to insure that the Evaluation Office of the Ministry becomes sufficiently competent early in the life of this project.

The second activity provides for the funding of baseline data studies, developing in cooperation with the Curriculum Department evaluation procedures for on-going curricula preparation and revision, and coordinating special project evaluations which will be conducted by outside consultants. One of the major activities to be carried out early in the program will involve the development of educational baseline data for Regions II and V. The baseline study will provide insights into the basic assumptions of the concerning leadership, their attitudes towards education, their educational priorities, as well as more valid data on the precise extent and degrees of literacy and numeracy.

A study of the administration and management of the MPE will be carried out early in the project with the cooperation and assistance of the Evaluation Department. This special study will develop baseline information on how the MPE is administered and managed. In depth analyses will be made in the areas of planning, staffing, coordination, operations and budgeting. After this informational base is developed, specific proposals will be developed regarding modifications and changes that must be made so that the MPE becomes a more effective and responsive organization. Evaluation Department staff will take an active part in carrying out this study and developing the recommendations.

In addition to these special studies, an important task of the Evaluation Department will be to design an efficient evaluation system for the Curriculum Development Component of this program. The Evaluation and Curriculum Departments will work closely in developing a system which will feed back information

on the effectiveness of the radio-supported curricula and materials. This information will be extremely useful to the MPE as it revises the rural primary curriculum to better meet the needs of the rural areas.

The third evaluation activity will measure inputs delivered against outputs expected in accordance with the Logical Framework.

These annual evaluations will be conducted jointly by the MPE and USAID with the assistance of outside technical consultants. These yearly evaluations will provide the MPE and USAID with the information needed to revise the project implementation plan as necessary. In the third and fifth annual evaluations, a review of the original assumptions as well as an assessment of the progress toward achievement of the project purposes will be made.

The Technical Assistance supporting all of the evaluation activities will be grant funded in order to insure timely and adequate application and to underline the importance attached to such evaluation activities.

A schedule of evaluation studies and dates is shown in the Implementation Plan Part V.D.).

E. Conditions and Covenants

1. Prior to any disbursement for other than consulting services or training, the MPE shall have submitted a general time phased project implementation plan, including a schedule of counterpart allocations, satisfactory to A.I.D.

2. Prior to disbursement for other than consulting services or training for each specific project component, the MPE shall have submitted a detailed time phased implementation plan for such component satisfactory to A.I.D.

3. Any disbursement subsequent to March 31, 1978 shall be subject to the following conditions:

a) The MPE Budget for 1978 shall contain the appropriate line items called for in the schedule of counterpart allocations submitted pursuant to condition 1 above.

b) The MPE shall have contracted for consulting services satisfactory to A.I.D. to implement Component One (Administrative Reform) and shall be actively engaged in carrying out the activities set forth in said Component One.

4. Any disbursement for Project Component Five (Strengthening Rural Education Delivery Systems) shall be subject to the following conditions:

a) A draft plan for administrative reform of the MPE satisfactory to A.I.D. shall have been prepared pursuant to Component One.

b) The MPE shall, to the satisfaction of A.I.D., have (i) developed both adequate capability to carry out Component Two (Community Development) and a detailed plan therefor and (ii) put into operation the above plan.

c) The MPE shall, to the satisfaction of A.I.D., have (i) developed both adequate capability to carry out Component Three (Curriculum Development) and a detailed plan therefore and (ii) put into operation the above plan.

d) The MPE shall, to the satisfaction of A.I.D., have (i) developed both adequate capability to carry out Component Four (Training) and a detailed plan therefore and (ii) put into operation the above plan.

5. Any disbursement subsequent to June 30, 1979 shall be subject to the following conditions:

a) Satisfaction of all Conditions under 4 above.

b) The MPE Budget for 1979 shall contain the appropriate line items called for in the schedule of counterpart allocations submitted pursuant to Condition 1 above or such other items and amounts as may be necessary and proper for successful project implementation.

c) A maintenance plan for project schools and equipment satisfactory to A.I.D. shall have been prepared, legally put into effect, and budgeted at a level satisfactory to A.I.D. in the MPE Budget for 1979.

6. Any disbursement subsequent to January 31, 1980 shall be subject to the following conditions:

a) A plan of administrative reform for the MPE satisfactory to A.I.D. shall have been put into operation.

b) The MPE Budget for 1980 shall contain the appropriate line items called for in the schedule of counterpart allocations submitted pursuant to Condition 1 above or such other items and amounts as may be necessary and proper for successful project implementation.

7. Any disbursement subsequent to January 31, 1981 shall be subject to the following conditions:

The MPE Budget for 1981 shall contain the appropriate line items called for in the schedule of counterpart allocations submitted pursuant to Condition 1 above or such other items and amounts as may be necessary and proper for successful project implementation.

8. Any disbursement subsequent to January 31, 1982 shall be subject to the following conditions:

The MPE Budget for 1982 shall contain the appropriate line items called for in the schedule of counterpart allocations submitted pursuant to Condition 1 above or such other items and amounts as may be necessary and proper for successful project implementation.

9. The GON Covenants to budget, for years subsequent to project completion, sums of money adequate to meet the recurring operating costs of the institutions and facilities developed pursuant to the project.

10. The Project shall be subject to such other terms and conditions as A.I.D. may deem advisable.

ANNEX A

AID/W APPROVAL AND GUIDANCE MESSAGES

This Annex contains the following:

1. Cable: DAEC Review - IRR and PPP - Education Sector
2. Cable: DAEC Review of Education Sector Assessment and Rural Education Institutional Development Project Paper
3. Cable: Education Sector Assessment

ANNEXES

A. AID/W Approval and Guidance Messages
B. Checklist of Statutory Criteria
C. Director's 611 Certification
D. Draft Loan Authorization
E. GON Letter of Application
F. Maps of Nicaragua (2)
G. List of INVIERNO Communities
H. Program Logical Framework Matrix
I. Detail of Component Two
J. Detail of Component Three
K. Detail of Component Four
L. Detail of Component Five
M. Initial Environmental Examination
N. Ministry of Public Education Budget
O. Procurement Plan
P. Current Economic Situation and Trends
Q. Program Beneficiaries
R. Component Timetables
S. Public Schools Identified by Builder
T. Disbursement Schedules
U. Replication Cost Analysis
V. Stanford Radio Math Project Cost Analysis Methodology
W. Engineering Analysis
X. Social Analysis
Y. Population Impact Statement

M3

UNCLASSIFIED
ANNEX A

ACTION: AID-6
INFO:
AMB
DCM
ECON
CHRN RF II/LM

UNCLASSIFIED CONTROL: 320

APR 15, 1975

R 142212Z APR 75
FM SECSTATE WASHDC
TO AMEMBASSY MANAGUA 3079
BT
UNCLAS STATE 084920

AIDAC

E.O. 11652: N/A
SUBJECT: DAEC REVIEW - IRR AND PFP - EDUCATION SECTOR

1. ON THE BASIS OF THE DAEC'S REVIEW, THE SUBJECTIRR AND PFP WERE APPROVED. LOAN INTENSIVE REVIEW AND PROP PREPARATION MAY PROCEED SUBJECT TO THE FOLLOWING GUIDANCE.

2. OVERALL PLANNING/COORDINATION: AN ANALYSIS WILL BE REQUIRED OF THE GON CAPABILITY TO PLAN AND COORDINATE THE SEVERAL ONGOING AND PROPOSED A.I.D. LOAN PROJECTS. THIS ANALYSIS SHOULD INCLUDEA DISCUSSION OF THE OVERALL RELATION AMONG GON PLANNING ORGANIZATIONS AT DIFFERENT LEVELS; E.G., GON CENTRAL PLANNING DEPARTMENT; SECTORAL PLANNING GROUPS SUCH AS UNASEC; AND INTERNAL PLANNING STAFFS OF AGENCIES.

3. PRIORITY OF PROJECT/ABSORPTIVE CAPACITY: THE CAP "SHOULD ANALYZETHE RELATIVE PRIORITY ACCORDED BY THE GON TO THIS PROJECT, VIS-A-VIS OTHER RECONSTRUCTION AND/OR DEVELOPMENT ACTIVITIES, INCLUDING PROPOSED A.I.D. LOAN FUNDED PROGRAMS IN HEALTH AND NUTRITION. THE CAP SHOULD INCLUDE AN ANALYSIS OF HOST COUNTRY HUMAN AND INSTITUTIONAL ABSORPTIVE CAPACITY CONSTRAINTS AND THE MEANS PROPOSED, INCLUDING POSSIBLE DEFERRAL OF LOWER PRIORITY PROGRAMS, TO OVERCOME THESE CONSTRAINTS.

4. ECONOMIC ANALYSIS: A FULL MACRO-ECONOMIC ANALYSIS RELATED TO OVERALL GON PRIORITIES WILL BE REQUIRED IN ORDER TO DEMONSTRATE THE FINANCIAL CAPACITY OF THEGON EITHER TO PROCEED WITH ALL SUCH ACTIVITIES DURING THE PROPOSED TIME SPAN OR TO CHOOSE CERTAIN OF THEM FOR

UNCLASSIFIED

PRIORITY IMPLEMENTATION, WHILE DEFERRING OTHERS.

5. PROGRAM PLANNING: THE DAEC ACCEPTED THE IRR CONCEPT THAT PLANNING UNDER THE PROPOSED PROGRAM WOULD BE CONCENTRATED ON RURAL EDUCATION. HOWEVER, THERE SHOULD BE AN ANALYSIS OF THE RELATIONSHIP OF SUCH PLANNING TO THE MORE GENERAL EDUCATION PLANNING BEING OR TO BE CARRIED OUT IN NICARAGUA; IF IT APPEARS THAT INADEQUACIES IN SUCH GENERAL PLANNING MIGHT ADVERSELY AFFECT THE RURAL EDUCATION PROGRAM THE LOAN FINANCED PROGRAM SHOULD ADDRESS THESE INADEQUACIES. THE ABOVE ANALYSIS SHOULD INCLUDE AN ASSESSMENT OF HOW RAPIDLY THE NECESSARY RURAL EDUCATIONAL PLANNING CAPABILITIES CAN BE DEVELOPED AND THE TECHNICAL ASSISTANCE AND TRAINING INPUTS NECESSARY TO ADDRESS EXISTING CONSTRAINTS IN THIS AREA. AVAILABLE EVALUATION MATERIAL RELATING TO THE EDUCATIONAL DEVELOPMENT GRANT PROGRAM SHOULD BE UTILIZED IN THIS REGARD.

6. TIME PHASING OF THE PROGRAM: DETERMINATION SHOULD BE MADE DURING THE EARLY STAGES OF INTENSIVE REVIEW, AND THE CONCLUSIONS PRESENTED IN THE PROP, OF THE DEGREE TO WHICH PROPER TIME PHASING OF THE PROGRAM WILL BE DEPENDENT UPON ITS GRANT FUNDED ASPECTS; AND WHETHER PROGRAMMED GRANT FINANCING MIGHT BE REDUCED BY LENGTHENING THE IMPLEMENTATION PERIOD OF THE LOAN TO FOUR OR FIVE YEARS. TO THE DEGREE THAT A PORTION OF THE PROGRAM WILL BE GRANT FUNDED, THAT PORTION SHOULD BE DIRECTED AT THE MOST TIME CRITICAL DEVELOPMENT ASPECTS WITH FOLLOW-ON TO BE CARRIED OUT UNDER THE LOAN.

7. SCOPE OF THE PROGRAM: CONSIDERATION SHOULD BE GIVEN DURING INTENSIVE REVIEW TO WHETHER THE PROGRAM SHOULD INCLUDE MAJOR OPERATIONAL ACTIVITIES IN ONE OR MORE DISTRICTS OR CONCENTRATE EXCLUSIVELY UPON INSTITUTION BUILDING AND HUMAN RESOURCES DEVELOPMENT. ANALYSIS OF ALTERNATIVE RURAL EDUCATION PROGRAMS SHOULD INCLUDE THE RELATIVE POTENTIAL USEFULNESS OF: (A) DEVELOPING NON-FORMAL EDUCATION PROGRAMS UP TO THE LEVEL OF PRIMARY SCHOOL GRADUATE EQUIVALENCY; (B) DEVELOPING NON-FORMAL INFORMATIVE AND SKILLS PROGRAMS TO EFFECT CHANGES IN HEALTH STATUS AND AGRICULTURAL PRACTICES OF THE TARGET GROUP; OR (C) CONCENTRATING THE PROGRAM AS A WHOLE ON DEVELOPMENT OF FORMAL EDUCATION. THIS ANALYSIS SHOULD FIRST FOCUS UPON GOALS, E.G., IMPARTING USEFUL SKILLS, AND THEN SEEK THE MOST COST-EFFECTIVE TECHNIQUES FOR MEETING SUCH GOALS. IT SHOULD ALSO BE BASED ON A BROAD DEFINITION OF "NON-FORMAL" EDUCATION AS INCLUDING ALL EDUCATIONAL ACTIVITIES OUTSIDE OF THE TRADITIONAL IMPARTING OF KNOWLEDGE AND SKILLS TO CHILDREN IN A SCHOOLHOUSE-TYPE SITUATION. CONSIDERATION SHOULD BE GIVEN DURING INTENSIVE REVIEW TO THE WAYS IN WHICH, ASSUMING NON-FORMAL

ELEMENTS ARE INCLUDED, THE FORMAL AND NON-FORMAL SYSTEMS CAN BE COORDINATED IN SUCH AREAS AS JOINT USE OF FACILITIES, PERSONNEL AND PROGRAMS. ATTENTION SHOULD ALSO BE PAID TO POSSIBILITIES FOR IMPROVED UTILIZATION OF EXISTING PHYSICAL PLANT AND HUMAN RESOURCES: ALL YEAR SCHOOLS, DOUBLE SESSIONS, AND NON-FORMAL TRAINING OR ADULT LITERACY COURSES USING SCHOOLS, TEACHERS AND PARAPROFESSIONALS IN OFF-HOURS, ETC., SHOULD ALL BE CONSIDERED. SIMILARLY, COMMUNITY-BUILT SCHOOLS AND NON-TRADITIONAL CONSTRUCTION MEHODS SHOULD BE INVESTIGATED. IN ANY EVENT, DETAILED JUSTIFICATION/DEMONSTRATION OF NEED WILL BE REQUIRED FOR ALL SCHOOL CONSTRUCTION TO BE UNDERTAKEN. THE PROJECT PROPOSAL TO USE PROGRAMMED RADIO AND CORRESPONDENCE TYPE MATERIALS TO TEACH PRIMARY SCHOOL AGED CHILDREN IN THINLY POPULATED RURAL AREAS SHOULD BE ANALYZED AS TO: THE PROJECTED SOURCE OF TECHNICAL EXPERTISE FOR RADIO PROGRAMMING AND MATERIALS DESIGN AND PRODUCTION; DESIRABILITY OF A PILOT TO TEST THE PROPOSED TECHNIQUES PRIOR TO FULL SCALE IMPLEMENTATION; EVALUATION POTENTIAL; PROJECTED COST; TRAINING AND INSTITUTIONAL REQUIREMENTS; POSSIBLE ROLE OF PUPILS' PARENTS; AND POTENTIAL APPLICABILITY OF THE "WISCONSIN PORTAGE PROJECT. AID/W IS CONSIDERING MODEST SUPPORT TO A CHILDREN'S TELEVISION WORKSHOP REGIONAL PILOT PROJECT WITH THE UNDERSTANDING THAT ACTUAL PROGRAM DISSEMINATION AND IMPLEMENTATION WILL BE FUNDED FROM NON-A.I.D. RESOURCES.

8. NUCLEAR/SATELLITE TYPE SCHOOL SYSTEM: THE CAP SHOULD CONSIDER THE EXPERIENCE WITH SUCH SYSTEMS IN OTHER LATIN AMERICAN COUNTRIES INCLUDING: (I) USE OF THE NUCLEAR SCHOOL ONLY AS A NEXUS FOR ADMINISTRATION, REFRESHER TEACHER TRAINING AND SUPERVISION, AND SPECIALIZED STUDIES, WITH ALL SIX GRADES BEING TAUGHT IN ALL SATELLITE SCHOOLS; (II) THE POSSIBLE BURDEN ON THE UPPER GRADES IN THE NUCLEAR SCHOOL IF THE SATELLITES HAVE ONLY 1-3, (III) THE RISK OF MOST CHILDREN STOPPING AT THIRD GRADE IF ONLY THE NUCLEAR SCHOOL HAS 4-6; (IV) PROVIDING 4-6 EQUIVALENT IN THE SATELLITIES THROUGH NON-FORMAL MEANS; (V) TRAINING SATELLITE TEACHERS IN MULTI-GRADE TEACHING SO THAT TWO TEACHERS PER SATELLITE CAN HANDLE ALL SIX GRADES, RECEIVING SUPPORTING SERVICES AND MATERIALS FROM THE NUCLEAR SCHOOL OR DISTRICT HEADQUARTERS.

9, REPLICABILITY OF PROGRAM: THE CAP SHOULD PRESENT AN ANALYSIS OF THE DEGREE TO WHICH THE AREA-LIMITED ASPECTS OF THE PROGRAM WILL BE CAPABLE OF REPLICATION IN OTHER AREAS OF NIC

RAGUA. THIS ANALYSIS SHOULD FOCUS ON THE COMMITMENT OF THE GON TO REPLICATE THIS PROGRAM WIDELY WITH THEIR OWN RESOURCES AS WELL AS THEIR CAPABILITY TO DO SO.

10. UTILIZING GENERAL EXPERIENCE OBTAINED IN OTHER

C.A.EDUCATION PROGRAMS: PLANS SHOULD BE MADE DURING INTENSIVE REVIEW TO DETAIL MOE PERSONNEL TO STUDYSIMILAR PROGRAMS, SUCH AS GUATEMALA'S PEMEP (FORMAL) AND BVE (NON-FORMAL) AND ACPO IN COLOMBIA IN ORDER TO BENEFIT FROM THEIR EXPERIENCE.

11. RESEARCH AND EVALUATION FUND: CAREFUL STRUCTURING OF THIS FUND AND PRECISE DELINEATION OF ITS FUNCTIONS ARE ESSENTIAL IF IT IS TO BE APPROVED AS PART OF THE PROGRAM. FUNDING SHOULD BE SO PROGRAMMED THAT A.I.D.'S FINANCIAL INPUT DIMINISHES RAPIDLY DURING THE COURSE OF THE PROGRAM AND GON SUPPORT INCREASES APACE.

12. RETENTION OF PERSONNEL IN RURAL AREAS: ANALYSIS SHOULD BE MADE OF HOW THE VARIOUS TYPES OF TEACHING AND ADMINISTRATIVE, PROFESSIONAL AND PARAPROFESSIONAL PERSONNEL CAN BEST BE OBTAINED FOR AND RETAINED IN RURAL SERVICE. THIS ANALYSIS SHOULD ALSO INCLUDE AN EXAMINATION OF OTHER C.A. PROGRAMS.

13. PROGRAM DESIGN AND EVALUATION: DEVELOPMENT OF THE DETAILED PROGRAM DESIGN AND EVALUATION PLAN DURING INTENSIVE REVIEW SHOULD: FIRST, BE PREMISED ON THE NEED TO OBTAIN AND UTILIZE THE MAXIMUM FEASIBLE DEGREE OF CONCRETE AND QUANTIFIED INFORMATION CONCERNING EXISTING CONDITIONS, I.E., BASELINE INFORMATION; SECOND, PROVIDE FOR SETTING FORTH AND QUANTIFYING TO THE DEGREE REASONABLY POSSIBLE THE PROJECTED RESULTS OF THE PROGRAM, IMMEDIATE AND LONGER TERM, ALONG WITH THEIR ESTIMATED TIMING; AND THIRD, INCLUDE INTERIM TARGETS FOR THE PURPOSE OF EVALUATING ONGOING PROGRAM PROGRESS. WHATEVER TECHNICAL ASSISTANCE MAY BE NEEDED TO MEET THIS REQUIREMENT SHOULD BE INCLUDEDIN THEPROJECT.

14. LOCAL LEVEL COORDINATION AND THE ROLE OF THE COMMUNITY EDUCATION COMMITTEES: THE CAP SHOULD DISCUSS THE ROLE OF THE COMMUNITY EDUCATION COMMITTEES AND CONSIDER MECHANISMS FOR PROMOTING COORDINATION ON THE LOCAL LEVEL WITH THE OTHER COMMUNITY ORGANIZATIONS DEALING WITH HEALTH, NUTRITION, AND AGRICULTURAL MATTERS UNDER A.I.D.'S OTHER LOAN PROGRAMS, TO INSURE OPTIMUM EFFECTIVENESS IN DEALING WITH INTERRELATED PROBLEMS.

15. SKILLS TRAINING/MANPOWER NEEDS: THE DEGREE THAT SKILLS TRAINING IS TO BE INCLUDED IN THE PROGRAM, AN INSTITUTIONAL CAPABILITY SHOULD BE CREATED FOR OBTAINING ADEQUATE MANPOWER NEEDS INFORMATION, FOR TAILORING SKILLS TRAINING PROGRAMS TO SUCH NEEDS, AND FOR CREATING A GUIDANCE COUNSELLING CAPABILITY TO ASSIST IN MATCHING SUCH NEEDS WITH TRAINED MANPOWER AVAILABILITIES. IN THIS REGARD, AN ANALYSIS SHOULD BE MADE OF THE PROJECTED

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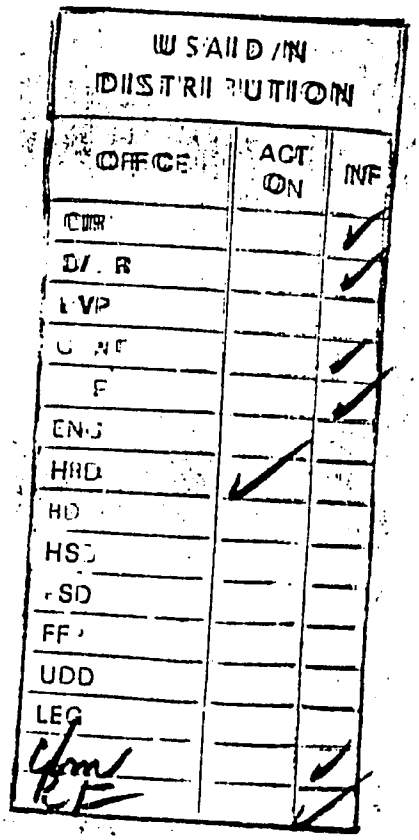
COST-EFFECTIVENESS, CURRICULUM DESIGN AND INSTRUCTOR TRAINING CAPABILITIES OF THE REGIONAL OCCUPATION CENTERS.

16. ROLE OF WOMEN: AS REQUIRED BY THE FAA, THE CAP SHOULD ANALYZE THE ROLE OF WOMEN AS AGENTS AND BENEFICIARIES OF THE PROJECT AND DESCRIBE HOW THIS PROJECT PARTICIPATION WILL IMPROVE THEIR INVOLVEMENT IN THEDEVELOPMENT PROCESS. THIS DESCRIPTION SHOULD NOT BE LIMITED TO AN IMPACT STATEMENT BUT SHOULD DEMONSTRATE THE WAYS IN WHICH SUCH PARTICIPATION WILL TAKE PLACE.

17. PLEASE PROPOSE SUBMISSION SCHEDULE AND TDY REQUIREMENT FOR REVISION OF THE NATIONAL EDUCATION PLAN/SECTOR ASSESSMENT. (THE ASSESSMENT REVISION SHOULD OF COURSE BE SUBMITTED FOR AID/W REVIEW BEFORE THE CAP). LA/R IS PREPARED TO PROVIDE TDY ASSISTANCE FOR INTER ALIA PREPARATION OF ASSESSMENT UPDATE SCOPE OF WORK WHICH SHOULD BE SUBMITTED FOR AID/W REVIEW. KISSINGER



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ANNEX A

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TELEGRAM

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SUBJECT: DAEC REVIEW OF EDUCATION SECTOR ASSESSMENT AND RURAL EDUCATION INSTITUTIONAL DEVELOPMENT PROJECT PAPER

REF: STATE 084920 (4/14/75)

1. THE DAEC APPROVED THE SECTOR ASSESSMENT BUT DISAPPROVED THE PROJECT PAPER FOR REASONS EXPLAINED BELOW. TO SUMMARIZE, IT WAS CONCLUDED THAT THE ASSESSMENT PROVIDES A GOOD BASIS FOR PROCEEDING WITH INTENSIVE REVIEW FOR THE LOAN PROJECT BUT THAT THE PROPOSED GRANT PROJECT WAS PREMATURE SINCE IT WOULD INITIATE SPECIFIC ADVISORY AND INSTITUTION BUILDING ACTIVITIES BEFORE THE ANALYSIS TO BE PERFORMED IN THE FORTHCOMING INTENSIVE REVIEW HAD CONSIDERED ALTERNATIVE SOLUTIONS, IDENTIFIED ANTICIPATED OUTPUTS, AND ESTABLISHED THE RELATIONSHIP WITH THE PLANNED LOAN PROJECT. THE DAEC FELT THE TWO PROJECTS REPRESENTED COMPONENTS OF A SINGLE PROGRAM AND THAT THE PP DID NOT ADEQUATELY DEMONSTRATE THE NEED TO INITIATE THE GRANT ELEMENT WITHOUT THE BENEFIT OF THOROUGH INTENSIVE REVIEW ANALYSIS. AT THIS TIME MOST OF THE ISSUES RAISED BY THE PREVIOUS DAEC AND REPORTED IN THE REFTEL REMAIN UNRESOLVED. CONSEQUENTLY, IT WAS CONCLUDED THAT THIS PROJECT PROPOSAL SHOULD BE WITHDRAWN FROM CONSIDERATION AT THIS TIME AND ITS SUBSTANCE SHOULD BE INCORPORATED INTO A SINGLE PP FOR THE RURAL DEVELOPMENT SECTOR LOAN II (EDUCATION), ACCORDING TO THE FINDINGS OF THE INTENSIVE REVIEW WHICH SHOULD BE INITIATED ASAP. ANY GRANT FINANCING PROPOSED SIMULTANEOUSLY WITH LOAN FINANCING FOR THE PROJECT MUST BE FULLY JUSTIFIED. IT WAS AGREED THAT THE TA REQUESTED IN THE GRANT PP FOR INTENSIVE REVIEW ASSISTANCE SHOULD BE PROVIDED FROM TECHNICAL SUPPORT FUNDS. THE MISSION SHOULD REQUEST ALLOTMENT OF THE ADDITIONAL FUNDS REQUIRED FOR THAT PURPOSE AND INDICATE THE MINIMUM AMOUNT NECESSARY DURING FY 76 IN THE EVENT THAT FUNDS ARE LIMITED. ADDITIONAL FUNDS SHOULD BE AVAILABLE DURING THE INTERIM QUARTER IF REQUIRED. AID/W WILL ASSIST THE MISSION OBTAIN APPROPRIATE CONSULTANTS. WITH RESPECT TO TIMING, WE HAVE INCLUDED THE LOAN FOR FY 77 FUNDING. SHOULD GRANT FUNDS BE REQUIRED, AND ARE JUSTIFIED, THIS WOULD LIMIT THE AMOUNT OF GRANT FUNDS IN FY 77 TO THE CONGRESSIONAL PRESENTATION LEVEL OF 250,000 DOLLARS. SHOULD MISSION REQUIRE A LARGER AMOUNT OF GRANT FUNDING IN THE INITIAL YEAR OF THE PROJECT, THE PP SHOULD BE SUBMITTED DURING THE TRANSITIONAL QUARTER TO SECURE THE AMOUNT APPROVED FROM THE TRANSITIONAL QUARTER GRANT LEVEL OF 500,000 DOLLARS. IN THAT CASE, WE WOULD WAIT UNTIL FY 77 FUNDS BECOME AVAILABLE TO AUTHORIZE THE LOAN COMPONENT.

2. SPECIFIC CONCLUSIONS REACHED BY THE DAEC ARE DISCUSSED BELOW. ALTHOUGH SOME COMMENTS REFER TO THE GRANT PP REVIEWED AT THE MEETING, ALL COMMENTS RELATE

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PERATIONALLY TO THE FORTHCOMING INTENSIVE REVIEW AND PP
OR THE LOAN PROJECT. THIS CABLE IS MEANT TO SUPPLEMENT
ATHER THAN TAKE THE PLACE OF THE CONCLUSIONS AND INSTRUC-
IONS IN THE REFTEL WHICH REPORTED ON THE DAEC REVIEW OF
HE EDUCATION SECTOR LOAN IRR AND GRANT PRP.

• THE SECTOR ASSESSMENT - THE ASSESSMENT WAS CONSIDERED
) BE SATISFAVTORY IN THAT IT ACCOMPLISHED MOST OF THE
AJOR GOALS SET FOR IT. THE EXCEPTION NOTED WAS THAT NO
RIORITIES WERE PROPOSED AMONG THE NUMEROUS RECOMMEN-
ATIONS MADE. IT WAS DECIDED THAT LA/DR WOULD FOLLOW UP
ITH THE CONTRACTOR TO OBTAIN THEIR RECOMMENDED
RIORITIES AND ADVISE THE MISSION OF THE RESULTS OF THE
IRY ASAP IN ORDER TO BE USEFUL FOR INTENSIVE REVIEW
ES.

CK OF SPECIFICITY - THE PP DISCUSSION OF PROPOSED
CHNICAL ASSISTANCE NEEDS AND INPUTS WAS VERY GENERAL.
HE APPARENT UNCERTAINTY ABOUT PROJECT COMPONENTS, INPUTS
ND OUTPUTS WAS CENTRAL TO THE DAEC CONCLUSION THAT THE

ROJECT WAS PREMATURE. THE NEXT PP SHOULD CLEARLY EXPLAIN
OW THE SPECIFIED INPUTS ARE NECESSARY AND SUFFICIENT
O OBTAIN THE STATED OUTPUTS.

• ECONOMIC ANALYSIS THE ECONOMIC ANALYSIS CONTAINED
THE PP WAS INSUFFICIENT. THE SECTOR ASSESSMENT IN-
CLUDED USEFUL ECONOMIC ANALYSIS THAT COULD BE COMBINED
ITH SPECIFIC PROJECT OUTPUTS TO PROVIDE A BASIS FOR A
ORE DEFINITIVE ECONOMIC ANALYSIS IN THE FORTHCOMING PP.

• RELATIONSHIP TO IBRD PROGRAM - THE DAEC DISCUSSED THE
OPOSED IBRD RURAL EDUCATION LOAN AND CONCLUDED THAT THE
NTERRELATIONSHIPS OF THE AID AND IBRD PROGRAMS SHOULD BE
REFULLY ASSESSED DURING INTENSIVE REVIEW. AN EXPLANA-
ION OF WHY THENIBRD COULD NOT MEET THE ENTIRE NEEDS
THE EDUCATION SECTOR SHOULD BE INCLUDED. OF PARTICULAR
NTEREST WAS THE SUGGESTION THAT THE IBRD PROGRAM MIGHT
IN OTHER GEOGRAPHIC REGIONS MANY OF THE THINGS THAT
E AID PROGRAM MIGHT SUPPORT IN REGIONS II AND V. IT
S NOT CLEAR IF AND TO WHAT EXTENT AID ASSISTANCE IN
MINISTRATIVE REFORM CURRICULUM DEVELOPMENT, AND
STRUCTIONAL MATERIALS DEVELOPMENT WOULD FACILITATE THE
ECUTION OF THE IBRD LOAN. CONVERSELY, IT HAS NOT BEEN
EARLY ESTABLISHED THAT AN AID LOAN WILL NOT CONFLICT
TH THE PROPOSED IBRD LOAN. THESE POINTS MUST BE
ORCUGHLY ADDRESSED IN THE PP. EVEN IN THE ABSENCE OF
IBRD LOAN, THE APPROPRIATENESS OF CONCENTRATING
UCATION RESOURCES IN REGIONS II AND V (IN THE WAY THAT
RICULTURE, NUTRITION AND HEALTH RESOURCES WILL BE CON-
NTRATED) SHOULD BE EXPLICITLY SUPPORTED.

RURAL EDUCATION UNIT (REU) - ALTHOUGH THE ESTABLISH-
NT OF THE REU IS PROPOSED AS A KEY ELEMENT OF THE PRO
CT, THE NEED FOR AND DESIRABILITY OF THIS SEPARATE UNIT

NOT ESTABLISHED. ITS ROLE, FUNCTIONS, LOCATION AND
LATIONSHIPS ARE NOT YET DEFINED. TO WHAT EXTENT COULD
RESOLVE THE ADMINISTRATIVE PROBLEMS REFERRED TO IN THE
CTOR ASSESSMENT? THE INTENSIVE REVIEW SHOULD ANALYZE
PROPOSAL CAREFULLY, AMD IF PURSUED, THE PP
ST SHOW CLEARLY THAT RATIONALE FOR IT AND BE SPECIFIC
UT ITS ROLE, FUNCTIONS AND RELATIONSHIPS. ONE
ICERN IS WHETHER IT IS ADVISABLE TO SPLIT OFF THE RURAL
T OF PRIMARY EDUCATION FROM ITS PRESENT ORGANIZATIONAL
IT. AID EXPERIENCE IN SETTING UP SPECIAL UNITS TO
INISTER PROJECTS IN ORDER TO AVOID INEFFICIENT
EADCRACIES HAS BEEN LARGELY UNSATISFACTORY IN THE PAST.
RT RUN IMPLEMENTATION BENEFITS MUST BE WEIGHED AGAINST
E, LONGER TERM POTENTIAL COSTS.

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8. MINISTRY ORGANIZATIONAL CONSTRAINTS THE ASSESSMENT IDENTIFIED A NUMBER OF DEFECTS IN THE MINISTRY WHICH IMPEDE EFFECTIVE DELIVERY OF EDUCATIONAL SERVICES, BUT WHICH THE GRANT PP DID NOT ADDRESS. THESE INCLUDE OVERCENTRALIZATION OF DECISION-MAKING, UNCLEAR JOB STANDARDS THAT ENCOURAGE HIRING UNQUALIFIED STAFFUN ABSENCE OF TEACHER JOB SECURITY AND PROMOTION STANDARDS AND INSUFFICIENT FUNDS BUDGETED FOR MATERIALS, SUPPLIES AND OTHER OPERATING COSTS. THE DAEC QUESTIONED THE IMPLIED ASSUMPTION THAT THE PROJECT COULD SUCCEED WITHOUT ADDRESSING THESE ADMINISTRATIVE PROBLEMS. IF VALID, THIS ASSUMPTION SHOULD BE PLACED IN THE LOG FRAME AND DEFENDED IN THE NARRATIVE. (IN THIS CONNECTION IT WAS NOTED THAT PROJECT 323, EDUCATIONAL PLANNING AND DEVELOPMENT, HAD SOME TIME AGO FOUND MINISTRY OF PUBLIC EDUCATION (MPE) NOT READY TO ACT ON PLANS WHICH CALLED FOR MAJOR REFORMS IN PERSONNEL AND ADMINISTRATION). IN ANY CASE THE INTEN SIVE REVIEW HOULD ANALYZE THESE PROBLEMS, REVIEW PRE7 VIOUS ATTEMPTS TO ADDRESS THEMAND MAKE SPECIFIC RECOM-MENDATIONS FOR OR AGAINST ADDRESSING THEM DIRECTLY THROUGH THE PROJECT.

9. GON COMMITMENT TO RURAL EDUCATION - ALTHOUGH THE GRANT PP ASSERTED THAT THE MPE AND OTHER GON OFFICIALS ARE COMMITTED TO IMPROVEMENT OF RURAL EDUCATION, THE EXPERIENCE REPORTED IN THE ASSESSMENT REVEALS A GROSS IMBALANCE TO DATE IN FAVOR OF URBAN EDUCATION. THE DAEC QUESTIONED HOW THE CURRENT GON COMMITMENT TO RURAL EDUCATION CAN BE DEMONSTRATED IN MORE CONCRETE TERMS. IT WAS SUGGESTED THAT INDICATORS MIGHT BE AMOUNT BUDGETED AND QUALITY OF STAFF ASSIGNED TO RURAL EDUCATION. THESE, AND/OR OTHER RELIABLE INDICATORS SHOULD BE PRESENTED AND EXPLAINED IN THE PP.

10. MPE BUDGET - THE EXTENT TO WHICH THE PROJECTED IN-CREASE OF THE MPE BUDGET SHOWN ON PAGE 26 OF THE PP MERELY COMPENSATES FOR INFLATION, AS OPPOSED TO BEING AVAILABLE FOR PROGRAM IMPROVEMENT AND EXPANSION WAS QUESTIONED. BUDGET ANALYSIS IN THE INTENSIVE REVIEW SHOULD FOCUS ON THIS QUESTION. THE PP ALSO DID NOT MAKE CLEAR WHETHER THE GON CONTRIBUTION TO THE GRANT PROJECT REPRESENTED A NET ADDITION TO THE MPE'S STAFF AND BUDGET OR MERELY AN EARMARKING OF ONGOING EXPENDITURES. THIS DISTINCTION SHOULD BE MADE CLEAR IN THE LOAN PP. KISSINGER

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ANNEX A

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CONTROL: 1972
RECD: MAR 23 - 0742
ACTION: AID-7
INFO:
AMB
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SUBJECT:EDUCATION SECTOR ASSESSMENT

REFERENCE: MANAGUA 1245

1. FOLLOWING WAS RECEIVED TODAY FROM AED: "AS YOU REQUESTED ENCLOSED IS A LISTING OF THE RECOMMENDATIONS CONTAINED IN CHAPTER III OF THE 1975 NICARAGUA EDUCATION SECTOR ASSESSMENT, BASED ON WHAT THE ASSESSMENT TEAM PERCEIVED TO BE PRIORITY NEEDS.

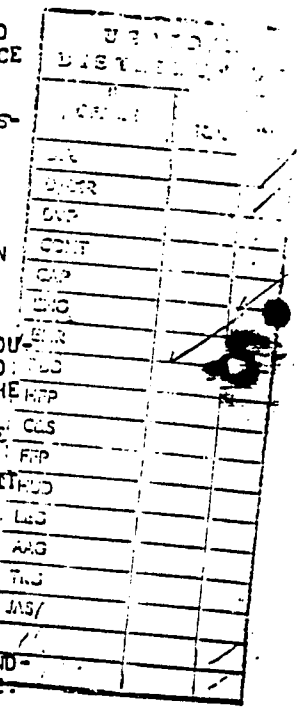
BECAUSE OF THE RELATIONSHIPS BETWEEN THE RECOMMENDATIONS, THEY HAVE BEEN GROUPED ACCORDING TO AREAS OF PRIORITY NEED, RATHER THAN LISTED AS INDIVIDUAL ITEMS. AS WE HAVE DISCUSSED, WE PREFER THAT THEY NOT BE EXTRACTED BY NUMBER FROM THE ATTACHED DOCUMENT; RATHER, WE WOULD HOPE THAT THE ENTIRE DOCUMENT WILL BE PRESENTED AS AN ADDENDUM TO BOTH THE ENGLISH AND SPANISH VERSIONS OF THE REPORT. WE WOULD ALSO LIKE TO REITERATE THAT THIS DOCUMENT DOES NOT REPLACE CHAPTER III, BUT IS INTENDED TO SUPPLEMENT IT."

2. TEXT: "IN THE 1975 NICARAGUA EDUCATION SECTOR ASSESSMENT REPORT, A PRIORITY LISTING OF RECOMMENDATIONS WAS

DELIBERATELY AVOIDED, SINCE THE ASSESSMENT TEAM FELT STRONGLY THAT A CAREFUL READING OF THE REPORT WOULD MAKE SUCH PRIORITIES OBVIOUS AND, FURTHERMORE, THAT ITEMS OF LOWER PRIORITY MIGHT BE SUBJECT TO CONSIDERABLE VARIATION IN ACCORD WITH STEPS TAKEN TO REMEDY MORE URGENT NEEDS.

NONETHELESS, IT IS POSSIBLE TO SET FORTH CERTAIN OVERRIDING REQUIREMENTS FOR PROGRESS IN THE DEVELOPMENT OF EDUCATION IN NICARAGUA, AND, AT THE REQUEST OF LA/DR/EST AND USAID/MANAGUA, THE ASSESSMENT TEAM HAS AGREED TO ORDER THE RECOMMENDATIONS CONTAINED IN THE REPORT ON THE BASIS OF PRIORITY NEEDS. AS THERE IS CONSIDERABLE INTERDEPENDENCE AMONG MANY OF THE RECOMMENDATIONS, HOWEVER, THEY MUST BE GROUPED TOGETHER RATHER THAN LISTED AS DISCRETE ITEMS. IT SHOULD BE NOTED, ALSO, THAT WHILE ADMINISTRATIVE REFORMS ARE CONSIDERED TO BE THE MOST URGENT NEEDS, SUCH REFORMS SHOULD BE CARRIED OUT WITH A CLEAR RECOGNITION OF THE RURAL PROGRAM PRIORITIES SET FORTH BELOW. TO THE EXTENT POSSIBLE, THEREFORE, THE FIRST AND SECOND PRIORITY AREAS SHOULD BE ADDRESSED CONCURRENTLY.

1. FIRST PRIORITY - ADMINISTRATIVE REFORM. THE RECOMMENDATIONS RELATING TO THE MOST URGENT NEEDS IN THIS AREA ARE: A.1, ADMINISTRATION, MANAGEMENT, AND PLANNING; A.2, DATA ANALYSIS; A. 4, SUPERVISION; AND C.2, ADMINISTRATION AND MANAGEMENT COURSES. SINCE THE FUNCTIONS OF THE NATIONAL EDUCATION CENTER ARE ALSO RELEVANT, THE RECOMMENDATION CONCERNING PLANNING FOR ITS EFFECTIVE UTILIZATION (A.8) IS ALSO INCLUDED.



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ALTHOUGH IT IS NOT RELATED DIRECTLY TO ADMINISTRATIVE OR STRUCTURAL REFORM, THE TEAM FEELS THAT C.6, SCHOOL DROP-OUT AND RETENTION STUDY, REFLECTS ONE OF THE MOST URGENT NEEDS IN NICARAGUA. IT IS THEREFORE SUGGESTED THAT SUCH A STUDY BE INITIATED AS SOON AS POSSIBLE FOLLOWING IMPLEMENTATION OF RECOMMENDATIONS A.1 AND A.2, WHICH RELATE TO INCREASING THE CAPABILITY OF THE MINISTRY OF PUBLIC EDUCATION TO UNDERTAKE SUCH A STUDY.

2. SECOND PRIORITY - RURAL EDUCATION. CONSIDERING CURRENT NEEDS IN NICARAGUA AND THE RELATED PROGRAM EMPHASIS OF BOTH AID AND THE GON, THE FOLLOWING GROUP OF RECOMMENDATIONS HAVE PRIORITY IN THIS SECOND CATEGORY: C.7, IMPROVEMENT OF RURAL SCHOOL CURRICULUM; B.6, VOCATIONAL AND AGRICULTURAL TEACHER TRAINING; B.1, REGIONAL LEARNING CENTERS; B.2, RADIO-PHONIC SCHOOLS; AND B.3, LOCAL LEVEL AGRICULTURAL SCHOOLS. IMPLEMENTATION OF B.7 AND B.6 SHOULD BEGIN AS EARLY AS POSSIBLE, SO THAT PROGRAM DEVELOPMENT AND PERSONNEL TRAINING WOULD PRECEDE THE INITIATION OF PROGRAMS FOR WHICH THEIR PRODUCTS WOULD BE REQUIRED. IN ADDITION, THE MOST EFFECTIVE IMPLEMENTATION OF THESE RECOMMENDATIONS, SPECIFICALLY B.1 AND B.7, DEPENDS TO A LARGE DEGREE UPON THE OUTCOME OF A STUDY TO DETERMINE THE LEARNING NEEDS OF THE RURAL POPULATION (C.4). THE CONDUCT OF SUCH A STUDY, AS WITH THAT RECOMMENDED IN C.6, DEPENDS IN TURN ON A.1 AND A.2 ABOVE.

ALSO INCLUDED IN THIS CATEGORY IS B.5, RURAL SCHOOLS FOR COMMUNITY ACTIVITIES, A RECOMMENDATION WHICH CONTRIBUTES TO THE EFFECTIVENESS OF RURAL NONFORMAL EDUCATION PROGRAMS AND COMMUNITY DEVELOPMENT ACTIVITIES WHILE REQUIRING THE ALLOCATION OF A RELATIVELY SMALL PORTION OF AVAILABLE FINANCIAL RESOURCES.

3. THIRD PRIORITY - ADDITIONAL RESEARCH, TRAINING AND ACTION PROGRAMS. THE SET OF RECOMMENDATIONS IN THIS FINAL CATEGORY INCLUDES THOSE ACTIVITIES FOR WHICH MOST EFFECTIVE IMPLEMENTATION IS DEPENDENT UPON EITHER SUCCESSFUL INITIATION OF PROGRAMS OR STUDIES SET FORTH ABOVE, OR DETERMINATION OF FACTORS WHICH AS YET REMAIN UNKNOWN. THEY CAN CONTRIBUTE SUBSTANTIALLY, HOWEVER, TO THE FUTURE DEVELOPMENT OF EDUCATION IN NICARAGUA. FOR EXAMPLE, C.3, TEACHER INCENTIVE STUDY AND DESIGN AND C.5, HUMAN RESOURCE MANPOWER STUDY, ARE OF GREAT IMPORTANCE, BUT THESE STUDIES SHOULD BE UNDERTAKEN AFTER THE RECOMMENDATIONS RELATING TO ADMINISTRATIVE REFORM HAVE BEEN ACTED UPON, SO THAT MPE CAN MOST EFFECTIVELY CARRY OUT SUCH STUDIES.

WHILE THE NEED FOR INTERSECTORAL COORDINATION (A.3) IS CRUCIAL, IT WILL DEPEND HEAVILY ON THE LONG-TERM RAPPROACHEMENT BETWEEN HIGHLY COMPLEX MINISTRIES AND AMONG A MULTITUDE OF PROGRAMS. IT IS CONCEIVABLE, HOWEVER, THAT EFFORTS TO IMPLEMENT B.1 AND B.3 MAY RESULT IN SUCH IMPERATIVE NEEDS FOR COORDINATION THAT THIS RECOMMENDATION WILL REQUIRE EARLY CONSIDERATION.

AS NEW PROGRAMS ARE INITIATED, MORE AND BETTER TRAINED TEACHERS AND ADMINISTRATORS WILL BE NEEDED, UNDERSCORING THE ADVISABILITY OF DEVELOPING NEW TRAINING CAPABILITIES AT THE TWO UNIVERSITIES (C.1).

OTHER RECOMMENDATIONS WILL REQUIRE ADJUSTMENT AS A RESULT OF THOSE EXPERIENCES WHICH GROW OUT OF THE MAJOR EFFORTS TO BE ATTEMPTED FIRST. IN ADDITION, SOCIAL AND FINANCIAL CIRCUMSTANCES WILL CHANGE AND ACTIONS WHICH SEEMED LESS URGENT WILL EMERGE AS CRITICALLY IMPORTANT. FOR EXAMPLE,

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TEACHERS' SALARIES AND BENEFITS NEED TO BE IMPROVED (A.5), ALTHOUGH ECONOMIC REALITIES SERVE AS A CONSTRAINT TO IMMEDIATE IMPLEMENTATION OF THIS RECOMMENDATION. A MAJOR IMPROVEMENT IN NATIONAL ECONOMIC CONDITIONS COULD CREATE A SITUATION IN WHICH THIS RECOMMENDATION MIGHT BE GIVEN A HIGHER PRIORITY. THE SAME IS TRUE OF A.6, EMPLOYMENT OF FULL-TIME TEACHERS; A.7, SCHOOL MAINTENANCE; AND A.9, TEXTBOOKS, ALL NEEDS WHICH ARE RELATED TO AVAILABILITY OF ECONOMIC RESOURCES.

WHILE BOTH AN INFORMATION PROGRAM TO INCREASE PUBLIC AND PRIVATE SECTOR AWARENESS OF THE NEED FOR IMPROVED RURAL EDUCATION (C.7), AND INCREASED INVOLVEMENT IN AND SUPPORT OF EDUCATION BY THE PRIVATE SECTOR (C.8), ARE ACTIVITIES WHICH ARE CLEARLY NEEDED AND WHICH COULD RESULT IN MORE EFFECTIVE IMPLEMENTATION OF HIGHER PRIORITY ITEMS, THESE RECOMMENDATIONS MUST BE GIVEN A LOWER PRIORITY IN LIGHT OF OTHER, MORE URGENT NEEDS. ALSO, WHILE IT IS FELT THAT SOME FORM OF SUPPORT FOR PRIVATE GROUPS INVOLVED IN RURAL EDUCATION (B.4) SHOULD BE PROVIDED, IT IS CLEAR THAT SUCH ASSISTANCE WILL ALSO HAVE TO TAKE A SECOND PLACE." INGERSOLL

CHECKLIST OF STATUTORY CRITERIA
(Alliance for Progress)

A. GENERAL CRITERIA FOR COUNTRY

1. FAA Sec. 116. Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in consistent pattern of gross violations of internationally recognized human rights?

   Yes. This program is designed to improve and expand educational opportunities for Nicaragua's rural poor population.

2. FAA Sec. 481. Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?

   No.

3. FAA Sec. 620(a). Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?

   No.

4. FAA Sec. 620(b). If assistance is to a Government, has the Secretary of State determined that it is not controlled by the international Communist movement?

   Yes.

5. FAA Sec. 620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?

   No.

6.	FAA Sec. 620(e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?	No.
7.	FAA Sec. 620(f); App. Sec. 108. Is recipient country a Communist country? Will assistance be provided to the Democratic Republic of Vietnam (North Vietnam), South Vietnam, Cambodia or Laos?	No.
8.	FAA Sec. 620(i). is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression?	No.
9.	FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property?	No.
10.	FAA Sec. 620(l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason?	The Investment Guarantee Program does exist in Nicaragua.
11.	FAA Sec. 620(o); Fishermen's Protective Act, Sec. 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters,	No.
	a. has any deduction required by Fishermen's Protective Act been made?	No.
	b. has complete denial of assistance been considered by AID Administrator?	No.

12.	FAA Sec. 620(q); App. Sec. 504. (a) Is the government of the recipient country in default on interest or principal of any AID loan to the country? (b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds, unless debt was earlier disputed, or appropriate steps taken to cure default?	
13.	FAA Sec. 620(s). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)	In 1976 approximately 11.1% of the GON budget was defense expenditures. Defense expenditures for 1977 will be approximately 10.7% of the total budget.
14.	FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?	No.
15.	FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget?	Nicaragua is not delinquent in the payment of its U.N. obligations.
16.	FAA Sec. 620A. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism?	No.
17.	FAA Sec. 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA?	No.
18.	FAA Sec. 669. Has the country delivered or received nuclear reprocessing or enrichment equipment, materials or technology, without specified arrangements on safeguards, etc.?	No.

19. FAA Sec. 901. Has the country denied its citizens the right or opportunity to emigrate? — No.

B. FUNDING CRITERIA FOR COUNTRY

1. Development Assistance Country Criteria

a. FAA Sec. 102(c),(d). Have criteria been established, and taken into account, to assess commitment and progress of country in effectively involving the poor in development, on such indexes as: (1) small-farm labor intensive agriculture, (2) reduced infant mortality, (3) population growth, (4) equality of income distribution, and (5) unemployment. — Yes. All AID assisted projects in Nicaragua include criteria for assessing the degree to which the recipient country is promoting increased involvement of the poor in development programs.

b. FAA Sec. 201(b)(5),(7)&(8); Sec. 208; 211(a)(4),(7). Describe extent to which country is:

(1) Making appropriate efforts to increase food production and improve means for food storage and distribution. — Within existing budgetary limitations, Nicaragua encourages increased productivity in the agricultural sector, particularly among small farmers.

(2) Creating a favorable climate for foreign and domestic private enterprise and investment. — Private enterprise, both foreign and domestic is respected, encouraged and promoted in Nicaragua.

(3) Increasing the public's role in the developmental process. — This program is specifically designed to provide school age children and adults in rural areas with literacy skills.

(4) (a) Allocating available budgetary resources to development.

(b) Diverting such resources for unnecessary military expenditure and intervention in affairs of other free and independent nations. — Nicaragua does not appear to be making unnecessary military expenditures. It does not intervene in the affairs of other nations.

(5) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise. — Nicaragua is presently involved in several land reform studies for future action. Several enabling decrees have already been passed.

(6) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.	The Government's major effort in the area of integrated rural development to improve the socio-economic status of the poor is a concrete demonstration of its efforts in this area.
c. FAA Sec. 201(b), 211(a). Is the country among the 20 countries in which development assistance loans may be made in this fiscal year, or among the 40 in which development assistance grants (other than for self-help projects) may be made?	Yes. It is included among the countries in which development loans and grants may be made.
d. FAA Sec. 115. Will country be furnished, in same fiscal year, either security supporting assistance, or Middle East peace funds? If so, is assistance for population programs, humanitarian and through international organizations, or regional programs?	No.
2. Security Supporting Assistance Country Criteria	
a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? Is program in accordance with policy of this Section?	No.
b. FAA Sec. 531. Is the Assistance to be furnished to a friendly country, organization, or body eligible to receive assistance?	Yes. Through various acts and demonstrations of support for U.S. positions in international forums, Nicaragua has shown itselt to be a friendly country.
c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	Not applicable.

6C(2) - PROJECT CHECKLIST

Listed below are, first, statutory criteria applicable generally to projects with FAA funds, and then project criteria applicable to individual fund sources: Development Assistance (with a sub-category for criteria applicable only to loans): and Security Supporting Assistance funds.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? IDENTIFY. HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653(b)

   (a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that figure plus 10%)?

   A description of this project was shown on page 212 of the FY 1978 Congressional Presentation.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of $100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

   Yes.

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

   Budgetary actions are in progress and are expected to be completed in sufficient time to ensure orderly and timely implementation of the program.

4. FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol 38, No.174, Part III, Sept. 10, 1973)?

   Not applicable.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed $1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?	Yes. The Director has so certified.
6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multilateral organizations or plans to the maximum extent appropriate?	No.
7. FAA Sec. 601(a); (and Sec. 201(f) for development loans). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	Improved educational opportunities for rural primary students, school leavers in the 14-18 age group and presently illiterate adults is expected to, in the long-run encourage the development of mutual assistance organizations such as cooperatives and improve the technical efficiency of industry, agriculture and commerce.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	Substantial goods and technical services will be purchased from the United States.

9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.	The Government of Nicaragua's contribution substantially exceeds the required contribution to the program.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency and, if so, what arrangements have been made for its release?	Not applicable.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(c); Sec. 111; Sec. 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?	The program will provide the rural poor with increased education opportunities which will in turn permit them to participate more actively in the local economy and contribute to the growth of local governmental programs.

(5)	107 by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries.	No
c.	FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively" least-developed" country)?	Yes, the Government of Nicaragua has indicated its willigness to finance 62% of the total cost of the program.
d.	FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing?	No
e.	FAA Sec. 207; Sec 113. Extent to which assistance reflects appropriate emphasize on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained workerpower in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.	The program supports extensive, locally initiated efforts to develop community self-help and human resource development in the field of education.
f.	FAA Sec.281(b). Describe extent to which program recognized the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.	Through use of the self-help efforts of community level committees, the program recognizes the effective contribution which the rural population can make to the program.

g.	FAA Sec. 201(b) (2)-(4) and -(8); Sec. 201(e); Sec. 211(a) (1)-(3) and -(8). Does the activity give reasonable promise of contributing to the development: of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?	Yes
h.	FAA Sec. 201(b) (6); Sec. 211 (a) (5), (6). Information and conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surplus and extent to which U. S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U. S. balance-of-payments position.	The program will provide for the procurement of technical services and some commodities in the U. S.
2.	Development Asistance Project Criteria (Loans only)	
a.	FAA Sec. 201 (b) (1). Information and conclusion on availability of financing from other free-world sources, including private sources within U. S.	By its nature the program requires long-term concessional financing, and other sources of such financing are not available at this time.
b.	FAA Sec. 201(b) (2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U.S.) of lending and relending terms of the loan.	Nicaragua has the capacity to repay the loan.
c.	FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds $100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?	Yes

d. FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development?	Yes
e. FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements fro private sources?	Not applicable.
f. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?	No such enterprise is being assisted.
3. Project Criteria Solely for Security Supporting Assistance FAA Sec. 531. How will this assistance support promote economic or political stability?	
4. Additional Criteria for Alliance for Progress (Note: Alliance for Progress projects should add the following two items to a project checklist.)	Yes, as a demonstration effort.
a. FAA Sec. 251(b)(1), -(8). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the ecomic or political integration of Latin America?	The program also takes the Act of Bogota and the Charter of Punta del Este into account.

b.	FAA Sec. 251(b)(8); 251(h). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES", the Permanent Executive Committee of the OAS) in its annual review of national development activities?	No. The loan is consistent with the most recent CEPCIES finding concerning Nicaragua.

6C(3) - STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed?	U.S. small business will be afforded an opportunity to participate equitably in the furnishing of goods and services for the Program.
2. FAA Sec. 604(a). Will all commodity procurement financed be from the U.S. except as otherwise determined by the President or under delegation from him?	Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the U.S. on commodities financed?	Yes.
4. FAA Sec. 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity?	Not applicable.
5. FAA Sec. 608(a). Will U.S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items?	Yes.

6. MMA Sec. 901(b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates.	Yes.
7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?	Technical assistance will be purchased from private sources with some assistance from Federal Agencies.
8. International Air Transport. Fair Competitive Practices Act, 1974 If air transportation of persons or property is financed on grant basis, will provision be made that U.S.-flag carriers will be utilized to the extent such service is available?	Yes.
B. Construction	
1. FAA Sec. 601(d). If a capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interest?	Not applicable.
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?	AID's normal procurement procedures will be followed.

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed $100 million?	Not applicable.

C. Other Restrictions

1. FAA Sec. 201(d). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?	Yes.
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?	Not applicable.
3. FAA Sec. 620(h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U.S.?	Yes.
4. FAA Sec. 636(i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U.S. or guaranty of such transaction?	No.
5. Will arrangements preclude use of financing:	
a. FAA Sec. 114. to pay for performance of abortions or to motivate or coerce persons to practice abortions?	Not applicable.
b. FAA Sec. 620(g). to compensate owners for expropriated nationalized property?	Yes
c. FAA Sec. 660. to finance police training or other law enforcement assistance, excepto for narcotics programs.	Yes
d. FAA Sec. 662. for CIA activities?	Yes
e. App. Sec. 103. to pay pensions, etc. for military personnel?	Yes
f. App. Sec. 106. to pay U.N. assessments?	Yes

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g. App. Sec. 107. to carry out provisions of FAA Sections 209(d) and 251(b)? (transfer to multilateral organization for lending).	Yes
h. App. Sec. 501. to be used for publicity or propaganda purposes within U.S. not authorized by Congress?	Yes

CERTIFICATION PURSUANT TO SECTION 611(E) OF THE

FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I CERTIFY to the Administrator of the Agency for International Development that, to the best of my knowledge and belief, Nicaragua possesses both the financial capability and human resources to maintain and utilize effectively the project to be undertaken pursuant to the terms of the A.I.D. Grant/Loan proposed in this paper. This project, between the United States of America and the Government of Nicaragua, will assist said Government in extending, improving and managing educational services in its rural areas. It should be noted that, in so certifying, provision is being made under the program for extensive technical assistance for each program component in order to ensure effective utilization of a development project of this nature and magnitude. I have also taken into account the maintenance and utilization of projects in Nicaragua previously financed or assisted by the United States, the capability of the institutions of Nicaragua, and the activities of other external donors with which the activities under this project are closely interrelated.

9/9/77
Date

Arthur W. Mudge
Director
A.I.D. Mission to Nicaragua

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PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

Name of Country: NICARAGUA
Name of Project: Education and Human Resources Development
Number of Project: 524-V-033

Pursuant to Part I, Chapter I, Section 105 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a Loan and a Grant to the Republic of Nicaragua, the ("Cooperating Country") of not to exceed EIGHT MILLION THREE HUNDRED AND NINETY THOUSAND United States Dollars ($ 8,390,000) the ("Authorized Amount") to help in financing certain foreign exchange and local currency costs of goods and services required for the project as described in the following paragraph.

The Project consists of a program to extend, improve and integrate the educational services furnished to two of Nicaragua's lowest income rural regions (hereinafter referred to as the "Project"). Of the Authorized Amount Seven Million Five Hundred Thousand Dollars ("Loan") will be lent to the Cooperating Country to assist in financing certain foreign exchange and local currency costs of goods and services required for the Project. The entire amount of the A.I.D. financing herein authorized for the Project will be obligated when the Project Agreement is executed.

I hereby authorize the initiation of negotiation and execution of the Project Agreement by the Officer to whom such authority has been delegated in accordance with A.I.D. regulations and delegations of Authority subject to the following essential terms and covenants and major conditions; together with such other terms and conditions as A.I.D. may deem appropriate.

A. Interest Rate and Terms of Repayment.

The Cooperating Country shall repay the Loan to A. I. D. in United States Dollars within thirty (30) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A. I. D. in United States dollars interest from the date of first disbursement of the Loan at the rate of (a) two percent (2%) per annum during the first ten (10) years, and (b) three percent (3%) per annum thereafter on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

B. Source and Origin of Goods and Services.

Goods and Services (except for ocean shipping) and marine insurance financed under the Loan shall have their source and origin in countries which are members of the Central American Common Market or countries included in Code 941 of the A. I. D. Geographic Code Book. Marine insurance may be financed under the Loan only if it is obtained on a competitive basis, and any claims thereunder are payable in freely convertible currencies. Ocean shipping financed under the Loan shall be procured in any country included in Code 941 of the A. I. D. Geographic Code Book, excluding countries which are members of the Central American Common Market.

C. Prior to any disbursement, or the issuance of any commitment documents for other than consulting services or training under this Agreement Borrower/Grantee shall furnish in form and substance satisfactory to A. I. D., a general time-phased project implementation plan for all program activities, including a schedule of counterpart allocations.

D. Prior to any disbursement, or the issuance of any commitment documents under this Agreement for other than consulting services or training for each specific project component, the Borrower/Grantee shall have submitted

a detailed time-phased implementation plan for such component.

E. Prior to any disbursement or the issuance of any commitment documents under this agreement, subsequent to December 31, 1977, Borrower/Grantee shall furnish in form and substance satisfactory to A.I.D.:

1. A Ministry of Public Education (MPE) budget for 1978 containing the appropriate line items required by the schedule of counterpart allocations submitted pursuant to Section C. above.

2. A.I.D. approved contracts for consulting services to implement Component One (Administrative Reform) and evidence that the Borrower/Grantee is actively engaged in carrying out the activities in said component.

F. Prior to any disbursement, or the issuance of any commitment documents to finance Project Component Five (Strengthening Rural Education Delivery System) Borrower/Grantee shall furnish in form and substance satisfactory to A.I.D.:

1. A draft plan for Administrative Reform of the MPE prepared pursuant to Component One.

2. Evidence that MPE has developed both the adequate capability to carry out Component Two(Community Development), Component Three (Curriculum Development) and Component Four (Training) and a detailed plan therefor and that the said plan is operational.

G. Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement, subsequent to December 31, 1978, Borrower/Grantee shall furnish in form and substance satisfactory to A.I.D.:

1. Satisfaction of all conditions precedent under F. above.

2. A budget for 1979 containing the appropriate line items required by the schedule of counterpart allocations submitted pursuant to Condition C. above and such other items and amounts as may be necessary for successful project implementation.

3. A maintenance plan for project schools and equipment shall have been prepared, legally put into effect, and budgeted at a level satisfactory to A.I.D. in the MPE budget for 1979.

H. Prior to any disbursement, or the issuance of any commitment document under the Project Agreement subsequent to December 31, 1979, Borrower/Grantee shall furnish in form and substance satisfactory to A.I.D.:

1. A plan for administrative reform for the MPE shall have been put into operation.

2. The MPE budget for 1980 containing the appropriate line items required in the schedule of counterpart allocations submitted pursuant to Condition C. above, or such other items and amounts as may be necessary for successful project implementation.

I. Prior to any disbursement, or the issuance of any commitment document under the Project Agreement, subsequent to December 31, 1980, Borrower/Grantee shall furnish in form and substance satisfactory to A.I.D.:

1. The MPE budget for 1981 containing appropriate line items required by the schedule of counterpart allocations submitted pursuant to Condition C. above or such other line items and amounts as may be necessary for successful project implementation.

J. Prior to any disbursement, or the issuance of any commitment document under the Project Agreement, sub-

sequent to December 31, 1981, shall be subject to the following conditions:

1. The MPE budget for 1982 containing the appropriate line items required by the schedule of counterpart allocations submitted pursuant to Condition C. above or such other items and amounts as may be necessary for successful project implementation.

K. Borrower/Grantee shall covenant that it will continually budget subsequent to project completion, sums of money adequate to meet the recurring costs of the institutions and facilities developed pursuant to the project.

L. The Loan/Grant shall be subject to other terms and conditions as A.I.D. may deem advisable.

By:_____

Date:_____

OFFICIAL TRANSLATION

The Honorable
Dr. Mauricio Solaún
United States Ambassador to Nicaragua
American Embassy
Managua, D. N., Nicaragua

Dear Ambassador Solaún:

The purpose of this letter is to request assistance from the United States Agency for International Development (A.I.D.) for a rural educational development program to be carried out by the Government of Nicaragua.

Our public education system presently provides but limited educational facilities and services to the rural population. However, our Government's Rural Policy and Strategy Statement has set as a prime objective increased support for, among other activities, expanded literacy training, basic primary education and non-formal skills training. Both the National Reconstruction and Development Plan 1975-1979 and the National Plan for Educational Development 1971-1980 state that the first priority of the educational system is to mee the educational needs of the rural areas. The 1975 Nicaragua Education Sector Assessment and a later study, both conducted by our Ministry of Public Education (MPE) and A.I.D., described these needs and recommended action to meet those needs. A a part of the integrated rural development program which already includes the activities of the Institute for Campesino Welfare (INVIERNO) and the Rural Health Services Program, being implemented by the Ministry of Health (MOH), the MPE has developed a Rural Education Development Program designed to complement the ongoing programs of INVIERNO and MOH, particularly in Regions II (Masaya) and V (Jinotepe). It is the objective of the Government of Nicaragua, and in particular, the Ministry of Public Education to extend critically needed educational services of improved quality to the more isolated rural areas. However, we have but limited resources available to finance the approximately $22.0 million cost of the proposed Education program. Therefore, to assist in financing this program, the Government of Nicaragua hereby requests an A.I.D. grant of $890,000 to be disbursed over a period of three years and an A.I.D. loan of $7.5 million to be disbursed over a period of five years. We understand that the terms of the loan would be: repayment within 30 years, including a ten year grace period, with an interest rate of 2% per annum during the grace period and 3% thereafter.

The Government of Nicaragua plans to contribute to this program a minimum of approximately $13.8 million from its own financial resources over

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the period 1977-82. These counterpart funds will finance operating costs, technical assistance and construction of the proposed activities for the Rural Education Development Program, which consists of five components as follows:

1. Administrative Reform and Management Improvement

The Ministry of Public Education will strengthen its institutional and management capacities in the areas of planning, organization, staffing, coordination, operations and budgeting. While the MPE will be addressing many of its weaknesses as identified in the 1975 Education Sector Assessment, this component will also provide critical and strategic support to the components of the program described below. The Government of Nicaragua will provide the equivalent of $830,000 as counterpart over the three year implementation period of this component.

2. Integrated Community Development

The Ministry of Public Education will help develop community capacity to take an active role in determining the nature of the educational service to be delivered to their communities. Local School Committees (LSCs) will be formed in the rural areas of Regions II and V. The LSC will be the mechanism through which the community will communicate with MPE personnel, establish the cooperating links with other communities, identify the educational needs of its area, monitor educational progress and otherwise participate in the operation and maintenance of the local schools.

The MPE will coordinate its community development activities with the ongoing community development programs of INVIERNO and the Ministry of Health. MPE teachers and supervisors will serve as community promoters, supported by four specialized MPE promoters to be stationed in Regions II and V. Of the approximately $573,000 cost of this component, the Government will finance increased costs of personnel and other operating costs, both estimated at $376,000.

3. Curriculum Development and Related Materials Production:

The MPE will develop a radio-supported basic education curriculum which meets the needs of rural primary school children, adolescents and adults lacking literacy and numeracy skills. The present curriculum content which is of limited relevance to the experience of rural children and their parents will be adapted for radio transmission and modified to reflect rural realities. Curriculum reform will concentrate on reading, health, nutrition, agriculture and social studies. Of the approximately $6.8 million cost of this component, the Government will finance curriculum materials, technical assistance and part of the educational material costs estimated at $3.6 million.

4. Training for Supervision and Teaching

The MPE will endeavor to meet the need for well trained, committed teachers through a continuing program of pre-service and in-service orientation and training of supervisors, master teachers, regular teachers and Comarca teachers who will serve in the rural areas of Regions II and V. The teaching personnel of the rural adolescent training centers who will be using the accelerated radio-supported basic education curriculum will also be trained in the content and methodology of the adapted curriculum. Of the approximately $2.0 million cost of this component, the Government will finance salaries, technical assistance, per diem and other operating costs estimated at approximately $1.8 millions.

5. Strengthening Rural Educational Delivery Systems

The Ministry will address the infrastructure, support and service constraints which hinder the delivery of rural education services. This component complements the three preceeding components. All construction and repairs under this component will be supervised by a private construction management firm.

The following activities will be included in this component:

Activity A- Comarca School Circuits

100 Comarca School Circuits (400 classrooms) will be established in the small rural communities of Regions II and V known as "Comarcas" where there are at present no educational services. The Local School Committees in a designated area will request that a Comarca School Circuit (CSC) be formed in its area. The MPE will act upon the request by constructing with help from the community, the appropriate number of classrooms and a home for the Master Teacher. The Committees, aided by the MPE, will choose a local person to be their Comarca teacher whose activities they will monitor. There will be a Master Teacher assigned to four Comarca Teachers to assist and supervise each comarca teacher one day per week.

Of the approximate cost of this activity of $2.8 million, the Government will finance the salaries of the Comarca Teachers and Master Teachers at approximately $.9 million.

Activity B- Improving Existing Rural Primary Schools

In view of the fact that approximately 50% of the rural primary classrooms in Regions II and V are in need of repair, the MPE will make some abandoned schools usable and improve others with less serious structural deficiencies. Of the total cost of $1.7 million of this activity, the Government will finance

the reconstruction and repair at approximately $0.8 million and the salaries of new teachers at an estimated cost of $0.8 million.

Activity C- Furnishing New and Existing Schools

The MPE will correct the deficiency of school furniture in 368 existing classrooms in Regions II and V. In addition, furniture will be provided to the 400 new Comarca classrooms and 761 classrooms lacking required furniture will be complemented. AID will be asked to finance all school furnishing costs.

Activity D- Ongoing School Maintenance

The Ministry will institutionalize a building maintenance program for the primary schools in Regions II and V. With the assistance of a technical advisor under the component of the program, the MPE will design and implement a maintenance plan, financed with grant funds, which will include a mechanism for the provision of funds to the Local School Committees for the repair and maintenance of the schools under their jurisdiction. The Government will finance this maintenance program, estimated to cost approximately $955,000 over the life of the project.

Activity E- Education Support and Services

The Ministry will provide adequate support for rural primary schools from MPE supervisors and central office staff, and in particular will provide the transportation necessary for the provision of such support. Important subjects in the new curriculum are health and nutrition which will be taught in part through practical experience with school gardens. Upon request, school garden tool kits will be supplied to the Local School Committees.

Of the approximate $1.5 million cost of this activity, the Government will finance fuel and maintenance of vehicles and supervisors' salaries, estimated at approximately $1.0 million.

Activity F- Rural Adolescent Centers (RAC)

The MPE will increase adolescent (ages 14-20) literacy, numeracy, and occupational skills in the rural areas. The MPE will expand the present system of the Rural Adolescent Centers and Rural Family Education Centers in order to better complement the basic primary education program in six major subject areas: (1) Agriculture, (2) Rural Marketable Skills, (3) Home Economics, (4) Community Organization, (5) Basic Education and (6) Health Education. Of the approximate cost of $2.0 million, the Government will finance the construction costs and cost of operating the centers, estimated at approximately $1.7 million.

Activity G- Radio Transmitting and Receiving Capability

In order to efficiently broadcast the radio-supported curriculum to

Regions II and V the Government will install two 10kw radio stations, one in Jinotega (Region V) and the other in Masaya (Region II). These radios stations will be operated by MPE personnel with the prime responsibility of broadcasting the curriculum for primary school children, and adolescents and adults taking accelerated basic education course. Radio/recorders will be provided to each school and RAC.

Of the estimated cost of approximately $1.6 million for this activity, the Government will finance the construction and operation costs of two radio stations to be built on Government-owned land at an estimated $1.0 million. The radio stations will become a focal point for the Government's integrated rural development strategy, providing the rural poor with skills and knowledge relevant to improving their living environment.

In summary, based upon the program jointly developed with AID, the total amount of grant funds requested is $890,000 for a period of three years, and the total amount of loan funds requested is $7.5 million. The Government of Nicaragua will provide more than this amount in counterpart funds as explained above. In this regard, in order to better implement and integrate the complex but vital activities it is requested that the loan be extended with a five year disbursement period, which we judge to be the most reasonable time to execute the program.

We recognize that the rendition of the additional educational services made possible by this Rural Education Development Program will result in additional, continuing budgetary requirements for the Ministry of Public Education, after the completion of the project, in order of magnitude of approximately 30 million Córdobas per year. We accept this additional obligation because of our belief that the additional educational benefits to flow therefrom are well worth this additional expenditure.

We would like to assure the Government of the United States that all funds for support of project activities will be applied in an economically and technically sound manner. Upon approval of this request, we will establish the appropriate implementation mechanism for this project.

We are pleased to inform that His Excellency, the President of the Republic of Nicaragua, General Anastasio Somoza Debayle, has authorized use to submit this request, copies of which are being sent to the President as well as to the Honorable Minister of Finance, General Gustavo A. Montiel.

Sincerely yours,

HELIA MARIA ROBLES SOBALVARRO
MINISTER OF PUBLIC EDUCATION

cc: His Excellency
The President of the Republic

Honorable
Minister of Finance

MAPS OF NICARAGUA

This Annex contains the following:

1. Map of Nicaragua (with Regions II and V highlighted)

2. INVIERNO Rural Assistance Centers, Regions II and V.

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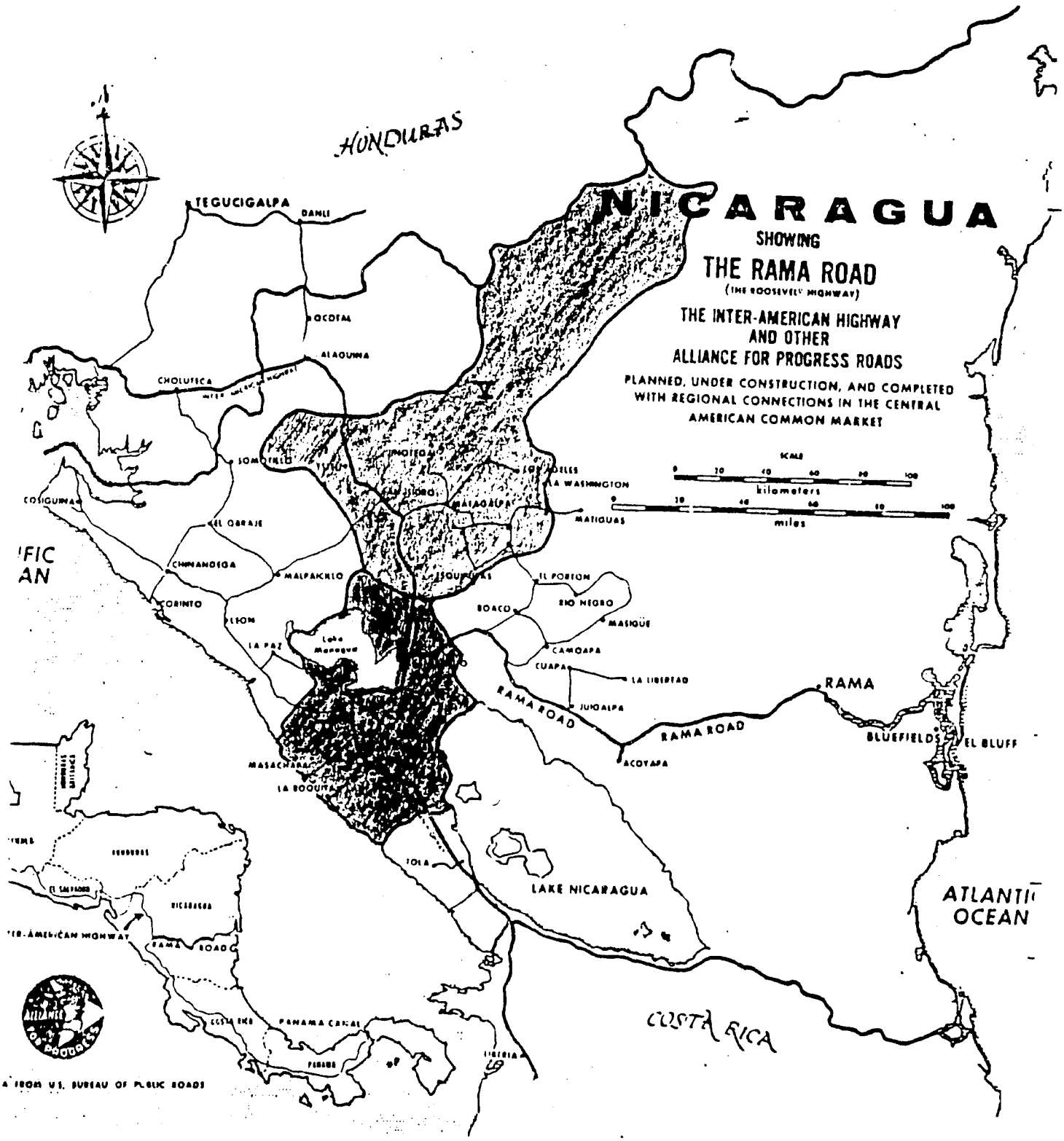
ANNEX F-1



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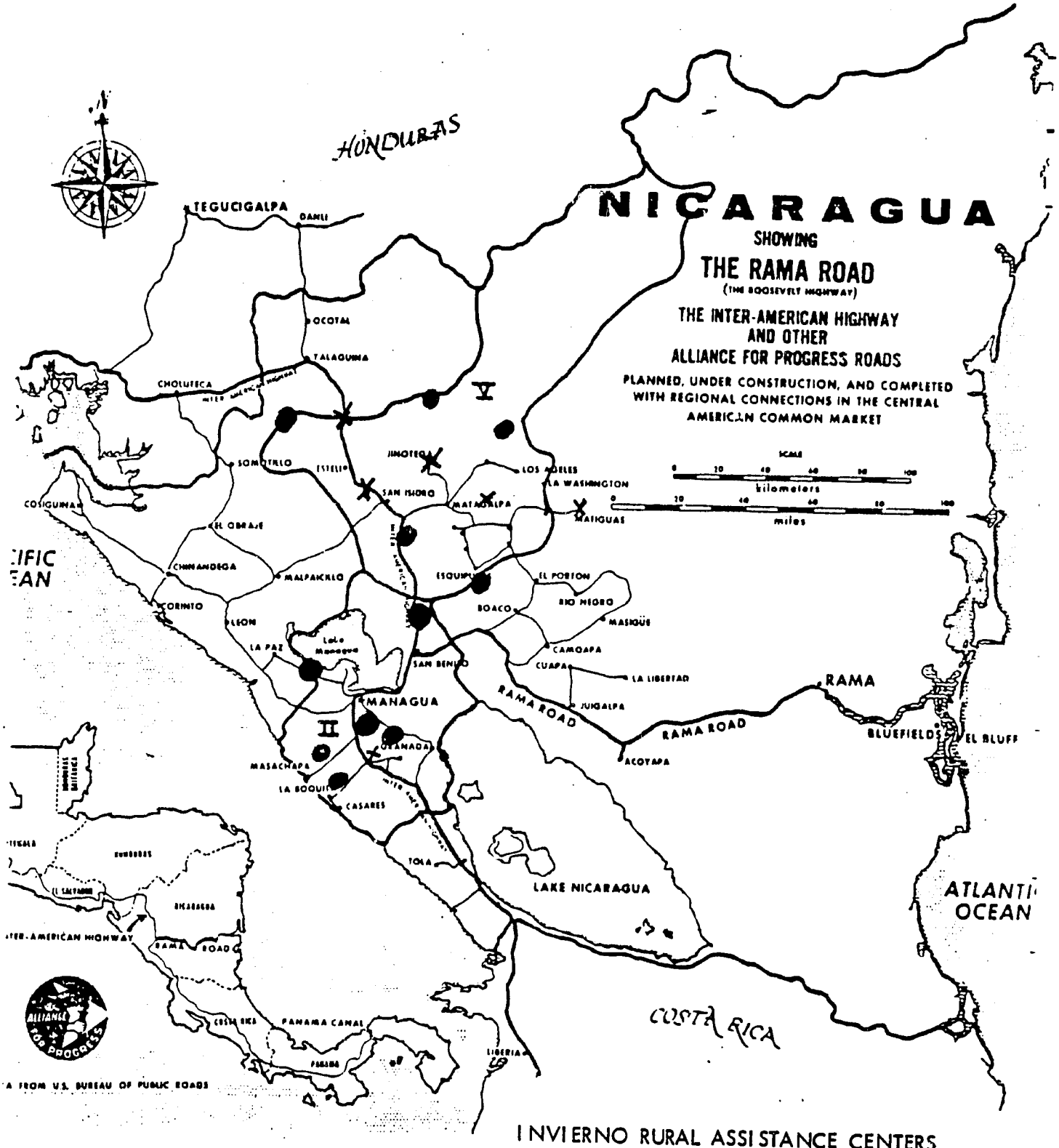
ANNEX F - 2



INVIERNO RURAL ASSISTANCE CENTERS
Operating: ✕ Planned: ●

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UNCLASSIFIED

UNCLASSIFIED
ANNEX G

LIST OF INVIERNO COMMUNITIES

This Annex contains the following:

1. Summary

2. Detailed List of INVIERNO Communities

UNCLASSIFIED
ANNEX G

SUMMARY

Development Center	Number of Communities	Number of Houses	Population	Number of Primary School Children		Average Number of Primary Children for Community
San Ramon	57	2,872	15,259	3,529		62
Matiguas	36	1,947	1,612	2,302		64
Jinotega	30	1,552	9,830	2,040		68
Pantasma	21	467	3,002	660		31
San Rafael del Norte	50	1,291	8,165	1,744		35
La Trinidad	37	1,256	8,233	1,806		49
Esteli	24	841	4,954	1,029		43
Ciudad Darío	70	2,527	14,208	3,058		44
Condega	64	2,290	13,857	2,903		45
Esquipulas	34	1,200	6,904	1,512		44
Wasaka	27	1,399	7,714	1,696		63
TOTAL	450	17,642	93,738	22,279	Overall Average	50

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

CEDE: 01 SAN RAMON

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios APROBADOS 1976	1977*
001	El Corozo	San Dionisio	801	13	38	224	25	29
002	El Jícaro	Matagalpa	852	13,23	61	324	22	25
003	El Horno	San Ramón	817	13,43	67	352	16	18
004	Yucul	San Ramón	802	13	44	230	19	22
005	Susulí	Matagalpa	851	13,23,33	144	766	105	121
006	Wibuse	San Dionisio	803	13	42	233	24	28
008	Guadalupe	San Ramón	804	13	78	408	26	30
009	Jucuapa Arriba	Matagalpa	807	13	109	580	31	36
011	San José	Matagalpa	842	13,23	51	272	1	2
012	El Chile	Matagalpa	851	13	135	718	57	66
015	Yasica Sur	San Ramón	805	13,23	59	311	3	4
019	La Garita	San Ramón	806	13,23	57	299	1	2
020	Matapalo	San Ramón	805	13,23	16	84	3	4
022	Cerro Grande	San Ramón	806	13,23	12	63	2	3
025	Sta. Ma. de Ostuma	Matagalpa	835	13,43	23	122	17	20
035	El Arenal	Matagalpa	833	13,43	51	271	1	2
039	Yasica Norte	Matagalpa	830	13	54	287	--	--
040	Las Escaleras	Matagalpa	840	13,23	82	436	--	--
043	Bailadora	San Ramón	845	13,33	39	205	6	7
045	Tejerina	Matagalpa	838	13,23	49	260	10	12
046	Waswalí	Matagalpa	838	13,23	39	207	9	11
047	El Naranjo	San Ramón	816	13,23	35	184	20	23
048	Molino Norte	Matagalpa	840	13,23,33	70	372	5	6
049	San Salvador	Matagalpa	841	13,23	46	245	0	0
050	San Pablo	San Ramón	824	13,23	88	462	63	72
052	Las Tejas	Matagalpa	845	13,23	37	197	2	3
056	Samulalí	Matagalpa	850	13,63	184	978	68	78
057	El Bijague	Matagalpa	845	13,23	46	244	7	8
058	Piedra Colorada	Matagalpa	856	13,33	144	765	56	64
059	Ocalca	Matagalpa	851	13,23	51	271	35	40
060	Pueblo Viejo	Matagalpa	860	13,43	104	551	10	12
064	Molino Sur	Sébaco	878	13	30	168	15	12

CEDE: SAN RAMON

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
061	Piedra Larga	Sn. Dionisio	800	13,23,13	-	--	14	16
074	Ocote de Pueblo Viejo	Matagalpa	161	13	-	--	8	10
063	Ocote de San Dionisio	S. Dionisio	801	13,23	-	--	18	20
014	El Hular	Matagalpa	830	13,23	21	111	-	8
017	La Alianza	Matagalpa	846	13,23,33	29	154	-	9
018	La Cumplida	Matagalpa	839	13,23,33	34	181	-	10
021	El Tuma	Matagalpa	829	13 al 43	59	314	-	18
023	Las Nubes	Matagalpa	818	13 al 33	41	217	-	12
024	Ocotal Espeso	Matagalpa	848	13 al 33	35	186	-	10
026	San José de Umure	Matagalpa	829	13 al 43	32	170	-	10
027	Las Mesas	Matagalpa	837	13,23	39	208	-	12
028	Yanule Arriba	Matagalpa	838	13 al 33	66	351	-	20
029	Los Lipes	Matagalpa	842	13,23	26	138	-	8
030	Llano Grande	Matagalpa	839	13 al 33	37	196	-	11
031	El Jícaro	Matagalpa	861	13 al 53	61	324	-	18
032	La Labranza	Matagalpa	834	13,23	24	128	-	8
033	Jumaiquí	Matagalpa	878	13,23	23	122	-	8
034	El Guineo	Matagalpa	849	13 al 33	28	149	-	9
036	Apatite	Matagalpa	852	13 al 33	27	144	-	9
038	Cuatro Esquinas	Matagalpa	855	13,23	31	165	-	10
042	Verapaz	San Ramón	800	13,23	19	99	-	8
044	Yayules	San Ramón	803	13 al 33	29	152	-	10
051	Los Placeres	San Ramón	804	13 al 43	40	210	-	12
053	Los Limones	San Ramón	808	13 al 53	58	304	-	18
054	Monte Grande	San Ramón	819	13,23	28	147	-	9
TOTAL	57				2,872	15,259	699	1,053

FUENTE : Censos Nacionales 1971. Censo y Recenso INVIERNO, 1976

FECHA : Mayo 20, 1976

Oct,1976/LANU/aga

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INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 y 1977

CEDE 02: MATIGUAS

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
001	Wana Wana	Matiguás	800	13	34	209	-	--
003	El Martillo	Matiguás	801	13	9	55	5	6
009	Muy Muy Viejo	Matiguás	810	13	100	613	25	29
011	Saiz	Matiguás	847	13,23	134	835	10	12
012	Las Limas	Matiguás	839	13	7	43	1	2
013	Cebadilla	Matiguás	830	13	85	522	26	30
014	La Patriota	Matiguás	834	13	17	104	3	4
015	El Anzuelo	Matiguás	840	13	113	693	8	9
016	Azáncor	San Ramón	804	13	111	584	22	25
017	Uluse	San Ramón	819	13	66	346	16	18
018	Alred. Matiguás	Matiguás	848	13			1	2
024	Paiwas	Matiguás	843	13	79	485	22	25
025	Río Blanco	Río Blanco	821	13,83	283	1,737	25	29
029	La Ponzoña	Río Blanco	820	13,33,23	56	344	35	40
034	Tierra Blanca	Matiguás	822	13	55	337	26	30
038	Bilwas	Matiguás	831	13	118	111	27	31
043	Bijagual	Matiguás	837	13	71	436	34	39
045	Las Minitas	Matiguás	841	13,23	38	233		
048	Sn Miguelito	Muy Muy	873	13	--	--	--	--
047	La Parra	Matiguás	822	13	--	--	10	13
046	Cabecera de Paiwa	San Ramón	834	13	--	--	13	17
037	San Marcos	San Ramón	853	13,23	--	--	10	13
027	Tierra Azul	Boaco	842	13,23	--	--	5	7
038	La Washington	San Ramón	821	13	--	--	14	18
002	El Sabalete	Matiguás	806	13 al 53	63	387	--	20
004	El Cacao	Matiguás	800	13 al 73	120	737	--	36
005	El Corozo	Matiguás	815	13 al 33	71	435	--	21
006	Apantillo Sabalar	Matiguás	807	13 al 63	69	423	--	20
007	El Guabo	Matiguás	813	13 al 43	50	307	--	15
008	Cusiles	Matiguás	829	13,23	28	172	--	9
010	Salto de la Hoya	Matiguás	843	13 al 43	50	307	--	15
020	Wiliwa	Muy Muy	805	13,23	24	123	--	8
021	Las Pavas	Muy Muy	809	13,23	20	103	--	6

CEDE 02: MATIGUAS

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
022	Olama	Muy Muy	807	13,23	33	169 -	--	10
023	Sitio El Corozo	Muy Muy	810	13,23	20	103 -	--	6
026	Ranchería	Muy Muy	801	13,23	23	138 -	--	10
TOTAL	36				1,947	1,612	338	601

FUENTE: Censos Nacionales 1971. Censo y Recenso, INVIERNO, 1975

FECHA : Mayo 20, 1976

Oct.1976/LANU/ada

*Proyectada

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 y 1977

CEDE 03: JINOTEGA

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	Socios Aprobados 1977*
003	El Limón	Jinotega	801	13	54	338	8	9
028	El salto	Jinotega	826	13,23	42	264	31	36
034	El Potrerillo	Jinotega	835	13,23	34	213	7	8
035	Pueblo Nuevo	Jinotega	839	13,43	56	351	16	18
037	Dantalí de Jiquina	Jinotega	862	13,73,63	119	747	46	53
039	El Yankee	Jinotega	832	13,33	70	438	20	23
040	Sn Antonio de Sisle	Jinotega	829	13,23	132	827	27	31
042	Sisle	Jinotega	823	13,23	63	395	20	23
048	Llano La Cruz	Jinotega	854	13,33	61	382	19	22
049	Los Chaquites	Jinotega	864	13,23	41	257	19	22
050	Llano la Tejera	Jinotega	859	13,23	200	1,320	36	41
052	La Fundadora	Jinotega	849	13,23	49	307	5	6
053	La Parranda	Jinotega	838	13,23	36	225	-	-
054	Los Robles	Jinotega	859	13,43	58	364	25	29
055	Sasle	Jinotega	852	13,23	34	213	17	20
056	Las Lomas	Jinotega	855	13,73	61	383	27	31
061	Tomateya	Jinotega	851	13,23	92	608	14	16
014	Yucapuca	Jinotega	846	13,23	24	150	-	-
018	Buculmay	Jinotega	848	13,23	21	138	11	13
013	Sn Esteban	Jinotega	858	13 al 43	47	294	2	3
024	El Limito	Jinotega	860	13,23	20	125	-	-
064	Bonetillo	Jinotega	849	13	-	-	3	4
066	Chaguite Grande	Jinotega	857	13 al 43	-	-	-	-
015	Los Cipreses	Jinotega	853	13,23	33	206	-	10
017	Venecia	Jinotega	848	13,23	26	163	-	8
019	Los Nogales	Jinotega	877	13 al 33	49	307	-	15
020	Lipululo	Jinotega	821	13 al 23	24	151	-	8
099	La Trinchera	Jinotega	854	13	30	188	-	10

*Proyectado

CEDE: 03 JINOTEGA

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	Socios Aprobados 1977
022	Zaraguasca	Jinotega	821	13 al 33	34	213	-	10
025	Jocomico	Jinotega	865	13 al 33	42	263	-	13
TOTAL	30				1,552	9,830	353	482

FUENTE : Censos Nacionales 1971. Censo y Recenso, INVIERNO 1976.

Oct. 1976/LANU/ada

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ANNEX G

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

SUB CEDE PANTASMA

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
004	Los Limones	Jinotega	829	13	20	125	52	60
005	Zenizabú	Jinotega	834	13,23	42	263	32	36
006	Tamalague	Jinotega	817	13	13	81	--	--
007	El Charcón	Jinotega	820	13	12	75	20	23
027	El Tamarindo	Jinotega	826	13	11	69	11	13
032	El Malecón	Jinotega	821	13,23	34	214	24	28
033	Alaba o Brujera	Jinotega	821	13,23	26	163	1	1
036	El Venado	Jinotega	821	13	19	118	4	5
021	El Ventarrón	Jinotega	836	13,23	26	162	4	5
041	Ulele	Jinotega	817	13,23	20	138	1	1
043	El Tigre	Jinotega	836	13	--	---	4	5
008	Sn Fco. de los Cedros	Jinotega	829	13	-	---	45	52
030	Loma Alta	Jinotega	828	13	19	119	1	1
029	El Corozal	Jinotega	827	13,23	--	---	15	17
031	Guale	Jinotega	839	13	--	---	23	26
044	Sta. Cruz	Jinotega	807	13,53	73	458	22	25
067	Cuatro Esquinas	Jinotega	846	13	--	---	-	-
072	El Chile	Jinotega	839	13	---	---	-	-
008	Sn Fco. Los Cedros	Jinotega	829	13	33	207	33	37
011	Pantasma	Jinotega	879	13	119	810	52	60
065	Mancotal	Jinotega	836	13/53	--	--	-	-
TOTAL	21				467	3,002	344	395

Oct. 1976/LAMU/ada

UNCLASSIFIED

*Proyectado

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

SUB CEDE SAN RAFAEL DEL NORTE

Código	L o c a l i d a d	M u n i c i p i o	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	Socios Aprobados 1977*
009	El Mojón	Sn Rafael del N.	833	13,23,33	43	270	40	43
010	Los Potrerillos	Sn Rafael del N.	827	13,23	29	181	10	12
016	San Gabriel	Sn Rafael del N.	834	13,23	42	262	3	4
057	Suní	Sn Rafael del N.	846	13,63	47	293	16	21
058	San Marcos Abajo	Sn Rafael del N.	821	13	16	100	11	13
059	Sabana Grande	Sn Rafael del N.	856	13,83	69	430	25	29
060	Sacaclí	Sn Rafael del N.	851	13,23,33,43,53	16	100		
062	Sn Marcos Arriba	Sn Rafael del N.	828	13,63	87	542	27	31
063	El Espino	Sn Rafael del N.	845	13,23	5	31	14	16
026	Sta. Bárbara	Sn Rafael del N.	851	13,23	-	-	17	20
098	Santa Fé	Sn Rafael del N.	834	13 al 33	48	301	-	14
001	El Salto	Sn Rafael del N.	800	13	20	124	-	6
002	La Colmena	Sn Rafael del N.	809	13	20	121	-	6
051	La Mora de Abajo	Sn Rafael del N.	800	13	20	122	-	6
068	Guiscanal	Sn Rafael del N.	802	13	20	123	-	6
069	Valerio	Sn Rafael del N.	803	13	20	124	-	6
070	El Zapote Oriental	Sn Rafael del N.	803	13	23	146	-	7
071	El Coyolito (Santiago)	Sn Rafael del N.	804	13 al 33	63	401	-	19
073	Sn Vicente del Coyolito	Sn Rafael del N.	804	13	21	126	-	6
074	Colón	Sn Rafael del N.	805	13 al 23	31	197	-	9
075	Río Negro	Sn Rafael del N.	800	13 al 23	30	187	-	9
076	El Plantel	Sn Rafael del N.	809	13	20	123	-	6
077	Laguna Verde	Sn Rafael del N.	800	13	21	126	-	6
078	Las Rinconadas	Sn Rafael del N.	801	13	22	137-	-	7
079	La Brellera	Sn Rafael del N.	802	13	24	149-	-	7
080	Sable	Sn Rafael del N.	804	13	20	121-	-	6
081	El Vallecillo	Sn Rafael del N.	806	13	22	138-	-	7

*Proyectado

SUB CEDE: SAN RAFAEL DEL NORTE

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	Socios Aprobados 1977
082	La Vuelta del Roble	Sn Rafael del N.	806	13	20	122	-	-6
083	La Tejera	Sn Rafael del N.	806	13	20	121	-	6
084	Sábana de Enmedio	Sn Rafael del N.	807	13	20	124	-	6
023	Las Delicias	Sn Rafael del N.	808	13	22	137	-	7
085	La Ermita	Sn Rafael del N.	809	13	20	121	-	6
086	Los Cerritos	Sn Rafael del N.	809	13	21	126	-	6
087	El Nance	Sn Rafael del N.	812	13	20	122	-	6
088	El Terrero	Sn Rafael del N.	812	13	21	131	-	6
028	El Zancudal	Sn Sebastián de Yalí	800	13 al 23	31	210	-	9
089	Rica Arriba(Larica)	Sn Sebastián de Yalí	801	13 al 23	41	278	-	12
090	Palo Blanco	Sn Sebastián de Yalí	801	13	24	163	-	7
091	El Amparo	Sn Sebastián de Yalí	802	13 al 23	38	257	-	11
092	Las Vegas	Sn Sebastián de Yalí	803	13	20	124	-	6
093	Qda. Grande	Sn Sebastián de Yalí	802	13	20	135	-	6
094	El Bijagual	Sn Sebastián de Yalí	804	13	21	142	-	6
038	El Camalote	Sn Sebastián de Yalí	805	13 al 23	39	264	-	12
035	Las Guayabas	Sn Sebastián de Yalí	805	13 al 23	29	197	-	9
096	El Coyolar	Sn Sebastián de Yalí	806	13	25	169	-	8
097	Las Bañaderas	Sn Sebastián de Yalí	807	13	20	126	-	6
100	Río Arriba	Sn Sebastián de Yalí	809	13	20	121	-	6
045	Kiata y Rodeito	Sn Sebastián de Yalí	810	13	--	-	-	-
046	Pavona Arriba	Sn Sebastián de Yalí	803	13	--	-	-	-
047	Pavona Abajo	Sn Sebastián de Yalí	803	13	--	-	-	-
TOTAL	50				1,291	8,165	205	509

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INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 y 1977

CEDE 04: LA TRINIDAD

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
002	Las Mangas	San Isidro	807	13,43	92	556	17	20
003	Quebrada Honda	San Isidro	813	13,33	31	188	6	7
004	El Jocote y Sabanetas	San Isidro	807	13,23	49	297	14	16
005	Licoroy	La Trinidad	811	13,23	44	302	16	18
006	Real de la Cruz	Ciudad Darío	806	13	21	145	8	9
007	Las Tablas	La Trinidad	802	13,23	36	245	8	9
008	Sta. Rosa de Lima	Sn Isidro	802	13,23	58	352	15	17
009	La Sidra	Sn Isidro	812	13,23	20	121	3	4
010	La Concepción	La Trinidad	809	13,23	29	198	23	26
012	Tomabú	La Trinidad	805	13,23	56	384	18	21
013	El Espinal	La Trinidad	802	13,23	18	125	51	51
014	Las Lajitas	La Trinidad	804	13,23	14	96	8	9
015	Quebrada Seca	San Isidro	809	13,33	67	406	17	20
016	Mechapa	La Trinidad	804	13,23	56	382	22	25
019	Las Animas	La Trinidad	802	13,23,33	38	259	9	10
020	Los Carbonales	La Trinidad	816	13,23	11	75	14	16
021	El Tamarindo	San Isidro	812	13,43	23	140	5	6
022	San Pablo	San Isidro	820	13,33	--	---	9	10
023	San Lázaro	La Trinidad	821	13	31	212	8	9
024	Las Cañas	La Trinidad	800	13,23	78	532	14	16
025	Valle Las Horquetas	La Concordia	808	13	30	205	8	9
026	San Francisco	La Trinidad	800	13	33	225	16	18
027	Oyanca	La Trinidad	807	13	25	170	22	25
029	El Rosario Viejo	La Trinidad	803	13,23	35	239	12	14
032	Llano Grande	La Trinidad	824	13,83	23	157	3	4
033	Cuajiniquil	La Trinidad	862	23	12	82	8	9
036	Chaguite Blanco	La Trinidad	801	13,23	26	178	-	-
037	La Cañada	La Trinidad	819	13	20	137	13	15
038	San Andrés	San Isidro	820	13	46	279	13	15
039	Mesa Los Espejos	La Trinidad	850	13	5	34	4	5

* Proyectado

CEDE 04: LA TRINIDAD

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977
043	El Paso Real	Sébaco	814	13	19	106	6	7
050	Las Cañas	Ciudad Darío	861	13	16	110	20	23
054	El Chaguite	Ciudad Darío	836	13	41	285	26	30
068	San Esteban	Ciudad Darío	842	13	42	290	12	14
045	El Hornillo	La Trinidad	808	13,23	41	279	--	12
046	Las Pencas	La Trinidad	809	13,23	24	163	--	7
047	San Andrés	La Trinidad	820	13	46	279	--	14
TOTAL	37				1,256	8,233	448	540

FUENTE: Censos Nacionales 1971. Censo y Recenso, INVIERNO, 1976

FECHA : Mayo 20, 1976

Oct. 1976/LANU/ada

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ANNEX G

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 y 1977

SUB CEDE ESTELI

Código	L o c a l i d a d	M u n i c i p i o	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
001	El Despoblado	Estelí	810	37	37	241	8	12
011	La Estanzuela	Estelí	815	13,33	18	118	20	20
017	El Quebracho	Estelí	816	23	51	331	10	12
018	Las Cámaras	Estelí	817	33	19	123	11	12
028	San Antonio	Estelí	822	13,23	6	39	19	20
030	San Nicolás	San Nicolás	823	13	---	---	9	10
031	Sta. Cruz	Estelí	824	13,43	109	710	31	36
034	Sabana Larga	Estelí	827	13,43	6	39	9	10
041	Buena Vista	Estelí	859	13	11	72	4	2
042	La Pacaya	La Trinidad	810	23	23	157	-	5
059	San José	Estelí	881	13,23	24	165	-	-
060	La Tunosa	Estelí	817	13,23	20	140	0	-
061	Sabana Verde	Sébaco	813	13,23	32	178	22	25
062	Río Nuevo	Sébaco	812	13,23	33	185	20	23
070	Las Gavetas	La Trinidad	802	13,23	27	184	-	8
048	El Coyolito	Estelí	881	13	23	149	-	7
049	Valle El Jícaro	Estelí	808	13,23	22	144	-	7
051	El Rosario	Estelí	810	13 al 63	102	165	-	31
052	Los Chilamates	Estelí	810	13,23	23	149	-	7
053	San Pedro	Estelí	813	13 al 53	61	399	-	18
055	Isidrillo	Estelí	814	13 al 43	48	315	-	14
056	El Limón	Estelí	817	13,23	23	149	-	7
057	La Montañita	Estelí	818	13 al 73	78	509	-	23
058	Subtiava	Estelí	825	13 al 33	45	293	-	14
TOTAL	24				841	4,954	163	323

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*Proyectado

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

SUB CEDE CIUDAD DARIO

Código	L o c a l i d a d	M u n i c i p i o	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	Socios Aprobados 1977*
064	Agua Zarca	Sébaco	801	13 al 43	48	269	-	14
065	Chaguitillo	Sébaco	804	13 al 63	109	559	-	30
069	Las Palmas	Sébaco	805	13,23	21	118	-	6
071	Wilwaska	Sébaco	810	13,23	27	150	-	8
072	Molino	Sébaco	807	13,23	22	123	-	7
073	Las Pozas	Sébaco	809	13 al 33	46	255	-	14
074	Río Nuevo	Sébaco	813	13,23	33	185	-	10
075	Sábana Verde	Sébaco	813	13,23	32	178	-	10
076	Apompuás	Sébaco	812	13,23	27	186	-	8
077	El Ocotillo	Sébaco	808	13,23	22	123	-	7
078	El Zarzal	Ciudad Darío	800	13,23	20	111	-	6
079	Apacorral	Ciudad Darío	801	13,23	24	135	-	7
080	Maunica	Ciudad Darío	801	13,23	36	246	-	11
081	Las Jaguas	Ciudad Darío	802	13,23	20	131	-	6
082	San Antonio	Ciudad Darío	803	13 al 53	91	626	-	27
083	El Jobo	Ciudad Darío	803	13,23	20	104	-	6
084	El Cacao	Ciudad Darío	821	13 al 63	109	752	-	33
085	Junquillo	Ciudad Darío	804	13,23	25	172	-	8
086	Agua Fría	Ciudad Darío	804	13,23	40	276	-	12
087	Tatascamo	Ciudad Darío	804	13,23	21	145	-	6
088	Asientos Viejos	Ciudad Darío	807	13	20	121	-	6
089	Los Cocos	Ciudad Darío	808	13	20	138	-	6
067	El Pital y el Placer	Ciudad Darío	826	13 al 33	43	258	-	13
090	El Delirio	Ciudad Darío	808	13	21	145	-	6
066	El Pangual y Terrero	Ciudad Darío	824	13 al 33	53	38	-	16
091	Los Encuentros	Ciudad Darío	814	13	20	138	-	6
092	El Carbonal	Ciudad Darío	810	13,23	28	193	-	8
093	El Juanillo	Ciudad Darío	801	13,23	29	201	-	9
094	Delicias del Quebracho	Ciudad Darío	811	13,23	135	210	-	41

* Proyectado

SUB CEDE CIUDAD DARIO

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977
095	Las Nubes	Ciudad Darío	812	13	22	152	-	7
096	Los Calpules	Ciudad Darío	817	13	20	139	-	6
097	Totumbla	Ciudad Darío	817	13	20	125	-	6
098	Puertas Viejas	Ciudad Darío	819	13,23	38	263	-	11
099	Tempisque	Ciudad Darío	819	13	120	124	-	36
100	Llanos de Tecomapa	Ciudad Darío	819	13,23	31	213	-	9
101	Nombre de Jesús	Ciudad Darío	821	13,23	41	280	-	12
102	Monte Verde	Ciudad Darío	821	13	20	117	-	6
035	El Prado	Ciudad Darío	822	13,23	36	249	-	11
103	La Pita	Ciudad Darío	824	13	23	159	-	7
104	Llano de San Juan	Ciudad Darío	824	13,23	35	242	-	11
105	Candelaria	Ciudad Darío	801	13,23	30	208	-	9
106	El Guineo	Ciudad Darío	824	13,23	24	166	-	7
040	Rincón del Diablo	Ciudad Darío	825	13,23	24	166	-	7
064	San Luis	Ciudad Darío	809	13,23	36	216	-	11
065	El Cristal	Ciudad Darío	824	13,23	31	206	-	9
107	Bacacán	Terrabona	801	13,23	29	200	-	9
108	Payacuaca	Terrabona	800	13,23	38	224	-	11
109	El Rincón	Terrabona	800	13,23	33	195	-	10
044	El Ocote	Terrabona	801	13,23	24	141	-	7
110	La Ceiba	Terrabona	802	13,23	26	154	-	8
111	La Joya	Terrabona	803	13,23	23	140	-	7
112	Monte Grande	Terrabona	803	13 al 33	59	347	-	18
113	Cuajiniquil	Terrabona	805	13 al 53	71	419	-	21
114	Ojo de Agua	Terrabona	811	13 al 23	55	328	-	17
115	El Carbonal	Terrabona	806	13,23	34	200	-	10
116	Apastas	Terrabona	806	13,23	35	206	-	10
117	El Hatillo	Terrabona	806	13,23	20	117	-	6
118	Monte Verde	Terrabona	808	13,23	33	191	-	10
119	San Agustín	Terrabona	809	13,23	20	121	-	6
120	El Bonete	Terrabona	813	13,23	27	159	-	8
121	Sta. Rosa	Terrabona	815	13,23	34	201	-	10
122	El Arado	Terrabona	815	13,23	21	124	-	6
123	El Bálsamo	Terrabona	815	13,23	20	118	-	6

*Proyectado

SUB CEDE CIUDAD DARIO

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios 1976	Aprobados 1977*
124	San Pedro	Terrabona	817	13 al 23	22	139	-	7
125	Chaguite Grande y Potrerillos	Terrabona	801	13 al 23	68	401	-	20
126	Montaña Grande	Terrabona	809	13,23	36	211	-	11
127	Monte Oscuro	Terrabona	814	13,23	20	123	-	6
063	El Naranjo	Jinotega	803	13 al 43	54	305	-	2
069	La Concepción	Sébaco	853	13	21	118	-	2
TOTAL	70				2,527	14,208	-	745

Octubre 1976/LANU/ada

*Proyectado

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

CEDE 05: CONDEGA

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
001	El Potrerillo	Condega	809	13,23	15	89	25	25
002	Valle Sta. Lucía	Condega	804	13	34	202	7	8
003	Sta. Teresa	Condega	808	13,23	54	322	16	18
004	La Labranza	Condega	810	13,23	57	339	48	55
005	Laguna Los Hernández	Condega	808	13,23	40	238	31	36
006	Culse	Condega	804	13,23	26	155	8	9
007	Río Abajo	Pueblo Nuevo	804	13	23	140	14	15
008	Ducuale Grande	Condega	800	13,23	19	113	5	6
009	El Bracito	Condega	800	13,23	36	214	2	6
010	Sta. Rita	Condega	800	13,23	16	95	2	3
011	San Diego	Condega	800	13,23	38	226	1	2
012	San Ramón	Condega	803	13	32	191	10	12
013	Piedra Larga	Condega	807	13,23	44	262	3	4
014	Los Nísperos	Condega	801	13,23	46	274	8	9
015	V. Sta. Rosa	Condega	801	13	33	196	16	18
016	V. La Laguna	Condega	801	13	36	214	13	15
017	V. El Jocote	Condega	806	13,43	94	560	13	15
018	V. Guayucalí	Condega	812	23	38	225	7	8
019	Los Calpules	Pueblo Nuevo	805	13,73	63	305	124	124
020	Los Hatillos	Pueblo Viejo	810	13,23	68	415	41	47
022	Matapalo	Pueblo Viejo	804	13,23	38	233	42	42
023	Cofradía	Pueblo Viejo	807	13,23	43	262	11	13
024	Quebrada Arriba	Pueblo Viejo	809	13	64	390	6	7
025	La Lamilla	Pueblo Viejo	802	13,23	24	146	14	16
027	Río Grande	Pueblo Viejo	806	13	37	227	11	13
028	El Limón	Pueblo Viejo	803	13,23	42	256	15	17
029	San José	Pueblo Viejo	800	13	31	189	13	15
031	Los Cerritos	Condega	814	13	16	95	13	15
032	El Peñasco	Condega	815	13	39	232	40	40
033	Pire	Condega	826	13	8	48	33	33
034	Los Rincones	Pueblo Viejo	808	13,23	30	183	15	17
035	La Naranjita	Condega	816	13	15	89	17	20
059	El Guásimo	Pueblo Nuevo	809	13,23	20	127	-	-

* Proyectado

Código	Localidad	Municipio	Sector	Segmentos	Número de Viviendas	Población,-	Socios -1976	Aprobados 1977*
036	El Paraisito	Pueblo Nuevo	817	13	-	-	16	16
037	Guasuyuca	Pueblo Nuevo	816	13	200	1,338	7[illegible]	81
038	Chaguite Grande	Condega	819	13	40	236	18	21
040	El Pencal	Pueblo Nuevo	811	13	11	67	23	28
065	La Pava	Pueblo Nuevo	812	13,23	20	120	-	6
066	El Cacao	Pueblo Nuevo	812	13,23	20	120	-	6
021	El Espino	Condega	801	13,23	24	144	-	7
026	El Aguacate	Condega	801	13,23	20	113	-	6
030	Las Cureñas	Condega	801	13,23	20	107	-	6
050	El Robledal	Condega	802	13,23	28	168	-	8
042	Paracayal	Condega	803	13,23	20	119	-	6
043	El Guayabal	Condega	805	13, al 43	45	268	-	13
044	El Tule	Condega	806	13 al 33	33	197	-	10
045	Campo Eliseo	Condega	807	13,23	20	119	-	6
046	La Hondura	Condega	811	13,23	20	113	-	6
047	El Rodeo	Condega	811	13,23	20	113	-	6
059	Plan de Grama	Condega	821	13,23	20	113	-	6
048	Sto. Domingo	Pueblo Viejo	809	13 al 74	101	616	-	30
049	Los Mojones	Pueblo Viejo	800	13,23	44	270	-	13
050	Lagunetas	Pueblo Viejo	803	13 al 33	37	227	-	12
051	Valle San Antonio	Pueblo Viejo	803	13,23	26	158	-	8
052	Motolín	Pueblo Viejo	804	13,23	20	122	-	6
053	Rincón de Motolín	Pueblo Viejo	805	13,23	23	140	-	7
054	El Rodeo	Pueblo Viejo	805	13,23	34	206	-	10
055	El Horno	Pueblo Viejo	805	13,23	26	159	-	8
057	El Cerro Grande	Pueblo Viejo	807	13,23	29	177	-	8
058	Casnalí	Pueblo Viejo	808	13,23	32	195	-	10
060	Los Llanos	Pueblo Viejo	810	13,23	48	294	-	13
061	Los Hornos	Pueblo Viejo	811	13 al 33	36	220	-	12
062	Rincón Grande	Pueblo Viejo	811	13,23	20	122	-	6
063	El Chacón	Pueblo Viejo	812	13,23	20	122	-	6
064	La Palagua	Pueblo Viejo	812	13 al 33	34	207	-	10
TOTAL	64				2,290	13,857	759	1,087

FUENTE: Censos Nacionales 1971. Censo y Recenso, INVIERNO, 1976

*Proyectado

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

CEDE 06: ESQUIPULAS

Código	L o c a l i d a d	M u n i c i p i o	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
001	Castillo	Esquipulas	800	13,23	35	202	-	10
002	Coscuilo	Esquipulas	800	13	25	144	-	8
003	La Enea	Esquipulas	800	13,23	40	231	-	12
004	El Castillo	Esquipulas	800	13,23	27	155	-	8
005	Miragua	Esquipulas	803	13	25	144	-	8
006	Quebrachal	Esquipulas	801	13	20	109	-	6
007	El Zapotal	Esquipulas	802	13,23	44	253	-	13
008	El Portón	Esquipulas	803	13 al 33	54	312	-	16
009	La Pineda	Esquipulas	803	13,23	43	248	-	13
010	El Barro	Esquipulas	803	13 al 43	73	421	-	22
011	El Gorrión	Esquipulas	803	13 al 43	63	363	-	19
012	La Pita	Esquipulas	804	13,33	27	155	-	8
013	El Ternero	Esquipulas	804	13,23	37	213	-	11
014	Cinta Verde	Equipulas	805	13,23	33	190	-	10
015	Montealegre	Esquipulas	806	13,23	31	180	-	9
016	La Danta	Esquipulas	808	13,23	28	161	-	8
017	El Cóbano	San Dionisio	800	13	20	120	-	6
018	Piedra Larga	San Dionisio	803	13 al 33	59	348	-	18
019	El Ocote (Abajo)	San Dionisio	801	13,23	38	224	-	11
020	Las Cuchillas	San Dionisio	802	13	20	120	-	6
021	Monteverde	San Dionisio	802	13,23	43	254	-	13
022	El Tempique	San Dionisio	802	13,23	25	148	0	8
023	El Ocote (Arriba)	San Dionisio	801	13	20	121	-	6
024	El Cerro	San José de los Remate	800	13,23	44	248	-	13
025	San Bartolo	Sn José de los Remates	800	13	22	124	-	7
026	Cumaica	Sn José de los Remates	801	13 al 43	66	372	-	20
027	El Dorado	Sn José de los Remates	801	13,23	25	141	-	8
028	Malacatoya	Sn José de los Remates	803	13,23	44	248	-	13
029	Coyol Bajo	Sn José de los Remates	805	13,23	26	147	-	8
030	El Llano del Coyol	Sn José de los Remates	805	13	20	113	-	6
031	Tierra Blanca	Sn José de los Remates	805	13,23	28	158	-	8

* Proyectado

CEDE 06: ESQUIPULAS

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
032	Bajos de Tomatoya	Sn José de los Remates	806	13 al 33	45	254	-	14
033	Nacascolo	Sn José de los Remates	806	13,23	24	135	-	7
034	La Concepción	Sn José de los Remates	808	13,23	26	147	-	8
TOTAL	34				1,200	6,904	-	361

Oct. 1976/LANU/ada

*Proyectado

INSTITUTO DE BIENESTAR CAMPESINO
I N V I E R N O

LISTA DE LOCALIDADES Y SOCIOS 1976 Y 1977

CEDE 07: WASAKA

Código	Localidad	Municipio	Sector	Segmento	Número de Viviendas	Población.-	Socios Aprobados 1976	1977*
001	El Bijao	Matagalpa	817	13,23,33	55	297	-	17
002	Sn José de Wasaka	Matagalpa	815	13,23	42	223	-	13
003	Sta. María de Wasaka	Matagalpa	816	13,23	20	120	-	6
004	El Diamante	Matagalpa	826	13,23	34	189	-	10
005	El Trébol	Matagalpa	813	13,23	28	149	-	8
006	La Concha	Matagalpa	814	13,23	44	234	-	13
007	Cara Terask	Matagalpa	823	13,23,33	60	319	-	18
008	La Lucha	Matagalpa	815	13,23	40	213	-	12
009	La Estrella	Matagalpa	815	13,23,33	56	297	-	17
010	Wacika	Matagalpa	822	13 al 43	193	1,025	-	58
011	La Dalia	Matagalpa	816	13	21	111	-	6
012	Granadillo	Matagalpa	858	13 al 53	65	345	-	20
013	La Florida	Matagalpa	823	13,23	28	149	-	8
014	La Revancha	Matagalpa	823	13,23	26	138	-	8
015	Las Delicias	Matagalpa	815	13	23	122	-	7
016	Las Nubes	Matagalpa	821	13,23	41	217	-	12
017	Yale	Matagalpa	824	13,23	30	157	-	9
027	La Virgen	Matagalpa	821	13,23	24	144	-	7
	Líbico	San Ramón	804	13	-	-	-	--
019	San Antonio	San Ramón	807	13,23	24	126	-	7
020	Sn Antonio de las Cuchillas	Jinotega	837	13 al 43	75	469	-	23
021	Pavona Abajo	Jinotega	824	13 al 43	77	482	-	23
022	Pavona Arriba	Jinotega	831	13 al 43	51	319	-	15
023	Sta. Teresa	Jinotega	831	13 al 73	136	851	-	41
	Sta. Fé	Jinotega	ANULADA	-	48	30	-	-
024	La Golondrina	Jinotega	838	13,23,33	59	369	-	18
025	Peñas Blancas	Jinotega	829	13 al 43	78	488	-	23
026	El Tabaco	Jinotega	830	13	21	131	-	6
TOTAL	27				1,399	7,714	-	405

Oct. 1977/LANU/ada

*Proyectado

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Rural Education Development (524-0115) (524-0127)

Life of Project:
From FY 77 to FY 82
Total U.S. Funding $8,390,000
Date Prepared: September 8, 1977

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Ultimate Goal: Improved socio-economic welfare of rural poor majority in Regions II and V of Nicaragua.	1. Increase in the per capita income of the rural population. 2. Improvement in the living conditions of the rural population	1. Program evaluation results. 2. Income surveys. 3. Health and Nutrition studies. 4. Production surveys.	1. Increased access to improved educational services leads to a more productive life. 2. Increased knowledge and skills results in improved health, nutrition, and general living habits.
Sector Goal: To improve and expand educational opportunities in rural areas in Nicaragua.	1. Increase in the number of children attending school: _____ by 1982. 2. Reduction in the attrition rate from ___% to ___% by 1982. 3. Increase in number of children continuing on to higher grades from ___% in 1973 to ___% in 1982. 4. Increase in the number of operating schools in the rural areas from ___ to ___ by 1982.	1. Attendance records and surveys. 2. MPE records 3. Program evaluation	1. Children find new rural curriculum relevant. 2. Teachers improve their teaching methods and attitudes.
Project Purpose			
To insure that the rural population (II, V) receives a greater number of relevant educational services in an improved learning environment using cost effective educational methods.	1. Increased number of rural primary school aged children enrolled in school. 2. Increase in rural student retention rates. 3. Decrease in drop-out rates in rural areas. 4. Increased number of adolescents and adults receiving accelerated basic education, occupational and vocational training in rural areas.	1. Increase in literacy in Regions II and V.	

Component One: Administrative Reform and Management Improvement

Component Purpose:	End of Project Status:	Means of Verification:	Assumptions
1. Assist the MPE to improve its institutional capability to plan, manage and evaluate expanded and improved programs of rural education in two target regions.	1.1 An efficiently operating MPE capable of meeting the educational needs of the rural poor in the two target regions.	1.1 Rural Education Project components on schedule as stated in outputs sections of Logical Framework presentations.	1.1 The GON will continue to encourage integrated rural development activities and will provide necessary fiscal and human resources to achieve project goals and objectives.
	1.2 A fully staffed and efficient Planning Unit in place by June 1979 including component offices of: curriculum, materials production, statistics, research, evaluation, and quantitative planning all capable of supporting needs of project development, implementation, and maintaining and expanding quantity and quality of services upon completion of this project component as necessary.	1.2.1 Staffing Pattern 1.2.2 Detailed planning document for 1978 and tentative planning document for 1979-82. 1.2.3 Research and Evaluation activities which have been completed or planned. 1.2.4 Quality and relevance of primary level radio-supported curriculum and curricula revision programs developed under the project.	1.2 MPE reorganization will place high priority on improved planning and educational improvement activities.

Component One: (continued)

	1.2.5 Materials Production Center meeting needs and distributing effectively materials to project schools and activities.	
1.3 Comprehensive staff development plan for project support completed including over 81 person months of both long and short term training abroad and 100 person months of in-country training to ensure qualified Nicaraguan staff in key project positions.	1.3.1 Analysis of Staffing Plan completed by November 1978.	1.3.1 Suitable candidates for training are available.
	1.3.2 Training programs completed	1.3.2 Institutions and organizations exist, (in-country, and United States) which are capable of providing training requirements.
	1.3.3 Staffing and placement patterns of participants and trainees.	
1.4 Improved personnel management, pupil accounting, and records systems by March 1979.	1.4 Rural schools in target areas staffed and rural teachers/students fully integrated into personnel management and pupil personnel systems.	1.4 GON maintains current position of support for the improvement of urban/rural disparities to ensure greater benefits and services to rural target populations.

Component One: (continued)

1.5 Systems designed for maintenance and repair of schools in target regions.	1.5.1 System installed and checked under monitoring procedures.	1.5 Adequate funds in MPE budgets over life of project, and subsequent to project funding, for maintenance and repair of project related facilities and system which has been developed.
	1.5.2 Adequate funds in 1978-81 MPE budgets to support maintenance of rural schools in project.	
	1.5.3 Full participation (100%) by local school committees in maintenance of rural schools.	
1.6 Revised Organizational structure in the MPE. Clearly defining roles and responsibilities for rural education.	1.6 Analysis of MPE organization charts, plans, and time phase accomplishments.	1.6. Improved efficiency in the central MPE is critical to improved quality and quantity of services to rural areas and eventual decentralization to achieve greater local level participation in education.
1.7 Project coordination mechanisms institutionalized and operating efficiently.	1.7.1 Analysis of status and effectiveness of managers for each project component.	1.7 Strong interest will be shown by the GON in maintaining close coordination of integrated rural development activities in the form of personnel assignments and monitoring and evaluating processes to ensure such coordination and accomplishment of stated goals of various GON development programs.

Component One: (continued)

	1.7.2 Inter Institutional Coordinating Committe status reports and analysis of recommendations for action in terms of project accomplishments.	
	1.7.3 Program Director appointed for Program Advisory Council and project evaluation and progress reports from that office.	
1.8 Improved operational methods in MPE to ensure adequate support of project activities.	1.8.1 School construction management plan.	1.8 Resources and personnel of adequate quality and quantity will be improved and more effective operational procedures related to rural education programs.
	1.8.2 MPE procedures and accomplishments in contracting for required technical services.	
	1.8.3 Completion of construction and repair activities as scheduled.	
	1.8.4 MPE Escalafon.	
	1.8.5 Effective supervision of rural schools in target areas.	
	1.8.6 MPE teachers and local school committees accept and implement payroll system for rural teachers and incentive system for rural teachers in place.	

Component One: (continued)

		1.8.7 Analysis of revised budgeting and disbursement procedures in MPE designed to ensure a more responsive and flexible system to meet needs of rural education in target areas.	
Outputs	Magnitudes of Outputs	Means of Verification	Assumptions
1. A revised organizational structure in the MPE for implementing rural education programs.	1.1 Revised policies, rules, procedures for communications and operations published by June 1979.	1.1. Policy, Rules, Procedures Handbook.	1.1 See Assumptions in preceding section which generally apply.
	1.2 A management by objectives system designed and institutionalized by June 1979.	1.2 Evaluation of system and effectiveness of its operation.	1.2 Contract technical assistance at key points in the MPE will enable systems design and "change agent" impetus to reorganization patterns.
	1.3 Development of cadre of highly specialized personnel through intensive training programs to staff key leardership positions in central Ministry operations and project related activities.	1.3 Completion of 81 person months of long term and short term training programs abroad and over 100 person months of in-country short term training with placement of all returned participants and trainees in key MPE positions to support project by December 1980.	1.3 The revised organization will effectively absurd project inputs.
	1.4 A central MPE Staffing Pattern produced with time phased projections for staffing requirements through 1981.	1.4 Staffing Need and Development Plan correlated with training requests/needs. 1.5 Status reports of technical assistance contractors.	

Component One: (continued)

2. Establish an effective system for coordinating MPE rural education activities both within the MPE and with cooperating GON agencies (INVIERNO, MOH, MOA)	2.1 Inter Institutional Coordinating Committee established with roles and responsibilities of members defined by December 1977.	2.1 Analysis of frequency of meetings, agenda, attendance, representation mix, recommendations for action.	
	2.2 Program Advisory Counsil established and functioning in MPE by December 1977.	2.2.1 Evaluation of project implementation progress.	
		2.2.2 Rural Education Project well coordinated internally and externally, progressing on schedule and meeting needs of rural education in target areas.	
	2.3 Appointment of Executive Director of Program Advisory Council.		
	2.4 Appointment of all Project managers for all project components by December 1977.		
3. Improved Planning Unit established in MPE including offices of curriculum, research evaluation, materials production, and quantitative planning.	3.1 A set of clear objectives for rural education program in Regions II and V established by June 1978.	3.1 Rural Education Development Plan.	3.1 Inputs to improved Planning Unit and its component offices will benefit all MPE operations.
	3.2 A rural primary radio-supported, curriculum produced, tested and implemented for 6 subject areas serving 160,000 students by November 1982.	3.2 Evaluation and analysis of rural primary curriculum and radio supported Education Program design and status.	

Component One: (continued)

	3.3 Detailed implementation plan for 1978 and preliminary planning for 1978-81 prepared and accepted by the MPE by June 1978.	3.3 Analysis of the plan.	
		3.3.1 Projected staffing requirements and training needs.	
	3.4 General educational goals, objectives, and priorities reviewed, revised, and time phased by December 1978.	3.4 Publication of report from Planning Office and acceptance by GON.	
	3.5 A planning/management information system designed by Dec. 1978 to provide accurate data and information for planning/management decisions.	3.5 Testing, installation and evaluation of the system.	
4. An increased capability of the Research and Evaluation Units in the MPE.	4.1 Two special studies coordinated and completed by Sept. 1978 in the field of (1) How the MPE functions at the present time and (2) specific rural educational needs in Regions II and V.	4.1 Studies completed and recommendations integrated into implementation of project components.	4.1 Strong research and evaluation capability is necessary to provide accurate baseline data for planning improvements in rural education.
	4.2 Detailed planning for evaluation of total program activities prepared and accepted by October 1978.	4.2 Analysis of evaluation and research plans prepared and progress status.	
	4.3 MPE tests experimental delivery systems, analyzes results and provides management oriented status reports on findings.	4.3.1 Annual Program Reviews held in December of each project year.	

Component One: (continued)

		4.3.2 Detailed research and evaluation design for all MPE experimental projects by February of each year. 4.3.3 Complete evaluation of all MPE experimental programs, including radio-supported education, each year beginning in January 1979.
5. Improved operational methods to increase efficiency of the MPE and support activities for rural education programs.	5.1 School construction/management plan for repairing, constructing, furnishing, and opening project schools as scheduled. Year 1 2 3 4 5 Schools - 8 80 120 192 Classrooms Repaired - 60 120 190 160 Classrooms Furnished - 104 200 520 705	5.1 Rural classrooms constructed, opened for use on schedule.
	5.2 A maintenance plan prepared by Dec. 1978; finances assured for the plan by GON budget for maintenance of facilities and equipment in Regions II and V.	5.2.1 Periodic maintenance inspection of project related comarca and other facilities. 5.2.2 Supervisor's reports. 5.2.3 Analysis of MPE budgets. 5.2.4 Local responsibility for maintenance of rural schools in target regions has 90% participation by local school committees by December 1980.

Component One: (continued)

5.3 A system designed and installed by December 1978 for verification of payroll by local school committees of teaching services in rural and comarca schools.	5.3 Rural teachers and paraprofessionals in project schools under this system.
5.4 A efficient personnel system installed in MPE to include written job descriptions, roles, rights, equitable evaluation and renumeration scales for all MPE employees by December 1980.	5.4 An operational policy by February 1980 of open hiring by the MPE for professional staff independent of non-merit considerations. Analysis of salary scales and Escalafon.
5.5 Incentives established for recruiting and retaining rural teachers.	5.5 Policy which provides rural teachers with a minimal incentive package of adequate housing, improved support functions by the MPE of instructional programs, salary incentives, adequate supervision and access to professional training and benefits on a scale equal to urban based teachers.
5.6 A computer assisted program designed and installed by December 1979 for pupil personnel accounting and personnel management.	5.6.1 System functioning equally well for rural and urban teachers, students, and other personnel.
	5.6.2 An accurate personnel file available on all MPE administrative and teaching personnel. Regions II and V - February 1979 All Nicaragua - December 1980

Component One: (continued)

	5.7 An improved system of supervision for rural education in Regions II and V.	5.7.1 Procedures manual published by June 1979. 5.7.2 100 supervisors trained in-country and assigned to positions in Regions II and V by 1982. 5.7.3 Staffing pattern for target regions and position assignments.	
Inputs:	Type and Quantity. ($000)	Means of Verification:	Assumptions:
1. Technical Assistance	See Inputs Summary	1.1 Contracts and Records. 1.2 Final report of institution or organization providing technical services under contract.	1.1 Appropriate technical assistance available. 1.2 MPE can provide suitable counterparts and support functions. 1.3 MPE organization now effectively utilize technical assistance inputs.
2. Special Studies		2.1 Completed Studies 2.2 Contracts with appropriate research organization or institution.	2.1 MPE Research and Evaluation Units can effectively coordinate special studies,

Component One: (continued)

3. Training		3.1 Selection, nomination, and placement of trainees.	3.1 Adequate numbers of qualified trainee candidates available.
		3.2 Contracts with local institutions.	3.2 GON funding will be provided for added staff positions and training costs.
		3.3 Completion of training programs.	3.3 Acceptable in-country training facilities are available.
		3.4 Placement of trainees and participants in MPE positions.	
4. Commodities		4.1 Commodity Procurement Plan; receiving reports, on-site inspections, inventories.	4.1 Adequate funds will be budgeted by the GON to finance required portion of commodity procurement.
5. Computer Services		5.1 Services Contracted for and utilized as planned.	5.1 Programs designed to effectively utilize services.
6. Operating Expenses		6.1 Funds available from budget for use as programmed.	6.1 Adequate GON funds available.
		6.2 MPE Operating Budget.	

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Component One: (Continued)

Inputs Summary

	GON	AID	Year 1	Year 2	Year 3	TOTAL $
1. Technical Assistance (Grant) Long Term-66 person months Short Term-18 person months	55,000	410,000	115,000	200,000	145,000	465,000
2. Special Studies (Grant)		100,000	100,000	-	-	100,000
3. Training		240,000	50,000	95,000	95,000	240,000
International-81 person months		130,000	40,000	60,000	30,000	
In-country-100 person months		110,000	10,000	35,000	65,000	
4. Commodities	175,000	100,000	50,000	50,000 75,000	50,000 100,000	275,000
5. Computer Services		75,000	25,000	25,000	25,000	75,000
6. Operating Costs	600,000	-	200,000	200,000	200,000	600,000
TOTALS:	830,000 (GON)	925,000 (AID)	545,000	645,000	565,000	1,755,000

AID Grant Funding: $585,000
AID Loan Funding: $340,000

..... End of Component One .....

Component Two: Integrated Community Development

Purpose:	Objectively Verifiable Indicators	Means of Verification	Assumptions
To establish, through effective community participation, local school committees to promote a demand for and the utilization of skills and knowledge.	1. Number of existing rural schools functioning with teachers.	1. MPE records and reports	1. LSCs carry out their functions as monitors and controllers of local education
	2. Number of new schools built and staffed.	2. MPE records and reports	2. LSCs build schools and repair/maintain existing schools
	3. Number of Comarca Circuits in operation	3. MPE records and reports	
	4. Number of traditional schools repaired and furniture replaced or repaired.	4. MPE records and reports	
Outputs:	**Magnitude of Outputs:**		**Assumption for Achieving Outputs:**
1. Central Office Staff trained and promotors trained and in the	1.1 Two new staff members for the Non-formal Education Department.	1.1 MPE records	1. Promotors are placed in the field with vehicles.
	1.2 Four promotors trained and in	1.2 MPE records	
2. Local school committees (LSCs) are by MPE, INVIERNO and	2.1 LSCs formed. $\frac{1}{60}$ $\frac{2}{150}$ $\frac{3}{300}$ $\frac{4}{500}$ $\frac{5}{390}$ = 1,400	2.1 Supervisors reports and visits	2. Inter-agency agreement in worked out and LSCs are formed.
3. Local school committees are capacitated and functioning	3.1 LSCs trained and functioning	3.1 Supervisors reports and visits	3. Promotors capacitate LSCs.

Component Two. (continued)

4. Community development materials ready for distribution	4.1 Promotion kits produced (2/group)	4.1 Inventory records	4. Materials are produced by the MPE

Inputs:

1. Technical Advisory services: Community Development Expert (Grant funded)
2. Central Office Staff and Promotors
3. Production Materials
4. Training and Traveling Expenses

	AID	GON	Total
1. Technical Assistance	105,000	15,000	120,000
2. Operating Costs		361,000	361,000
3. Vehicles	92,000	-	92,000
	$197,000	376,000	573,000

Grant $105,000

Loan $ 92,000

1. AID and MPE records
2. MPE personnel records
3. MPE and Material Production Center records

1. Availability of appropriate technical personnel.
2. MPE hires new staff and promotors.
3. Counterpart is available

oooooooooo END OF COMPONENT TWO oooooooooo

Component Three: Curriculum Development and Related Educational Materials

Purpose:	Objectively Verifiable Indicators	Means of Verification	Assumptions
1. Primary Student (1-4) basic skill and knowledge needs met through improved curriculum and materials in Regions II and V.	1.1. New curriculum broadcasts and materials in use in rural primary schools. Number of Classrooms 1 / 60 — 2 / 184 — 3 / 400 — 4 / 650 — 5 / 583 =1,877	1.1 MPE records and Supervisor reports.	1. Improved (more relevant curriculum will improve attendance and learning.
	1.2 50% of students enrolled successfully complete 3 years of primary work in 4 years or less by 1982.	1.2 MPE records	2. Teacher recruitment and training will keep pace with all related activities.
	1.3 60% of students enrolled successfully complete tests for advancement to the next grade by 1981.	1.3 MPE records	3. Curriculum development activities will keep pace with community development and school repair/ construction activities.
2. Basic Education needs adolescent and adult population met through improved curriculum in CFE/EAC schools and community education programs.	2.1 CFER/EAC schools using new curriculum broadcasts and materials. Number of Schools 1 / 5 — 2 / 5 — 3 / 4(9) — 4 / 4(13) — 5 / 4(17) = 17	2.1 Managers' reports	4. MPE broadcast facilities will be ready by 1979, and classes prior to that date can be broadcast over local commercial channels.
	2.2 Adult classes using new curriculum broadcasts and materials. Adult Classes (cumulative) 1 / - — 2 / 40 — 3 / 120 — 4 / 400 — 5 / 1,100 =1,100	2.2 Record of teachers paid for adult education teaching.	
	2.3 50% of students enrolled successfully complete literacy tests by 1981.	2.3 MEP records	

Component Three: (continued)

Outputs:			
1. Revision of the present primary curriculum through preparation of radio broadcasts to meet the needs of rural students, ages 6-12.	1.1 Number of radio lessons taped in Primary Reading (20-30 min. each) $\frac{2}{\text{Grade 1}}$ $\frac{3}{\text{Grade 2}}$ $\frac{4}{\text{Grade 3}}$ $\frac{5}{\text{Grade 4}}$ = 680 170 170 170 170	1.1 Radio/TV Dept. of MPE records	1.1 Technical assistance is available.
	1.2 Number of radio lessons taped in Primary Health/Nutrition (20-30 min. each) $\frac{2}{20}$ $\frac{3}{20}$ $\frac{4}{40}$ $\frac{5}{40}$ = 120	1.2 Radio/TV Dept. of MPE records.	1.2 Technical assistance is available.
	1.3 Number of radio lessons taped in Primary Social Studies (20-30 min. each) $\frac{2}{40}$ $\frac{3}{40}$ $\frac{4}{40}$ $\frac{5}{40}$ = 160	1.3 Radio/TV Dept. of MPE records.	1.3 Technical assistance is available.
	1.4 Number of radio lessons taped in Primary Agriculture skills (30 min. each) $\frac{2}{40}$ $\frac{3}{40}$ $\frac{4}{40}$ $\frac{5}{40}$ = 160	1.4 Radio/TV Dept. of MPE records.	1.4 Technical assistance is available.
	1.5 Number of radio lessons taped in Primary Math (30 min.each) (Grade 1-3) 510 (Grade 4) 170 = 680	1.5 Radio/TV Dept. of MPE records.	1.5 Technical assistance is available.

Component Three: (continued)

Outputs:

2. Preparation of an adult education curriculum related to job skill needs of rural adolescents and adults.	2.1 Number of radio lessons taped in Adult Reading (40 min.each) $\frac{2}{60}$ $\frac{3}{60}$ $\frac{4}{60}$ $\frac{5}{60}$ = 240	2.1 Radio/TV Dept. of MPE records.	2.1 Technical assistance is available.
	2.2 Number of radio lessons taped in Adult Health/Nutrition (30 min.each). $\frac{2}{40}$ $\frac{3}{40}$ $\frac{4}{40}$ $\frac{5}{40}$ = 120	2.2 Radio/TV Dept. of MPE records.	2.2 Technical assistance is available.
	2.3 Number of radio lessons taped in Adult Vocational/Agriculture skills (40 min.each) $\frac{2}{80}$ $\frac{3}{80}$ $\frac{4}{80}$ $\frac{5}{80}$ = 320	2.3 Radio/TV Dept. of MPE records.	2.3 Technical assistance is available
	2.4 Number of radio lessons taped in Adult Math (40 min. each) $\frac{2}{60}$ $\frac{3}{60}$ $\frac{4}{60}$ $\frac{5}{60}$ = 240	2.4 Radio/TV Dept. of MPE records.	2.4 Technical assistance is available.
	2.5 Number of radio lessons taped in Basic Economic Concepts (30 min. each) $\frac{2}{40}$ $\frac{3}{40}$ $\frac{4}{40}$ $\frac{5}{40}$ = 160	2.5 Radio/TV Dept. of MPE records.	2.5 Technical assistance is available.
3. Training Curricula for supervisors, master teachers, comarca teachers, regular teachers and adult education teachers.	3.1 Sequenced training curricula on new curriculum content, methods of supervision, assistance to classroom teachers organizing for workshops for	3.1 Written outlines of workshop curriculum.	3.1 Technical assistance is available.

Component Three: (continued)

	supervisors and master teachers. 1 (X) 2 (-) 3 (-) 4 (-) 5 (-)		
	3.2 A sequenced training curriculum for primary regular teachers and comarca teachers to cover primary curriculum content, methods of multigrade teaching, preparation of classroom materials human growth and development, lesson planning, rural curriculum methods and human relations training as applied to community development and classroom teaching. 1 (X) 2 (-) 3 (-) 4 (-) 5 (-)	3.2 Written outline of workshop curriculum.	3.2 Technical assistance is available.
	3.3 A sequenced training curriculum for teachers of adolescents and adults to cover techniques of radio-forum teaching, curriculum evaluation and principles of adult education. 1 (X) 2 (-) 3 (-) 4 (-) 5 (-)	3.3 Written outline of workshop curriculum.	3.2 Technical assistance is available.
4. Teachers' Guides, Student Worksheets and Tape Cassettes to accompany each lesson in primary and adult/adolescent education.	4.1 Primary Teachers' Guides distributed. 1978: 244; 1979: 1,132; 1980: 3,256; 1981: 11,616; 1982: 20,356	4.1 Copies of guides distributed.	4.1 Materials Production Center in on schedule. Supervisions receive copies in time for workshops

Component Three: (continued)

	4.2 Primary Students' Worksheet Packets (50/pk) distributed. (See Note on page 21). 1: 244 2: 1,132 3: 3,256 4: 11,616 5: 20,356	4.2 Copies of Worksheet distributed.	4.2 Distribution schedule is on target.
	4.3 ABE Teachers' Guides distributed 2: 200 3: 1,000 4: 4,800 5: 17,200	4.3 Copies of guides distributed.	4.3 Materials Production Center is on schedule. Supervisors receive copies in time for workshops.
	4.4 ABE Students' Worksheet Packets (30/pk) distributed. 2: 200 3: 1,000 4: 4,800 5: 17,200	4.4 Copies of worksheets distributed.	4.4 Distribution schedule is on target.
	4.5 Primary Curriculum Tapes completed. 1: 53,355 2: 46,200 3: 28,355 4: 5: 30,445	4.5 Master or duplicate tapes at MPE Radio Stations and in schools.	4.5 Sufficient copies are made on schedule and distributed.
	4.6 ABE Curriculum Tapes completed 1: - 2: 37,000 3: 37,000 4: 37,000 5: 37,000	4.6 Master or duplicate tapes at MPE Radio Stations and in schools.	4.6 Sufficient copies are made on schedule and distributed.
5. Written Summative Evaluation (Grant funded)	5.1 External evaluation of curriculum content and use in classrooms Year 1: X 2: - 3: X 4: - 5: X (pre-evaluation)(written)(written)	5.1 Written reports.	5.1 Yearly evaluations of project component are on schedule.

Component Three: (continued)

Inputs:

	AID	GON	Total		
1. Technical Assistance Grant $ 90,000 Loan $650, 000	$1,740,000 (372 p.m.)	-	$1,740,000	1. AID records and contracts.	1. Appropriate technical assistance is available
2. Operating Costs (includes MPE Personnel)		$1,747,000 (includes 2640pm)	$1,747,000	2. MPE fiscal records	2. The MPE has the technicians for counterpart activities.
3. Materials	$1,790,000 $3,530,000	$1,685,000 $3,432,000	$3,475,000 $6,962,000	3. AID/GON records	3. Commodities (tapes, radios, etc.) are procured on schedule.

Note: After using the worksheets for one year in each subject area, an evaluation will be performed to determine if their cost effectiveness and efficiency justify continued use of the worksheets.

oooooooo E N D O F C O M P O N E N T T H R E E oooooooo

Component Four: Training for Supervision and Teaching

Purpose	Objectively Verifiable Indicators	Means of Verification	Assumptions
1. Primary school students perform better and graduate in much larger numbers than in 1976.	1.1 Primary school enrollment rate increases by at least 10% in Region II and 40% in Region V, by 1981.	1.1 MPE enrollment records.	1.1 Improved teaching methods and ability to meet student needs increase both rate of learning and attendance.
	1.2 Primary school retention rate increases to 60% by 1981.	1.2 MPE attendance records at dept. levels.	
	1.3 60% of the students enrolled successfully complete tests for advancement to the next grade by 1980.	1.3 MPE records on file in the department offices	
2. Adult and Adolescents basic needs are met through community education classes.	2.1 Number of rural teachers teaching new adult education classes (cumulative). 1977 - 1978 40 1979 120 1980 400 1981 1,100	2.1 Records of payment of teachers for extra adult classes.	2.1 Rural Teachers will have time to teach additional classes.
	2.2 60% increase in literacy among adults participating in the project.	2.2 Literacy test results recorded by adult education teachers.	2.2 There will be a sufficient demand for adult education in rural areas to warrant 1,100 classes by 1981.

Component Four: (continued)

Outputs:			
1. Teacher Trainers are prepared to function as members of training teams.	1.1 Number of Teacher Trainers to complete 6 weeks' intensive training course. $\frac{1}{12}$ $\frac{2}{2}$ $\frac{3}{2}$ $\frac{4}{4}$ $\frac{5}{4}$ = 24 1.2 Teacher Trainers give workshops with/for Supervisors, Master Teachers, Normal School Teachers, Regular and Comarca Teachers. $\frac{1}{12}$ $\frac{2}{14}$ $\frac{3}{16}$ $\frac{4}{20}$ $\frac{5}{24}$ = 24 trainers 4 18 47 103 163 = 335 workshops	1.1 Attendance records of teachers trainers at the NEC.	1.1 The MPE appoints the teacher trainers needed.
2. Supervisors are prepared to assume their duties in the rural areas.	2.1 Numbers of Supervisors trained in 6 weeks' course. $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{24}$ $\frac{5}{46}$ =100 2.2 Supervisors complete 2 week intensive course each year in utilization and implementation of revised curriculum. 2.3 Supervisors conduct monthly inservice 1-day workshops for teachers. 2.4 Supervisors provide a minimum of 2 demonstration lessons per teacher supervised per year. (1 supervisor for 20 teachers)	2.1 MPE/NEC records	2.1 The MPE appoints the additional supervisors needed for the 20:1 ratio.

Component Four: (continued)

	2.5 80% of Supervisors' planned visits are accomplished, coordinated with INVIERNO and MOH.		
	2.6 Supervisors assist teachers in handling community relation problems.		
3. Master Teachers are prepared to assume their duties in the Comarca Circuits.	3.1 Number of Master Teachers trained in 6 weeks' course. $\frac{1}{-}$ $\frac{2}{6}$ $\frac{3}{20}$ $\frac{4}{40}$ $\frac{5}{34}$=100	3.1 MPE/NEC records	3.1 The MPE appoints the required number of Master Teachers for the Comarca Circuits.
	3.2 Master Teachers complete 2 week intensive course each year in utilization and implementation of revised curriculum.		
	3.3 Master Teachers conduct workshops in their circuits on a weekly basis when time permits.		
	3.4 Master Teachers spend one day per week in each of 4 comarca schools helping the comarca teachers. (1 comarca circuit= 4 schools)		
	3.5 Master Teachers attend monthly workshops conducted by supervisors.		

Component Four: (continued)

4. Regular (traditional) teachers are ready to resume their duties, using the revised curriculum.	4.1 Number of Regular Teachers trained in 6 weeks' course. $\frac{1}{60}\ \frac{2}{160}\ \frac{3}{320}\ \frac{4}{490}\ \frac{5}{447} = 1,477$	4.1 Attendance records at workshops.	4.1 Traditional (regular) teachers are willing to go to rural areas.
	4.2 All teachers complete annual 2-week intensive training program as revised curriculum is completed.	4.2 Attendance records at workshops.	
	4.3 Teachers attend monthly one-day workshops conducted by supervisors.		
5. Comarca Teachers are ready to assume their duties using the revised curriculum.	5.1 Number of Comarca Teachers trained in 6 weeks' orientation course. $\frac{1}{-}\ \frac{2}{24}\ \frac{3}{80}\ \frac{4}{160}\ \frac{5}{136} = 400$	5.1 Attendance records at workshops.	5.1 A sufficient number of locally hired teachers can be found.
	5.2 All teachers complete annual 2 week intensive program as revised curriculum is completed	5.2 Attendance records at workshops.	
	5.3 Attend workshops conducted by Master Teachers.	5.3 Records of Master Teachers.	

Component Four: (continued)

6. Teachers of Adult Education are ready to assume their duties using the revised Accelerated Basic Education (ABE) curriculum.	6.1 Number of ABE teachers trained in 2 weeks' course(cumulative) 1 / - 2 / 40 3 / 120 4 / 400 5 / 1,100	6.1 MPE attendance records.	6.1 The MPE will furnish salaries or salary implements to teachers of this program.
	6.2 ABE teachers will attend annual 2-week workshops as revised curriculum is completed.	6.2 Attendance records.	
	6.3 ABE teachers in CFER/EAC schools will be retrained. 1 / - 2 / 30 3 / 24 4 / - 5 / - = 54 teachers	6.3 Records of the Managers of the schools.	6.3 Additional CFER/EAC schools will be built.
7. Normal School Staff trained in revised primary curriculum for pre-service training.	7.1 Number of Normal School professors trained in 6 weeks' course in each of 4 normal schools. 1 / - 2 / 10 3 / 10 4 / 10 5 / 10 = 40	7.1 Attendance records.	7.1 MPE will require retraining of normal school staff.

Inputs	AID	GON	TOTAL		
1. Technical Assistance	$220,000	20,000	$240,000	1. AID records and contracts.	1. Appropriate technical assistance is available.
2. Materials and Equipment	42,000	-	42,000	2. AID records	2. Commodities are procured on schedule.
3. Operating Costs	-	$1,770,000	1,770,000	3. MPE records	3. The MPE has the technicians for counterpart activities.
	$262,000	$1,790,000	2,052,000		

..... END OF COMPONENT FOUR .....

Component Five: Strengthening Rural Education Delivery Systems

Purpose	Objectively Verifiable Indicators	Means of Verification	Assumptions
To strengthen the infrastructure support and service components to improve the delivery of rural educational services	1. Number of students attending schools under the program. Primary 1: 3,000 — 2: 12,000 — 3: 32,000 — 4: 64,700 — 5: 93,850 Adolescents 952 — 2,270 — 2,745 — 2,745 — 2,745 Adults - — 1,200 — 3,600 — 12,000 — 33,000	1. MPE attendance records	Students attend school and find educational services relevant and useful. ISCs maintain existing and new classrooms.
Outputs: 1. Comarca School Circuits are established in areas where rural primary schools are nonexistent and needed.	1.1 Number of CSCs set up during life of project 1 — 2 — 3 — 4 — 5 CSCs: - — 2 — 20 — 40 — 34 = 100 Classrooms: - — 24 — 80 — 160 — 136 = 400 Houses: - — 6 — 20 — 40 — 34 = 100	1.1 MPE procurement records PEMEN construction records	ISCs will request schools in their remote areas. A school maintenance plan has been adopted by the MPE.
		1.2 Supervisory inspection reports.	MPE budget resources exist for paying comarca teachers' salaries.
2. Existing rural primary classrooms are repaired and furnished and teachers ap-	2.1 Classrooms repaired or reconstructed 1 — 2 — 3 — 4 — 5 = Total - — 60 — 120 — 190 — 160 = 530	2.1 MPE/AID survey	ISC will request the GON for resources
	2.2 Classrooms completely furnished. 1 — 2 — 3 — 4 — 5 — Total - — 54 — 100 — 260 — 354 — 768	2.2 MPE/AID survey	Repair and reconstruction will be supported in a timely manner by MPE and AID
	2.3 Furnishing for classrooms 50%	2.3 MPE/AID survey	

Component Five: (continued)

	incomplete. 1 / - 2 / 50 3 / 100 4 / 260 5 / 351 = Total / 761		
	2.4 Teachers will be appointed by MPE to fill 139 vacancies in primary schools (Reg. II, V)	2.4 MPE records of salary payments.	
3. The MPE has a School Maintenance Plan which serves as an institutionalized mechanism for rural school maintenance.	3.1 Rural schools receive financial assistance to maintain their schools.	3.1 GON financial records of disbursements.	ISCs request assistance for school maintenance.
4. Improvement in the service and support of rural educational programs.	4.1 New MPE Supervisors in the field. 1 / 10 2 / 10 3 / 12 4 / - 5 / - = Total / 32	4.1 MPE records for new salaries	4.1 Central Office of the MPE and supervisors are supportive of the program.
	4.2 Mules assigned to ISCs for use of supervisors 1 / - 2 / 10 3 / 10 4 / - 5 / - = Total / 20	4.2 AID records	4.2 ISCs will maintain mules in their communities.
	4.3 AID financed motorized vehicles in the field 1 / 14 2 / 11 3 / 15 4 / - 5 / - = Total / 40	4.3 AID procurement records	4.3 Vehicles are delivered on time and the GON maintains them thereafter.
	4.4 Number of school garden kits 1 / - 2 / 200 3 / 477 4 / 600 5 / 600 = Total / 1,877	4.4 MPE records AID records	4.4 Tools for kits are delivered on schedule and teachers request kits.
5. The Rural Adolescent Center system has been expanded in Regions II and V.	5.1 Construction and equipment for RACs CFER: 1 - 2 - 3 2 4 2 5 2 Total 6 EAC: - - 2 2 2 6 / 12	5.1 PEMEN records AID records	Communities have requested that CFERs or EACs be located in their areas.

Component Five: (continued)

6. The MPE has a radio transmitting and receiving capability for rural	5.2 New CFERs and EACs staffed by the MPE and the Ministry of Agriculture.	5.2 MPE records MOA records	The Ministries have the money and staff to make the new schools operational.
	6.1 Two 10KW radio stations transmitting educational programs to Regions II and V. 1 / 2 / 3 / 4 / 5 / Total - / 1 / 1 / - / - = 2	6.1 Station monitoring survey Classrooms visits	6.1 The MPE is able to buy the land for the stations and erect the buildings on schedule.
	6.2 Radio recorders are distributed to the primary schools under the program. 1 / 2 / 3 / 4 / 5 / Total 60 / 184 / 400 / 650 / 583 = 1,877	6.2 MPE/AID records.	6.2 AID procurement is on schedule.
	6.3 Revised curriculum being received on transister radios	6.3 Supervisors' reports MPE reports.	6.3 MPE radio stations are capable of good transmission

Inputs:

	AID	GON	Total
1. Comarca School Circuits	$2,240,000	$1,935,000	$4,175,000
2. Improving existing rural primary schools	100,000	1,642,000	1,742,000
3. Furnishing new and existing primary schools	398,000	-	398,000
4. Ongoing school maintenance	-	955,000	955,000
5. Educational support and services	475,000	1,042,000	1,517,000
6. Rural Adolescent Centers	945,000	1,278,000	2,223,000
7. Radio transmitting and receiving capability	610,000	1,007,000	1,617,000
	$5,856,000	$7,208,000	$11,069,000

END OF COMPONENT FIVE

DETAIL OF COMPONENT TWO

This Annex contains the following:

1. MPE Personnel Costs

2. MPE Operating Costs

3. A.I.D. Financed Technical Assistance

4. A.I.D. Financed Vehicles

DETAIL OF LOAN COMPONENT TWO

MPE PERSONNEL COSTS

	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
1. Two Central Office Employees to support Community Development Activity at $500/month	$ 7,000	$12,000	$12,000	$12,000	$17,000	$ 60,000
2. Four Community Development Promotors to begin working in Region V with one transferred to Region II in 1979 at $600/month	$16,800	$33,600	$33,600	$33,600	$45,600	$163,200
Sub-Total	$23,800	$45,600	$45,600	$45,600	$62,600	$223,200

MPE OPERATING COSTS

1. Paper, ink, pens, pencils, office space, secreterial services, etc., at $100/month/person; 6 MPE personnel and advisor will be working together through September 1977	$ 3,200	$ 2,400	$ 2,400	$ 2,400	$ 3,400	$ 13,800
2. Per Diem Expenses at $30.00/day with 1/5 work day devoted to traveling. (Central Office personnel and advisor only) 270 work days/year	$ 3,024	$ 4,050	$ 3,240	$ 3,240	$ 4,680	$ 18,234
3. Maintenance and Fuel Cost for 10 vehicles at $3,000/Year	$ 5,250	$30,000	$30,000	$30,000	$42,500	$137,750
Sub-Total	$11,474	$36,450	$35,640	$35,640	$50,580	$169,784

TECHNICAL ASSISTANCE

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
1. One Community Development Expert for 24 Months at $5,000/month (Grant Financed)	30,000	60,000	30.000			120,000

A.I.D. FINANCED VEHICLES

1. 6 Jeeps at $7,000/each	35,000	7,000	-	-	-	42,000
2. 4-Wheel drive promotional vehicles	25,000	25,000	-	-	-	50,000
Sub-Total	$60,000	$32,000				$92,000

Total Component Cost: $573,000
Funding by Source: MPE $376,000
A.I.D. $197,000
Grant $105,000
Loan $ 92,000

DETAIL OF COMPONENT THREE

This Annex contains the following:

1. Formula for Estimating Number and Cost of A. Guides, B. Handouts and C. Tapes

2. Data for Estimating Curriculum Costs

3. Detailed Material Costs

4. Technical Assistance and MPE Personnel Costs

5. Multigrade Teaching

ANNEX J
UNCLASSIFIED

FORMULA FOR ESTIMATING # AND COST OF

1. Guides, 2. Handouts and 3. Tapes

1. Cummulative lessons x new teachers + master teachers + supervisors + new lessons x cummulative teachers + master teachers + supervisors of previous year = # of 2-page guides to be printed each year.

2. # of cummulative lessons x cummulative students = # of 1 page worksheets to be printed each year.

3. New lessons each year x 100 supervisors (+17 RACS - adult tapes only) + 5 (4 station tapes, 1 master). = # of cassette tapes to be made each year.

4. New teachers x 5 = # of blank cassettes to be provided each year.

5. Cost estimates based on:

Printing:	US$.005 ¢ per page
Tapes:	US$3.50 per tape

ANNEX J

UNCLASSIFIED

DATA FOR ESTIMATING CURRICULUM COSTS

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
No. Students	3,000	12,200	32,200	64,700	93,850	93,850
Teachers Trained	60	160 (220)	320 (540)	490(1030)	447(1477)	1,477
Community Teachers Trained	-	24	80 (104)	160 (264)	136 (400)	400
Master Teachers Trained	-	6	20 (26)	40 (66)	34 (100)	100
Supervisors Trained	10	10 (20)	10 (30)	24 (54)	46 (100)	100
Trainers Trained	12	2 (14)	2 (16)	4 (20)	4 (24)	24
ABE Students	1,425	5,135	12,845	32,845	59,845	59,845
ABE Teachers Trained	-	40	120 (160)	400 (560)	540(1100)	1,100
RAC's in Operation	5	6 (11)	6 (17)	-	- (17)	17
No. Primary Math Lessons	510 (Grades 1-3)	170 (680) (Grade 4)				680
No. Primary Reading Lessons	-	170	170 (340)	170 (510)	170 (510)	680
No. Primary Health/ Nutrition	-	20	20 (40)	40 (80)	40 (120)	120
No. Primary Agriculture	-	40	40 (80)	40 (120)	40 (160)	160
No. Primary Social Studies	-	40	40 (80)	40 (120)	40 (160)	160
Total	510	440 (950)	270(1220)	290(1510)	290(1800)	1,800
No. ABE Math Lessons	-	60	60 (120)	60 (180)	60 (240)	240
No. ABE Literacy Lessons	-	60	60 (120)	60 (180)	60 (240)	240
No. ABE Health/ Nutrition	-	40	40 (80)	40 (120)	40 (160)	160
No. ABE Agriculture	-	80	80 (160)	80 (240)	80 (320)	320
No. ABE Economics	-	40	40 (80)	40 (120)	40 (160)	160
Total		280	280 (560)	280 (840)	280(1120)	1,120

( ) = Cummulative #

MATERIALS*

YEAR	1	2	3	4	5	TOTAL
Inputs: Curriculum						
Cost of Primary Teacher's Guides	357	2,208	5,894	12,811	16,034	37,304
Cost of Primary Student Worksheets	7,650	57,950	196,420	488,485	873,800	1,624,305
Cost of ABE Teachers Guides		170	579	4,140	8,329	13,888
Cost of ABE Student Worksheets		7,189	35,966	137,949	335,132	516,236
Sub-Total	8,007	67,527	238,859	643,385	1,233,295	2,191,733
Cost of Primary Curriculum Tapes	187,425	161,700	99,225	106,575	106,575	661,500
Cost of ABE Curriculum Tapes		129,360	129,360	129,360	129,360	517,440
Cost of blank tapes, 5 per teacher	1,137	4,025	9,205	18,375	19,652	52,394
Sub-Total	188,562	295,085	237,790	254,310	255,587	1,231,334
MPE Miscellaneous Operating Costs	18,000	36,000	36,000	36,000	36,000	192,000

*A.I.D. and the GON will finance materials costs in the following manner:

A.I.D.	100%	100%	75%	50%	25%
GON	-	-	25%	50%	75%

ANNEX J

UNCLASSIFIED

TECHNICAL ASSISTANCE

Curriculum

INPUTS: CURRICULUM	1		2		3		4		5		TOTAL	
	A.I.D./MEP	MEP*	A.I.D./MEP	MEP	A.I.D./MEP	MEP	A.I.D./MEP	MEP	A.I.D./MEP	MEP	A.I.D./MEP	MEP
Personnel												
1. Radio Broadcast Studio Production Technician (MPE Personnel include announcers)	60,000 1 person 12 months	21,600 3 12	60,000 1 12	21,600 3 12	-	21,600 3 12	-	21,600 3 12	-	21,600 3 12	120,000	108,000
2. Radio Broadcast Script Writer	120,000 2 12	28,800 4 12	120,000 2 12	28,800 4 12	60,000 1 12	28,800 4 12	-	28,800 4 12	-	28,800 4 12	300,000	144,000
3. Expert in Ed. Tests and Measurements, Evaluation		28,800 4 12	60,000 1 12	28,800 4 12	60,000 1 12	28,800 4 12	-	28,800 4 12	-	28,800 4 12		144,000
4. Materials Production/Distribution Management	60,000 1 12	14,400 2 12	-	14,400 2 12	-	14,400 2 12	-	14,400 2 12	-	14,400 2 12	60,000	72,000
5. Reading Curriculum Expert Primary and Adult	120,000 2 12	28,800 4 12	120,000 2 12	28,800 4 12	90,000 2 19	28,800 4 12	-	28,800 4 12	-	28,800 4 12	330,000	144,000
6. Health and Nutrition Ed. Expert - Primary & Adult	60,000 1 12	28,800 4 12	60,000 1 12	28,800 4 12	-	28,800 4 12	-	28,800 4 12	-	28,800 4 12	120,000	144,000
7. Agriculture Ed. Expert Primary and Adult	60,000 1 12	28,800 4 12	60,000 1 12	28,800 4 12	-	28,800 4 12	-	28,800 4 12	-	28,800 4 12	120,000	144,000
8. Short Term Consultants in Intensive Gardening, Family Planning, Marketing and Finance	-	14,400 2 12	30,000 2 12	14,400 2 12	-	14,400 2 12	30,000 2 12	14,400 2 12	-	14,400 2 12	60,000	72,000
9. Short-Term Teacher Training, Curric. Experts in Areas such as Adult Ed., Multi-Grade Teaching, and Supervision	30,000 2 3	14,400 2 12	-	14,400 2 12	-	14,400 2 12	-	14,400 2 12	-	14,400 2 12	30,000	72,000
10. Adult Math. Curric.	60,000 1 12	108,000 15 12	60,000 1 12	108,000 15 12	40,000 1 8	108,000 15 12	-	108,000 15 12	-	108,000 15 12	140,000	540,000
11. External Evaluation	30,000 2 3	-	-	-	30,000 2 3	-	-	-	30,000 2 3	-	90,000	-
TOTAL:	600,000	316,800	630,000	316,800	260,000	316,800	30,000	316,800	30,000	316,800	1,570,000	1,584,000
CON:	30,000		45,000		30,000		30,000		30,000		165,000	
AID	570,000		585,000		230,000		-		-		1,405,000	

* MEP salaries based on average of $600 per month.

MULTIGRADE TEACHING

Multigrade teaching (more than one grade in a room) is not a new technique. Ungraded primary schools are not far removed from the little red school house of years ago; the essential difference is that ungraded primary schools often have fewer grade levels to include in one classroom.

Many teachers in Nicaragua are teaching multiple grades even though they have had little or no training. Their lack of preparation in the techniques of handling two or more grade levels may be one of the reasons for high attrition rates in primary schools. The inexperienced teacher faces discipline problems, lack of interest on the part of her pupils, and a deep-rooted distaste for teaching when she cannot cope with a multigrade situation.

Proper lesson planning, instruction in the ways to group students, learning the techniques of making visual materials, assessing the growth and development of children are only a few areas for teacher preparation. The single, most important facet of successful multigrade teaching is daily preparation. That, coupled with flexibility, makes a teacher's day worthwhile, and the students begin to respond to directions that are organized and planned ahead of time.

The teaching-learning situation with multiple grades is an art in itself but not beyond the reach of primary teachers in Nicaragua. With careful lesson planning, the rural teachers (comarca or traditional) can handle 2 - 4 grades in one classroom in spite of the short four-hour teaching day. With radio-supported education, the primary teachers will eventually have a daily schedule that will operate almost automatically, provided that the radio station is transmitting its lessons for the day. If cassettes are not available,

the teacher should be able, on the basis of previous training, to carry out the lessons without too much frustration.

Under this project, the master teachers, who are skilled in handling multigrades, will spend one day a week with each community teacher to help her cope with the four levels of classes. Since individual differences among children in the rates of learning and retention are common in all schools, the master teacher can help the community teacher regroup her students. A nine year old who has not yet learned to read may spend the reading period with a first grade group and the rest of the time with his third grade class-mates. On the day the master teacher is scheduled to visit the school, special help can be given to the slow reader without taking time away from the regular class.

The master teacher is allowed one day a week to prepare materials for the four schools in his/her comarca circuit. Depending upon the needs of the four community teachers responsible to the master teacher, he/she may spend an extra day at one school, conduct a worshop for all of them after school hours or work out with the local supervisor the plans for monthly workshops.

The schedule below can be viewed as a typical day during which the comarca master teacher may be present. Twenty-thirty minute lessons (see black dots) are given from 8 a.m. to 12:00 p.m. via radio. Not all the students are listening to the radio at the same time, and not all subjects are to be taught with the use of the radio.

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Sample Comarca School Schedule For One Day

Sub.	8:00 I 40	II 40	III 40	10:40 IV 40	V 40	VI 40 12:00
Grades I	Reading / Writing	Math / Drawing	Soc. Studies / P.E.	Reading / Writing	Nat. Science / Health / N.	Agri-culture Orien-tation
II	Writing / Reading	Drawing / Math	Social Studies / P.E.	Reading / Writing	Natural Science / N Health /	Agri-culture Orien-tation
III	Social Studies	Health / Nutrition	Math / P.E.	Reading / Lang. Arts	Natural Science	Agri-culture Orien-tation
IV	Social Studies	Health / Nutrition	P.E. / Math	Lang. Arts / Reading	Natural Science	Agri-culture Orien-tation

Reading and math will be broadcast 5 times a week for each grade. Health and Nutrition will be broadcast once a week for grades 1 and 2 and twice a week for grades 3 and 4. Social Studies will have one radio lesson a week for all four grades. Agriculture Orientation will also have one radio lesson a week for all four grades. With forty-five lessons a week via radio, the teacher of four grades still has seventy-five to plan; so whenever feasible, she will combine subjects, such as music (singing), art, manual training, physical education, social studies and agriculture orientation. From time to time, natural science can be taught to all four grades at the same time with work-sheets of different ability levels; the same is true of social studies. All four grades will work in the school garden; so the weekly lesson via radio will bring the four classes together once a week for general study. Then

each grade will take its turn in the school garden the other days of the week. See MPE Study Plan below for required weekly lessons.

STUDY PLAN FOR PRIMARY EDUCATION, 1971

Subjects New Plan	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
Spanish	10	10	8	8	8	8
Mathematics	6	6	6	6	6	6
Natural Sciences	3	3	4	4	4	4
Social Studies	3	3	4	4	4	4
Manual work, Music, Singing	4	4	4	4	4	4
Physical Education	2	2	2	2	2	2
Agricultural Orientation	2	2	2	2	2	2
Weekly lessons of 40 minutes	30	30	30	30	30	30

(HED -- I -12)

RURAL EDUCATION DEVELOPMENT
PRIMARY GRADES: 1-4

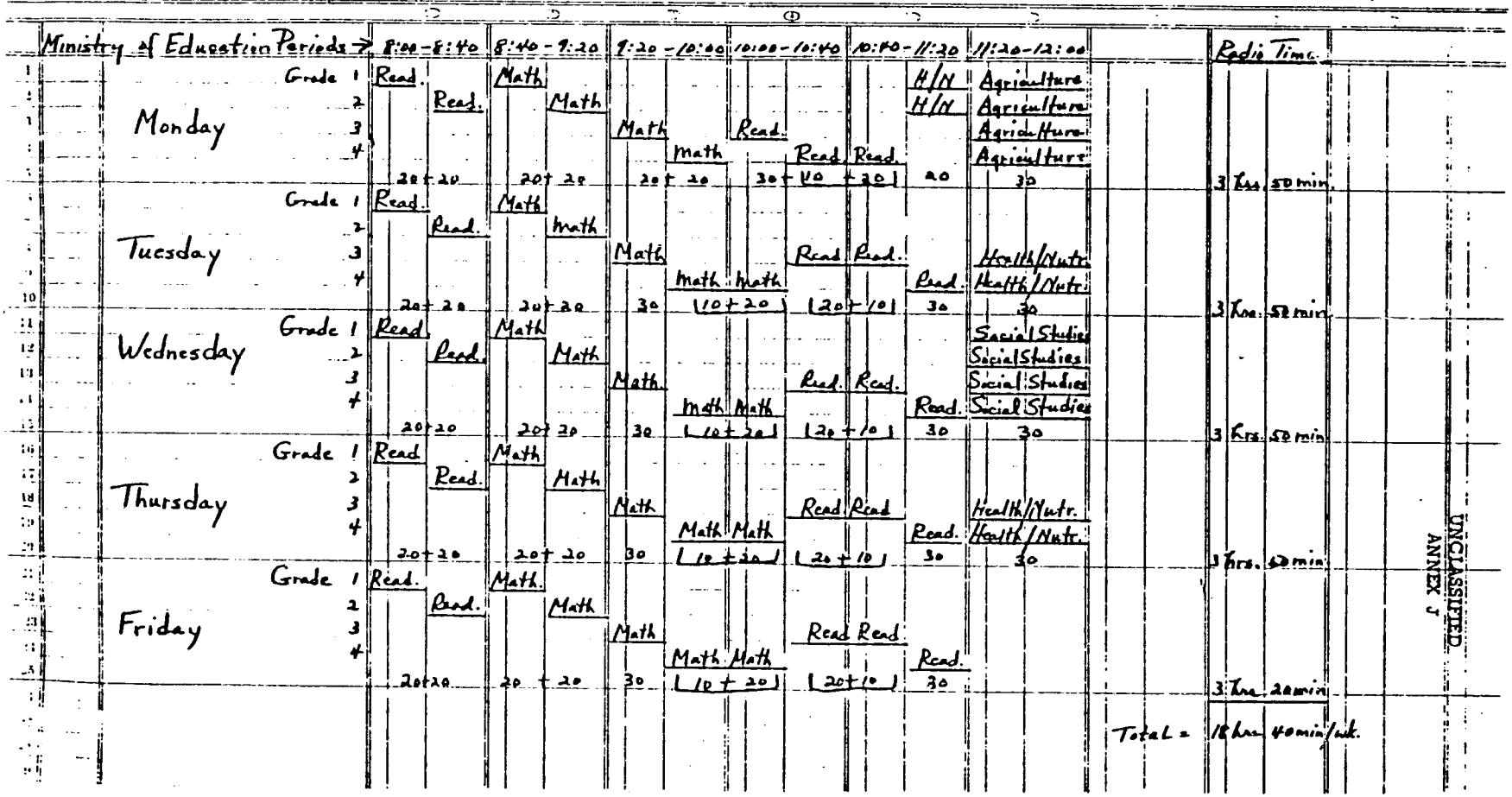
The attached Sample Radio-Supported Schedule for the Primary Grades, 1-4, in the proposed Rural Education Development Grant/Loan does not cover every subject, nor does it include all the periods required by the Ministry of Public Education in a given subject. Daily radio lessons range from three hours and twenty minutes to three hours and fifty minutes. The average daily radio time per grade is as follows:

Grade	Mon.	Tues.	Wed.	Thurs.	Fri.
1	90" (a)(b)	40"	70"(d)	40"	40"
2	90" (a)(b)	40"	70"(d)	40"	40"
3	80" (b)	90"(c)	90"(d)	90"(b)	60"
4	80" (b)	90"(c)	90"(d)	90"(b)	60"

On no day during a given week would any student have more than one and a half hours of radio lessons. In the case of agriculture and of social studies, all four grades have one weekly radio lesson together because all will work in the school garden, and there are enough social studies' lessons suitable for all grades with different levels of materials to accompany the lessons.

(a) Grades 1/2 take Health/Nutrition together once a week by radio.
(b) Grades 1-4 take Agriculture Orientation once a week by radio as a group.
(c) Grades 3/4 take Nutrition/Health together twice a week by radio.
(d) Grades 1-4 take Social Studies together once a week by radio.

Sample Radio-Supported Schedule – Primary Grades – Rural Education Development



UNCLASSIFIED
ANNEX K

DETAIL OF COMPONENT FOUR

This Annex contains the following:

1. Number and Type of Personnel to be Trained

2. Training Timetable

3. MPE Personel Training Costs

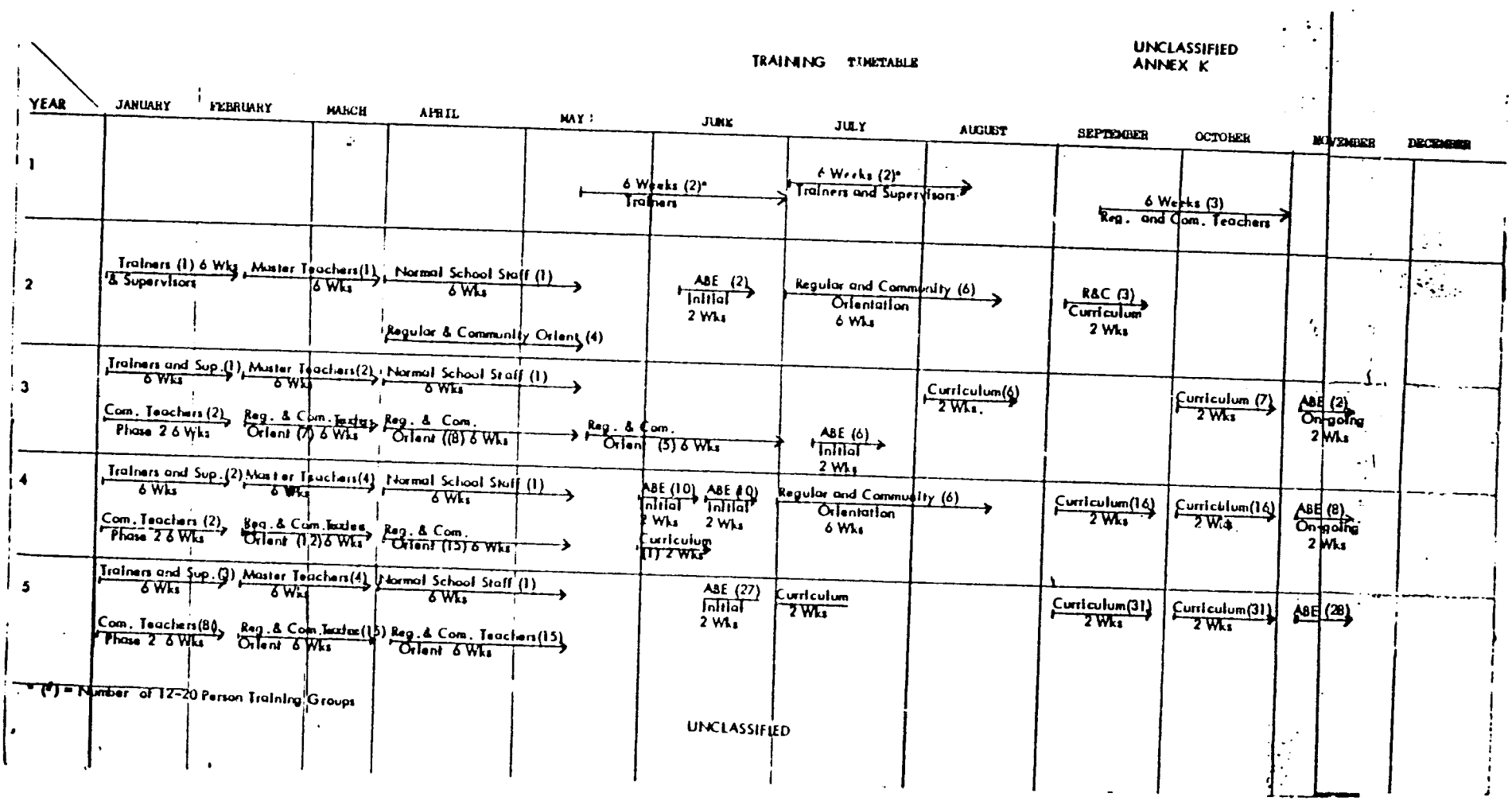
NUMBER AND TYPE OF PERSONNEL TO BE TRAINED

Training Inputs	1		2		3		4		5		TOTAL	
	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP
Technical Assistance												
48 Person/months	110,000	10,000	110,000	10,000	---		---		----		220,000	20,000
MEP Salaries												
MEP Supervisors	(300 mo)	36,000		72,000		115,200		194,750		360,350		778,300
Trainers	(600 mo)	86,400		100,800		115,200		194,400		172,800		669,600
MEP Master Teachers (Tentative at 170 mo)		---		12,240		53,040		134,640		204,000		403,920
MEP Regular Teachers (Tentative at 150 mo)		108,000		396,000		972,000		1,854,000		2,658,600		5,988,600
MEP Community Teachers (Tentative at 60 mo)		---		17,280		74,880		190,080		288,000		570,240
MEP Accelerated Basic Ed. Monitors (Tentative at 50 mo)		---		24,000		96,000		336,000		660,000		1,116,000
EAC/CFER Teaching Staff (Tentative at 250 mo.)		---		90,000		162,000		162,000		162,000		576,000
Total Salaries and Technical Assistance:	110,000	240,400	110,000	722,320	---	1,588,320	---	3,065,870	---	4,505,750	220,000	10,122,660

Year	1		2		3		4		5		TOTAL	
Training Inputs	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP	A.I.D.	MEP
B. Materials and Equipment											10,000	
1) 4 UTR at 2,500 each	5,000		5,000								10,000	
2) VTR Tapes	10,000		---									
3) Instruction Aids	4,400		4,400		4,400		4,400		4,400		22,000	
Sub-Total	19,400	--	9,400		4,400	--	4,400	--	4,400	--	42,000	--
C. Training Costs												
1) Transportation per diem for trainees at $5 per day	--	12,300	---	33,220	---	89,200	---	204,200	---	333,100	---	670,020
2) Transportation per diem for training teams at $20 p/day		10,800		35,200		74,400		135,200		187,200		442,800
Sub-Total		23,100		68,420		158,000		327,400		496,300		1,073,220

UNCLASSIFIED
ANNEX K

TRAINING TIMETABLE



* (#) = Number of 12-20 Person Training Groups

UNCLASSIFIED

TIME TABLE

Training / Year	1			2			3			4			5		
OUTPUTS	Persons	Groups	Weeks	Persons	Groups	Weeks	Persons	Groups	Weeks	Persons	Groups	Weeks	Persons	Groups	Weeks
1 Trainers and Supervisor	12 10	2 (5)**	6	2 10	1 (8)	6	2 10	1 (12)	6	4 24	2(19)	6	4 46	3(31)	6
2 Master Teachers	-	-	-	6	1	6	20	2	6	40	4	6	34	4	6
3 Regular and Community Teachers Orientation R	60	3	6	160	10	6	320	20	6	490	33	6	447	30	6
C	-			24			80			160			136		
Community Teachers Follow-Up	-	-	-	-	-	-	24	2	6	80	4	6	160	8	6
Regular and Community Teachers Curriculum Training (Cumulative)	-	-	-	60	3	2	244	13	2	644	33	2	1294	65	2
4 Accelerated Basic Educ. Teachers Trained Initial	-	-	-	40	2	2	120	6	2	400	20	2	540	27	2
On-going (Cumulative)	-	-	-	30 EAC/CFER			24 EAC/CFER 40	2	2	160	8	2	560	28	2
5 Normal School Staff Trained				Normal #1 10	1	6	Normal #2 10	1	6	Normal #3 10	1	6	Normal #4 10	1	6

* (#) 4-person training teams

* One (1) training week is 5 days

TABLE

MPE PERSONNEL TRAINING COSTS

TRAINING INPUTS	1		2		3		4		5		TOTAL
	#	$	#	$	#	$	#	$	#	$	
MEP Counterpart Salaries - Training											
Supervisors (300 mo.) 75 wks	10	4,500	10	4,500	10	4,500	24	10,800	46(6)	20,700	45,000
Trainers (600 mo.)	12	10,800	2	1,800	2	1,800	4	3,600	4(6)	3,600	21,600
MPE Master Teachers (170 mo. 42.50 wk)	--	--	6	1,530	20	5,100	40	10,200	34(6)	8,670	25,500
MPE Regular Teachers (150 mo. 37.50 wk)	60	13,500	160	40,500	320	88,500	1030	150,750	1447	179,625	472,875
MPE Community Teachers (60 mo.) 15 wk	--	--	24	2,160	80	10,080	344	24,720	400	34,200	71,260
MPE ABE Monitors (50 mo.) 12.50 wk.	--	--	40	1,000	120	4,000	560	14,000	1100	27,500	46,500
EAC/CFER Teaching Staff (250 mo) $62.50 wk.	--	--	30	3,750	24	3,000	24	3,000	24	3,000	12,750
TOTAL SALARIES:	82	28,800	272	55,240		116,980		217,100		277,295	645,485

DETAIL OF COMPONENT FIVE

This Annex contains the following:

1. Summary Cost Data Sheet
2. Activity A: Comarca School Circuits
3. Activity B: Improving Existing Rural Primary Schools
4. Activity C: Furnishing New and Existing Primary Schools
5. Activity D: Ongoing School Maintenance
6. Activity E: Educational Support and Service
7. Activity F: Rural Adolescent Centers (RAC)
8. Activity G: Radio Transmitting and Receiving Capability
9. Investments for Two Transmitting Stations
10. Radio Station Operating Costs
11. Field Strength Measurements Taken in Jinotega, Nicaragua (Region V)
12. Localized Maintenance of Primary School Facilities: A Conceptual Proposal to the MPE

SUMMARY OF COMPONENT FIVE

STRENGTHENING RURAL EDUCATION DELIVERY SYSTEMS

	A.I.D. (Loan)	GON	TOTAL
A. Comarca School Circuits			
1. Construction and Supervision	1,970,000	-	1,970,000
2. Operating Costs	-	866,000	866,000
Sub-Total	1,970,000	866,000	2,836,000
B. Improving Existing Rural Primary Schools			
1. Repair and Reconstruction	-	795,000	795,000
2. Operating Costs	-	847,000	847,000
3. Supervision	100,000	-	100.000
Sub-Total	100,000	1,642,000	1,741,000
C. Furnishing New and Existing Primary Schools	398,000	-	398,000
D. Ongoing School Maintenance	-	955,000	955,000
E. Education Support and Service			
1. School Garden Kits	188,000	-	188,000
2. Vehicles (Including Mules)	287,000	-	287,000
3. Operating Costs	-	1,042,000	1,042,000
Sub-Total	475,000	1,042,000	1,517,000
F. Rural Adolescent Centers			
1. Construction	-	1,080,000	1,080,000
2. Construction and Supervision	120,000	-	120,000
3. Equipment and Furnishings	188,000	-	188,000
4. Operating Costs	-	636,000	636,000
Sub-Total	308,000	1,716,000	2,024,000
G. Radio Transmitting and Receiving Capability			
1. Construction	-	60,000	60,000
2. Equipment	610,000	-	610,000
a. Radio Station	450,000	-	
b. Radio/Recorders	160,000	-	
3. Operating Costs	-	927,000	927,000
Sub-Total	610,000	987,000	1,597,000
Total	3,861,000	7,208,000	11,069,000

ACTIVITY A: COMARCA SCHOOL CIRCUITS

	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Construction of 100 Comarca School Circuits (4 classrooms, 1 teacher dwelling) at a price of $19,700* per circuit. A and E (10%) supervision costs are included in the cost of construction.						
Number of Circuits	-	2	20	30	48	100
Number of Classrooms Built	-	8	80	120	192	400
Construction Cost (A.I.D. financed)		39,400	394,000	591,000	945,600	1,970,000
Number of New Master Teachers	-	2	20	30	48	100
Number of New Comarca Teachers	-	8	80	120	192	400
Personnel Costs (GON Financed)	-	9,840	108,240	255,840	492,000	865,920
Master Teachers	-	4,080	44,880	106,080	204,000	359,040
Comarca Teachers	-	5,760	63,360	149,760	288,000	506,880

* Comarca School Circuit Construction

Schools
Number of m^2/classrooms = 88
Construction cost per classroom = $4,000
School Construction cost/circuit = $16,000

House
Number of m^2/house = 72
Construction cost per house = $3,700

ACTIVITY B: IMPROVING EXISTING RURAL PRIMARY SCHOOLS

	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Repair and reconstruction of 530 existing rural primary classrooms using self-help methods. Estimated cost is $1,500/classroom						
Classrooms Repaired or Reconstructed -		60	120	150	200	530
Total Cost (GON)		90,000	180,000	225,000	300,000	795,000
New Primary Teachers -		50	90			140
Increased Personnel Costs (GON) -		90,000	252,000	252,000	252,000	847,000
Supervision (A.I.D.) -		20,000	25,000	25,000	30,000	100,000

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ACTIVITY C: FURNISHING NEW AND EXISTING PRIMARY SCHOOLS

		1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
1.	400 new classrooms and 368 existing classrooms without furniture will be furnished at a cost of $340 per classroom A.I.D. will finance all furnishing costs						
	Number of Classrooms	-	54	100	260	354	768
	Total Cost	-	18,360	34,000	88,400	120,360	261,120
2.	Furnishing 761 existing classrooms where furnishing are 50% incomplete. Furnishing cost estimated at $170.						
	Number of Classrooms	-	50	100	260	351	761
	Total Cost	-	8,500	17,000	44,200	59,670	129,370

ACTIVITY D: ONGOING SCHOOL MAINTENANCE

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
Financing for Maintenance for Primary Schools in Regions II and V. GON Financed.						
TOTAL COST:	-	225,000	230,000	245,000	255,000	955,000

ACTIVITY E: EDUCATIONAL SUPPORT AND SERVICE

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
School Garden Kits						
Gardening materials (shovels, hoes, machetes, picks, etc.) for use in the development of school gardens. Estimated cost $100/kit. AID Financed.						
Number of Garden Kits:	-	200	477	600	600	1,877
Cost of Garden Kits		20,000	47,700	60,000	60,000	187,700
Vehicles						
1. Within departmental transportation for 100 inspectors. Thirty-five (35) 4-wheel drive vehicles at $7,000 each. AID Financed.						
Number:	10	10	15	-	-	35
Cost:	70,000	70,000	105,000	-	-	24,500
2. Five 4-wheel drive vehicles to provide the Central Office Staff mobility to monitor and supervise project activities. Estimated Cost is $7,000/vehicle. AID Financed.						
Number:	4	1	-	-	-	6
Cost:	28,000	7,000	-	-	-	35,000
3. Twenty mules for transportation of supervisors within Region V. Estimated Cost $300/mule. AID Financed.						
Number:	-	10	10	-	-	20
Cost	-	3,000	3,000	-	-	6,000

ACTIVITY E: EDUCATIONAL SUPPORT AND SERVICE

Page 2.-

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
4. Vehicle Maintenance and Fuel Cost.						
GON Financed.	54,110	104,355	143,000	143,000	143,000	587,465
5. Salaries for 32 new Supervisors.						
GON Financed.						
Number:	10	10	12	-	-	32
Cost:	36,000	72,000	115,200	115,200	115,200	453,600

ACTIVITY F: RURAL ADOLESCENT CENTERS (RAC)

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
1. Construction Costs (GON Financed)						
Number of CFER	-	-	2	2	2	6
Cost $55,000	-	-	110,000	110,000	110,000	330,000
Number of EACs	-	-	2	2	2	6
Cost $125,000	-	-	250,000	250,000	250,000	750,000
Sub-Total	-	-	360,000	360,000	360,000	1,080,000
2. Construction Supervision (A.I.D. Financed)	-	-	40,000	40,000	40,000	120,000
3. Equipment and Furnishings (A.I.D. Financed)						
CFER at $4,200/Unit	-	-	8,400	8,400	8,400	25,200
EACs at $27,000/Unit	-	-	54,000	54,000	54,000	162,000
Sub-Total	-	-	62,400	62,400	62,400	187,200
4. Operating Costs						
CFER at $23,000/School/ Year	-	-	46,000	92,000	138,000	276,000
EACs at $30,000/School/ Year	-	-	60,000	120,000	180,000	360,000
	-	-	106,000	212,000	318,000	636,000

ACTIVITY G: RADIO TRANSMITTING AND RECEIVING CAPABILITY

	1st Year	2nd Year	3rd Year	4th Year	5th Year	TOTAL
1. Land for the two radio stations. GON Financed.	-	10,000	10,000	-	-	20,000
2. Construction of two buildings for the radio stations. GON Financed.	-	30,000	30,000	-	-	60,000
3. Equipment						
Installed equipment for the radio stations. (See Annex 1.9) A.I.D. Financed.	-	225,000	225,000	-	-	450,000
AM/FM Radio/Recorders for 1,877 primary school classrooms and five radio/recorders for each EAC and CFER. Approx. 2,000 radio/recorders at a per unit price of $80.00. A.I.D. Financed.						
Number	300	500	400	400	400	2,000
Cost	24,000	40,000	32,000	32,000	32,000	160,000
4. Operating Costs (See Annex 1.10) GON Financed	8,000	19,000	180,000	360,000	360,000	927,000

INVESTMENTS FOR TWO TRANSMITTING STATIONS

Two	10 KW AM transmitters operating, one with 1580 KH2 and the other one with same frequency or 790 KH2 Cost of each $30,000.00	$ 60,000
Two	Towers of 95m or one of 190 m and one of 95m. Average Cost $30,000 each with ground network	60,000
Two	Tuning boxes and lighting for towers at $6,000.00 ea.	12,000
Two	Induction regulators (*) for pr. voltage regulation. Cost of each $5,000	10,000
Two	Spare tubes for transmitters at $6,000 a set	12,000
Two	Consoles for 8 audio channels at $6,000 each.	6,000
Four	Microphones at $350.00 each.	1,400
Two	Amplitude limiters at $2,000 each	4,000
Two	Amplitude compressors at $3,000	6,000
Four	Ampex playback reproduction at $6,000 each	24,000
Four	Monitoring loadspeakers at $350.00 each	1,400
Four	Turntables, complete with pickup pre-amplifiers Cost of each $2,000.00	8,000
One	Field strength meter 9.5 KH2 to 5 MH2 (portable)	4,600
Two	Racks, tables, chairs, etc. at $2,000 a set	6,000
Two	Receivers AM at $750.00 each	1,500
Two	Receivers, FM at $750.00 each	1,500
	Sub-Total	

Brought Forward .....

Two	5" Oscilloscopes for monitoring at $2,000.00	$ 4,000.
Two	Coaxial cable, 50 ohms, for 20 KW power, 200 m long, with fittings at $3,000 a set	6,000
Two	Studio-Transmitter links, high-fidelity, two ways with antennas Cost of each $10,000	20,000
Two	Fences 1,000 m, at $8,000 a set	16,000
Two	30m Towers, guyed, installed at $2,500 each	5,000
20	Cassette recorder-reprod., at $150.00 each	3,000
Four	Cassette reproducers, 110 volts at $200,00 each	800
Two	Audio Oscillators HP at $1,500.00 each	3,000
Two	Sets of Tools at $1,500.00 each (Electric drill, drills, screw drivers, wrench, etc.)	3,000
Two	Studio-transmitter links, high-fidelity, two ways with antennas Cost of each $12,000	24,000
Two	30m. towers, guyed, installed at $2,500	5,000
Two	Sets of furniture (desks, chairs, racks and tables of steel) at $6,000.00	12,000
Two	AM receivers $500.00 each	1,000
Two	Electric Typewriters at $1,000.00 each	2,000
Two	Four-wheel traction Jeeps	14,000
	Approx.	$ 350,000
	Transportation	30,000
	Installation	70,000
	TOTAL	$ 450,000

RADIO STATION OPERATING COSTS

Depreciation	
10% x $147,500	$ 15,750
Maintenance	5,000
Electricity	
Assuming a 14 hour per day operation seven days a week the annual KWH usage will be:	
14x7x52x30 = 152880 KWH per year	
152880 x $0.3800*	$ 58,094
Personnel	90,000
1 Chief Operator	
2 General Operators	
1 Studio Operator	
1 Janitor	
1 Gardener	
1 Watchman	
Miscellaneous (vehicles, office supplies)	$ 10,000
TOTAL:	$178,844
(Rounded to:	$180,000)

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* Electrical charge per KWH for Government as of November, 1976.

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FIELD STRENGTH MEASUREMENTS TAKEN IN JINOTEGA, NICARAGUA (REGION V)

Freq. (KH2)	Signal	Full Scale	Local Station
500	.24	1 mV	Nicaragua
590	.3	1 mV	"
620	.37 - .17	1 mV	"
650	.29	1 mV	"
670	.6 - .5	1 mV	"
750	.4	1 mV	"
750	.6	1 mV	"
820	1.5	10 mV	"
950	.3	1 mV	"
970	.6	1 mV	"
1000	1.3	10 mV	"
1070	.9	1 mV	"
1110	1.1	10 mV	"
1200	.9	1 mV	Costa Rica
1210	.8	1 mV	Nicaragua
1260	.8	1 mV	"
1310	.6	1 mV	"
1360	.8 - .15	1 mV	Honduras
1380	1.	10 mV	Nicaragua
1460	.3	1 mV	"
1560	.2	1 mV	"

LOCALIZED MAINTENANCE OF PRIMARY SCHOOL FACILITIES
A CONCEPTUAL PROPOSAL TO THE MPE

DISCUSSION

The GON and A.I.D. have endorsed an integrated approach to rural development as evidenced by the Rural Development Loan I (Agriculture) and proposed loans in health, nutrition, and education. A basic concept of this approach is one of more direct benefits to rural populations and the betterment of school and economic conditions of these populations.

Local involvement of these populations in decisions that stand to affect them is also an important consideration in integrated rural development. Community participation in the development processes of education is therefore desirable to make education, both formal and non-formal, more relevant to the people and communities it must serve as wll as to national development aspirations. A school facility in enighborhoods and villages can serve as a focal point for increased local participation in education. It can be impatant for a community to take price in its school, the quality of teaching and learning, and the physical facility itself. The following plan to achieve more effective maintenance of primary schools is based on this assumption and it is believed that both social and economic fallout can result by the adoption of this plan or some modified version within the same general precepts.

OUTLINE OF PLAN

Number of Primary Schools (1973 Statistics)	2,300
Number of Students	341,000
Number of Classrooms	6,100
Average Rate of Growth	4.7%

1. The MPE will establish a basic support figure for maintenance of primary schools based on per pupil enrollment. For small schools of less than three classrooms, a basic figure per school will be used--not student enrollment. For example: An amount of four (4) cordobas per pupil would serve as a foundation for funding of basic maintenance and improvement requirements, but each school of three or less classrooms could be entitled to draw an amount not to exceed C$750.00 per year. A school of 800 students having one or more shifts could be eligible to draw a maximum of C$3,200 per year for maintenance or physical plan improvements while smaller schools would be assured of at least

C$750.00 even though their student enrollment allowed them less than this amount. These basic support figures would apply to both urban and rural primary schools. It is possible that a three-room school could have two shifts enrolling a total of 300 students. In that case, this school could elect to use the per student plan for funding maintenance instead of the C$750.00 base rate for small schools enrolling less than 190 students.

2. The MPE would be required to budget each year an amount equal to primary school enrollments projected for the budget year (for 1973; 341,000 x C$4 per student, or C$1,364,000) for the maintenance of primary school facilities. It is further anticipated that about 10% of the schools will require major repairs or renovation each year. In such cases exceeding C$5,000 for any given year, the MPE would allow normal maintenance procedures using the Ministry of Public Works to carry out the repairs, such as with new roofs, major glass replacement, or utility repair or installation. To cover these costs, an amount equivalent to 10% of the total number of schools x C$5,000 would be provided in the MPE budget (2,300 schools in 1973 x C$5,000 or C$1,150,000) in addition to the amount derived from the per student formula.

3. To stimulate local level action, the per student formula would be used to allocate funds for routine maintenance and school improvements to the main education or supervisory office in each department and at progressively more localized levels if possible. The intent is to enable a local school director to draw upon funds as close to points of use as possible. The funds for major maintenance (over C$5,000) would be allocated and disbursed through more central channels using existing GON procedures as appropriate.

4. The plan for localized maintenance would need good publicity with clear and direct procedures established and understood by school directors, local committees and students to enable maximum participation and success of the plan. Maintenance of primary school facilities would the responsibility of the director of each school who would be charged with the formation of a local school maintenance committee of not more than 3 parents of students in the school. Routine maintenance and school improvements required or planned would be proposed to either the principal or this committee and approved by both as a system of checks and balances and to encourage greater dialogue between the parents and the school. Groups of students, teachers, community members

local contractors or technicians could actually do the work, preferably utilizing students where possible, in school development projects. The students could plan and provide labor as appropriate for painting, school gardens and landscaping. An element of competition could be introduced as to which class in a larger school would have the neatest, cleanest, the best maintained classroom or a portion of the school compound. To carry out a project, the Principal of the maintenance committee would procure materials such as paint for the groups performing the maintenance. In cases requiring technical services, but of still a routine nature, the Principal and committee could contract locally for these services. As discussed previously, major maintenance problems involving sums over C$5,000 regular maintenance procedures would be used (Public Works, contractors) funded by the MPE from the central budget with more centralized control. The Director, with approval of the committee, would procure materials or assure reimbursement for approved maintenance materials purchased by working groups.

5. No school would be compelled to participate in this maintenance plan. It would be on an elective basis stressing local initiatives to provide school maintenance and improvement, but the MPE would be responsible for apprising local school authorities of the plan and would encourage participation. It is possible that funds available from this plan would be supplemented by funds raised by the community to carry out special projects requiring added funds. The C$4 per student, or C$750 minimum would, in some cases, serve as seed money for greater school improvement initiatives. The key to this plan would be to achieve good publicity of the concept of self-help, local responsibility, and to notify schools of funds available and disbursement procedures. If the funds available were not used in a given year, because schools failed to take advantage of the opportunities, they would revert back to the Ministry of Finance at the end of the budget year. Some schools lacking good leadership might not use this plan. others would seize the opportunity and look for ways to get additional funds.

6. The MPE would critically evaluate this plan after the first year of operation in terms of the desirability of continued operation and possible ways to improve it.

7. The plan would involve no major bureaucrat organization; utilizing those educators, citizen, and students in place and responsible for school maintenance. It would capitalize a civic pride and local participation of concerned groups, and would be a non-formal learning experience in the process.

8. The MPE would devise an allocation, disbursement, and accountability plan within GON regulations but at the closest point of local use and receipt as possible.

PROBLEMS ANTICIPATED

1. Procedure design for utilization of funds starting from the points of need UP through the system.

2. Correlation of difference in routine, minor maintenance expenditure and those of more nature, over C$5,000.

3. Dissemination of knowledge of this plan to maximize utilization and improvement of primary school maintenance.

4. Need to differentiate between maintenance funding for private schools and that for public facilities.

RECOMMENDATIONS

1. That the MPE consider the concepts of decentralized maintenance of primary school facilities as set forth in this draft proposal of improved management effectiveness, increased local responsibility for and participation in primary education, and national development goals.

2. That a select working group be formed by the MPE to analyze the merits of this proposal, its feasibility in terms of GON policy and regulations, and its practical application for improving maintenance of school facilities.

3. That this working group be charged with the further development and refinement of this proposal resulting in a comprehensive plan for funding, testing, and national utilization.

MAINTENANCE PLAN ESTIMATED FINANCING

NATIONAL, REGIONS II AND V

YEAR	Number Primary Schools National	Number Primary Schools II & V (Estimated)	Number Primary School Rural II & V	Students National	Students II & V	Rural Students II & V	Total C$000 National C$000	Region II & V C$000	Rural II & V C$000
1977	2,318	927	753	44,000	246,028	86,400	1,764 1,150* 2,914	984 465* 1,449	346 380* 726
1978	2,364	945	768	462,000	257,796	90,500	1,848 1,180* 3,028	1,031 475* 1,506	362 385* 747
1979	2,415	966	785	484,000	270,072	94,864	1,936 1,205* 3,141	1,080 485* 1,565	379 395* 774
1980	2,463	985	800	507,000	279,000	99,372	2,028 1,230* 3,258	1,116 495* 1,611	397 400* 797
1981	2,663**	1,020	1,000	531,000***	296,298	104,000	2,124 1,330* 3,454	1,185 510* 1,665	416 500* 916
1982	2,912**	1,084	1,220	555,000***	309,600	108,780	2,220 1,455* 3,675	1,236 545* 1,781	435 610* 1,045

* Amount added for estimated 10 to of total schools which might require added maintenance expenditures of major nature (C$5,000 per year) which would be effected through channels apart from this local level proposal.

** Includes 2,000 new Comarca School buildings.

*** Includes an added 10,000 new Comarca School students.

SUMMARY OF AMOUNTS TO BE BUDGETED FOR

PRIMARY SCHOOL MAINTENANCE

YEAR	NATIONAL	REGIONS II & V	RURAL PRIMARY II & V
1977	C$ 2,914,000 US$ 416,285	C$ 1,449,000 US$ 207,000	C$ 726,000 US$ 103,710
1978	C$ 3,028,000 US$ 432,570	C$ 1,506,000 US$ 215,140	C$ 747,000 US$ 106,710
1979	C$ 3,141,000 US$ 448,710	C$ 1,565,000 US$ 223,570	C$ 774,000 US$ 110,710
1980	C$ 3,258,000 US$ 465,430	C$ 1,611,000 US$ 230,142	C$ 797,000 US$ 113,860
1981	C$ 3,454,000 US$ 493,430	C$ 1,695,000 US$ 242,140	C$ 916,000 US$ 130,860
1982	C$ 3,675,000 US$ 525,000	C$ 1,781,000 US$ 254,430	C$ 1,045,000 US$ 149,280

UNCLASSIFIED
ANNEX M

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Nicaragua

Project Title: Rural Education Development

Funding (Fiscal Year and Amount): FY 1977 - FY 1982
$980,000 grant/$10.0 million loan

Life of Project: 5 Years (3 year grant - 5 year loan)

IEE prepared by: Gussie L. Daniels III, GD
Assistant Program Officer

cleared by: Paul M. Groves, DVP
Wally F. Bowles, ENG

Environmental Action Recommended: It is recommended that this project receive a negative determination that no additional environmental examinations be carried out on this project. The project will involve construction of 24 Rural Adolescent centers and construction/repair of approximately 530 classrooms, but most of this work will be carried out in a limited geographic area, involving a small portion of the total land/resources available in the region. In addition, the basic purpose of the program is to provide expanded training, new materials and additional resources for education programs. On the basis of our appraisal and review of the activities contemplated under the project, we believe that given the projects emphasis on training and technical assistance, it is not a major federal action which will have a significant effect on the human environment.

Concurrence by Mission Director:

Arthur W. Mudge, Director, USAID/Nicaragua

Date: 2/2/77

Assistant Administrator Decision:

Approved: _____
Eugene N. Girard II, AA/LA

Disapproved: _____
Eugene N. Girard II, AA/LA

Project Description: Nicaraguan efforts to develop and implement a series of action programs aimed at the progressive reduction of illiteracy, the rational development of a system for professional and technical training, and the deliberate realignment of educational services towards the needs of the rural poor often confront a number of economic, financial and sectoral constraints which have limited the outreach capacity of the country's system of public education. The Education Sector Assessment for Nicaragua, completed in 1971 and updated in 1976, identifies a number of serious constraints to full utilization of Nicaragua's education planning, manpower development and facilities utilization capabilities.

These systemic deficiencies extend beyond traditional LDC concerns such as diminishing foreign exchange reserves, increasing costs of and demands for public sector services, and competing priorities for limited funds. The particular constraints identified in the Sector Assessment which affect the levels and quality of education in Nicaragua include insufficient emphasis on rural primary education, poor maintenance and utilization of facilities, insufficient coordination of curriculum development with human resource development programs, inadequate teaching methodologies and educational delivery systems, and low levels of access to educational services combined with abnormally high drop-out rates. As a consequence, about 66 percent of the total rural population is illiterate and less than one-third of the children 7 to 12 years of age attend school on a regular basis. Of this limited number, about 60 percent are in grades 1 and 2, and drop-out rates are very high at the first two basic levels. This dismal situation occurs with increasing frequency at higher levels, with the result that over 80 percent of 13-18 year olds do not attend school at all despite their need for skills and education training for subsequent productive employment.

The Government of Nicaragua's Five Year Plan (1975-1980) emphasizes the need to 1) develop a flexible educational structure closely tied to changes in the demand for skilled labor; 2) reorient education courses towards practical and vocational training; 3) expand on-the-job training opportunities; 4) develop re-entry education programs for workers; 5) establish teacher training priorities with special emphasis on retraining for rural teachers; augment the budget for primary education. Achievement of these objectives will require expanded contacts between GON agencies working in rural areas and improvement of the managerial and organizational capabilities of the Ministry of Public Education to plan and implement widely dispersed, complex education services programs.

Within the context of the Mission's support for Nicaragua's integrated rural development program which emphasizes in its first stage improving the welfare and the standard of living of the lowest income groups in a limited geographical area, USAID/Nicaragua is developing a combined loan/grant project of approximately $10.9 million to assist GON efforts to significantly expand the opportunities for rural education.

The loan element of this project (Approximately $10.0 million) will finance activities to improve and upgrade the institutional capabilities of the Ministry of Public Education (MPE) to prepare, implement and manage an expanded and improved system of formal and non-formal primary-level education and skills training for rural inhabitants in the North and the Pacific Regions of Nicaragua-a low income, fairly densely populated area where the GON, with USAID assistance- has already carried out integrated programs in health and rural development.

The eight interrelated components of the project are as follows:

a. Community Participation and Support System - Training for community level organizations such as local school committees, local women's and youth groups in primary school administration, vocational training and community organization/leadership.

b. Reinforced Traditional Rural Schools - Development of community school programs related to teacher in-service training, basic life and literacy skills improvement, facilities improvement, improved management and supervision and radio education in mathematics.

c. Comarca School circuit - Delivery of four years of traditional primary education to communities without full-time teachers through the clustering of small isolated community schools, use of a resident community teacher-aide, new educational materials and two-way radio communications.

d. Accelerated Basic Education - Development and implementation of a correspondence course to teach basic health skills, special agricultural skills, basic reading, economics and math to children age 10-14, unschooled adolescents and uneducated adults.

e. Radio-based Occupational Education - Development of a series of radio programs and radio forums to improve the occupational and commercial skills of the rural poor.

f. Community Education - The development of learning packages for use by a variety of educational organizations working in rural areas. The knowledge areas to be covered would relate to occupational, health, nutrition, family life and community development.

g. Rural Adolescent Centers - Construction of approximately 24 centers and the training of new staff to teach agricultural education and job skills to tutal adolescents ages 14 to 20 years old.

h. Infant and Early Childhood Education - Initiation of a parent training program directed at improving the cognitive, physical and social development of children ages 1 to 5 so they will be better able to benefit from school experiences.

Technical assistance, training and material support needed for

management systems improvements, expanded coordination mechanisms and management-oriented evaluation systems will be financed under the grant ($980,000).

AT.

I. Identification and Evaluation of Environmental Impacts

Impact Areas and Sub-areas	Impact Identification and Evaluation 2/
A. Land Use	
1. Changing the character of land through:	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	L
d. Changing soil productive capacity	N
2. Altering natural defenses	N
3. Foreclosing important uses	N
4. Jeopardizing man or his works	N
5. Other Factors	N
B. Water Quality	
1. Physical state of water	N
2. Chemical and biological states	N
3. Ecological balance	N
4. Other factors	N
C. Atmospheric	
1. Air additives	N
2. Air pollution	N
3. Noise pollution	N
4. Other factors	N

2/ N = No environmental impact
L = Little environmental impact
M = Moderate environmental impact
H = High environmental impact
U = Unknown environmental impact

D. Natural Resources

1. Diversion, altered use of water	N
2. Irreversible, inefficient commitments	N
3. Other factors	N

E. Cultural

1. Altering physical symbols	L
2. Change of cultural traditions	M
3. Other factors	N

F. Socio-Economic

1. Changes in economic/employment patterns	M
2. Changes in population	N
3. Changes in cultural patterns	M
4. Other changes in traditional agriculture cultivation practices	L

G. Health

1. Changing a natural environment	N
2. Eliminating an ecosystem element	N
3. Other factors - changing dietary -habits of rural families	N

H. General

1. International impacts	N
2. Controversial impacts	N
3. Larger program impacts	N
4. Other factors	N

I. Other possible impacts (not listed above)

MINISTRY OF PUBLIC EDUCATION BUDGET

This Annex contains the following:

1. Ministry of Public Education's Total Budget, 1972-1977

2. Budget Item Explanations

Ministry of Public Education Total Budget

1972 through 1977

Budget Item	1972	1973	1974	1975	1976	1977	Annual Rate of Growth
Central Administration	2,070,000	2,338,000	2,560,000	2,859,000	2,934,800	4,016,394	14.2 %
Planning and Assessment	859,000	784,000	807,000	1,176,000	1,344,000	2,455,000	23.4 %
Primary Education	86,470,000	88,431,000	104,171,000	114,976,000	136,145,000	133,559,725	12.2 %
Secondary Education	22,987,000	25,301,000	29,965,000	36,564,386	50,556,960	61,724,616	21.8 %
Agricultural Ed.	2,005,000	2,006,000	2,485,000	3,690,000	4,178,000	4,311,000	16.5 %
Physical Education	963,000	945,000	1,084,000	1,549,991	2,211,000	2,481,000	20.8 %
Industrial Arts	1,136,000	1,136,000	1,842,000	2,280,000	3,155,000	3,507,000	25.3 %
Labor Training	--	--	456,000	8,217,000	7,217,000	7,217,000	151. 0 %
Cultural Extensions	2,491,000	2,266,000	2,225,000	2,262,000	3,366,540	3,624,540	7.8 %
Higher Education	13,601,000	12,234,122	18,531.000	2,721,000	32,634,000	38,155,000	22.9 %
Construction of Schools and cultural centers	21,146,000	48,367,200	54,740,000	44, 084,900	52,122,000	24,286,900	2.8 %
Capital Transfers	2,014,000	871,000	7,741,000	5,157,310	45,235,000	32,175,000	74.0 %
Extension & Improvement of National Education	---	914,200	12,322,000	4,107,000	2,900,000	---	47.0 %
Total:	155, 742,000	185,593,522	238,954,000	254, 133,587	342, 998,760	337,513,175	16.7%
% of National Budget	20%	15 %	14 %	14 %	15 %	14 %	---

M P E

BUDGET ITEM EXPLANATIONS

Central Administration: Provides the overall management function for the MPE. Includes the Minister's Office.

Planning and Assessment: Provides planning and evaluation services for the Ministry. Includes curriculum development and materials center.

Primary Education: Includes the staffing and operations of the primary schools and adult literacy program. Also, includes a community development program.

Secondary Education: Includes the staffing and operations of the secondary schools, the normal schools, the National Vocational Technical Institute and the Technological Institute of Nicaragua.

Agricultural Education: Includes the staffing and operations of 14 Ag education centers.

Physical Education: Provides supervision for physical education activities in the public schools. Coordinates with the sports organizations for tournaments.

Industrial Arts: Includes the staffing and operations for 52 shop units (including home education) in 27 cities of Nicaragua.

Labor Training: Provides a training program through the National Technological Institute for various trades.

Cultural Extension: Includes the operations and maintenance of museums, libraries, a fine arts school, a music conservatory and a folklore school.

Higher Education: Provides scholarships and partially supports operations of the two local universities.

Construction of Schools and Cultural Centers: Includes the staffing of the implementation unit and accounts for both the internal and external funding of construction for MPE buildings.

Capital Transfers: Includes support for capital additions for UNAN and other educational institutions. Accounts for the external funding for capital additions to non-MPE institutions.

SERVICE/COMMODITY PROCUREMENT PLAN AND SCHEDULE

COOPERATING COUNTRY (CC): Nicaragua AGREEMENT No. Grant 524-0115 Loan 524-0127 LOAN/GRANT TITLE: Rural Education Development US INPUTS: $3,309,000 CC INPUTS: $255,000

PART I - SERVICES

TYPE FINANCING: Loan/Grant SOURCE: Loan 941/Grant U.S. AUTHORIZED AGENT: GON/MPE CONTRACTING PERIOD: 11/77-3/82 DELIVERY PERIOD: 9/77-4/82

CATEGORY	ESTIMATED COST	WORKSCOPE AVAILABLE	ADVERTISING COMPLETED	CONTRACT ISSUED	ARRIVAL DATE	EXCEPTIONS REQUIRED	MONITOR'S COMMENTS
Administrative Reform (Institutional Team Contract)	465,000	11/77	2/78	3/78	Fiscal Advisor (1) by 5/78		
Community Development Expert	120,000	11/77	2/78	3/78	5/78		
Curriculum Development Team (Team Institutional Contract)	1,570,000	11/77	2/78	3/78	5/78-8/78		
Teacher Training Advisors	240,000	11/77	2/78	3/78	5/78		

PART II - COMMODITIES

TYPE FINANCING: Loan/Grant SOURCE: 941/Grant-U.S. AUTHORIZED AGENT: GON/MPE CONTRACTING PERIOD: 11/77-11/81 DELIVERY PERIOD: 3/78-3/82

CATEGORY	DESCRIPTION	ESTIMATED COST	REQUIREMENT AVAILABLE	ADVERTISING COMPLETED	CONTRACT AWARD	CONTRACT ISSUANCE	FINANCING COMPLETED	DELIVERY DATE	EXCEPTIONS REQUIRED	MONITOR'S COMMENTS
Vehicles	4-Wheel Drive Jeep-Type	$308,000	11/77	2/78	3/78	4/78	12/80	(18) 8/78 (11) 8/79 (15) 8/80		
Vehicles	4-Wheel Drive Equipped Promotional Vehicles (4)	64,000	11/77	2/78	3/78	4/78	12/78	(4) /78		
Tools	School Garden Kits (1,877)	$187,000	11/77	2/78	3/78		9/81	(200) 5/78 (477) 5/79 (600) 5/80 (600) 5/81		
Radio/Recorders	AM/FM Radio with Cassette Type Player (2,000)	$160,000		2/78	3/78	4/78		800 (8/78) 400 (8/79) 400 (8/80) 400 (8/81)		
Radio Stations (Turn Key Contract)	Two, 10 KW Radio Stations designed and installed	$450,000		10/78	11/78	12/78	12/81 6/80	(1) 12/79 (1) 12/80		

Overall Economic Situation:

1976 seems to have brough general recovery to Nicaragua's agricultural-based economy, following the 1975 recession. Judging from projected full-year data, 1/ the nation's gross domestic product (GDP) increased 7% in real terms during 1976 and per capita GDP, at current prices, reached approximately $825. A marked 44% increase in 1976 export earnings coupled with only a slight 3% increase in imports will enable Nicaragua to enjoy its first trade surplus ($45 million on an f.o.b. basis) since 1972. Although the country continues to have a current account deficit owing to net outlays for services, net capital movements should augment the trade surplus sufficiently to produce a $39 million increase in net international reserves. This development, too, is a reversal of Nicaragua's recent balance of payments deficits (See Table C).

1976 exports of cotton ($129 million) and coffee ($95 million), both of which command high prices, contributed greatly to the trade surplus. Export earnings from meat, seafood and sugar were also up, although depressed world sugar prices reduced anticipated income from the latter crop. Through the first eight months of 1976, Nicaragua had a trade surplus with most areas of the world (including a $16 million surplus with the U.S.), and, as usual, a trade deficit with its partners in the Central American Common Market (CACM) and with Venezuela, its crude oil supplier.

Nicaragua's economic recovery has not been even. Certain 1976 imports were considerably below last year's levels owing primarily to large inventories carried over from that year and a cautious "wait'and'see" attitude on the part of many in the private sector. Imports of fertilizers, industrial machinery, raw materials for the food processing industry, and construction materials were substantially below 1975 totals.

Although investment in the manufacturing sector grew by 60% (chiefly in textiles and chemical products) and the value of manufactures

1/ 1976 data cited herein are, unless otherwise indicated, based on such projections for the full year as were available in "Nicaragua: Situation y Perspectivas Económicas: Enero - Septiembre, 1976" prepared by Central Bank.

rose by 7% in real terms, private investment during 1976 grew by only 8.6%. Moreover, while GDP grew by 17% at current prices, few of those who profited by the export boom were inclined to make new investments. Indeed, local bankers complained of excessive liquidity for which suitable borrowers were few; they kept interest rates near legal maximum, however, The local construction industry continued to stagnate and relatively few farmers were prepared to make additional inputs to increase tehir crop yields despite high coffee and cotton prices.

Higher export prices improved the nation's terms of trade by approximately 27% but domestic inflation was substantially curbed. The official consumer price index rose less than 3% during the first nine months of 1976 while the money supply grew less than 6% and wages went up by about 5%. Domestic savings for 1976 are expected to increase by 130% and provide financing for about 80% of total capital investment ($363 million). As savings grew and private sector borrowing slackened relatively, commercial banks utilized some of their excess liquidity to reduce their foreign indebtedness during the first ten months of 1976, particularly short-term obligations, and also reduced their indebtedness to the government and the Central Bank.

1977 Economic Prospects:

Nicaragua's economic prospects for 1977 are, on the whole, suspicious. Its export earnings should increase by over $100 million. Coffee is expected to bring in between $160 and $170 million, thus exceeding for the first time in recent memory cotton earning (estimated at about $160 million). Income from exports of meat, and textiles should also grow substantially. The 1976 drought affected cotton production; only a 7% increase over the prior year's crop was registered and this will slow increase of 1977 export earning from cotton.

Nicaragua's expected 1977 balance of payments surplus ($38 million) will be slightly smaller than in 1976. Expenditures for invisibles, including debt services, will reduce the anticipated trade surplus. The nation's GDP should, nonetheless, approach $2,100 million by the end of the year, an estimated growth of 13.5% in current terms.

Among the steps the Nicaraguan government has announced that it is taking to improve economic development are: plans to develop geothermal power resources to eliminate dependence on thermal plants using imported oil within a decade; arrangements for over $200 million in new loans in 1976 to consolidate short-term commercial debts and to finance road-building equipment purchases, water resources studies, water and sewage projects, power development, and agro-industrial development; and programs to develop further the country's all important agricultural sector, including continuing assistance for campesinos. The government also plans to promote irrigation to counteract the effect of recurring droughts.

At the end of November, the government candidly announced the existence of coffee rust which threathens coffee crops not only in Nicaragua but throughout Central America. It simultaneously instituted strong measures to combat the blight, enlisting the support of the CACM and other coffee producing nations. It later imposed a $5 tax on each bag of exported coffee to finance the eradication program. The rust problem will not affect 1976 or 1977 coffee exports, but if uncontrolled, could reduce 1978 production.

Public Sector Finances

Revenues

Once again, in 1976, Nicaraguan Central Government current revenues rose over the prior year's collections but fell short of the year's goal.

1976 current revenues are estimated to be 1494.6 million cordobas compared to 1323.2 million cordobas in 1975, and to 1658.6 million cordobas originally projected in the 1976 budget (see Table A). 1976 actual revenues thus represent a 13% increase over 1975 actual collections, and 90% of expected 1976 collections.

Income tax was reformed in 1975 to be more progressive and more responsive to GDP growth, but 1976 collections were overstimated and underenforced. The 37% increase in 1976 income tax revenues over 1975 was significant, but still only three quarters of the hoped-for total. This was even more disappointing given the windfall gains of coffee exporters, and the excess

liquidity of private banks. (Coffee exporters however, are being taxed $5 per quintal in 1977 to fund the rust eradication campaign). Indirect revenues still represent three quarters of total tax collections, an indication of Nicaragua's regressive tax system, although this proportion has declined slightly since 1973. Sales tax performance in 1976 was 20% better than expected, due in part to the economic recovery.

Expenditures

Preliminary examination of the 1976 current and capital expenditures of the central government indicate that current expenditures were very close (and slightly under) target; and, total capital expentures were just slightly over those programmed (See Table B). Implementation of real investment was only 74% of the target level, due largely to project delays, but additional capital transfers to public banks and autonomous agencies more than compensated for the real investment shortfall.

Projected 1977 Revenues and Expenditures

The 1977 Budget projects 1,695.2 million cordobas or a 10.9% increase in current revenues (including recuperations and earmarked taxes) and total expenditures of C$2,428 million, C$1,413 million (or 58%) of which are current. The resulting C$732 million deficit is to be financed by C$676 million in foreign borrowing (83% of the total deficit) and the rest in internal credit. This latter item includes borrowing from the Social Security System (C$56 million) and authorization to issue bonds, essentially a balancing item which is not likely to be used unless and until actual shortages occur. The 1977 programmed expenditures represent a 17% increase in current and 1% in capital expenditures over 1976 (See Table B).

Public debt servicing is diverting an even greater shcre of 1977 capital budget than in 1976 (22% vs. 18%). See the discussion in Section IV for additional information on the public debt.

TABLE A

NICARAGUA: CENTRAL GOVERNMENT REVENUES
(C$ Millions)

	Actual 1975	Budget 1976	Preliminary Actual 1976	Budget 1977
1. Total Current Revenues	1312.9	1658.3	1528.3	1695.2
2. Tax Revenues	1151.2	1431.6	1316.2	1471.3
A. Direct Taxes	265.2	427.6	345.4	375.0
Income Tax	175.2	322.4	240.4	255.2
Property Tax	90.0	105.2	105.0	119.8
B. Indirect Taxes	858.0	971.4	970.8	1096.3
Import Tax	344.6	406.0	347.7	390.6
Export Tax	6.9	7.8	6.3	11.0
Sales and Excise	506.5	557.6	676.8	694.7
3. A. Non-tax Revenues	119.9	146.3	137.0	105.1
B. Recuperations	14.2	50.2	19.2	70.0
4. Current Transfers	4.6	5.2	12.4	8.0
Capital Transfers			14.6	7.7
5. Earmarked Taxes	23.0	24.9	28.9	33.1

SOURCES: 1975 and Budget 1976 - USAID Nicaragua: Current Economics Situation
1976 and 1977 Budget - Ministry of Finance 1977 Budget Document

TABLE B

NICARAGUA: CENTRAL GOVERNMENT BUDGET
(C$ Millions)

		1975	Budget 1976	Actual* 1976	Budget 1977
A.	Current Revenues	1323.2	1658.3	1528.3	1695.2
B.	Current Expenditures	1130.1	1234.2	1203.1	1413.3
C.	Savings on Current Account (A-B)	193.1	424.1	325.2	281.9
D.	Capital Expenditures	963.7	989.0	1001.8	1014.3
	Real Investment	(332.0)	(414.9)	(308.5)	(469.5)
	Financial and Indirect Investment**	(506.2)	(393.6)	(513.0)	(316.4)
	Amortization of Debt	(125.5)	(180.5)	(180.3)	(228.4)
E.	Total Expenditures (B+D)	2093.8	2223.2	2204.9	2427.6
F.	Additional Resources Needed to Finance Investment (D-C)	770.6	564.6	676.1	732.4
G.	Sources of Funds	644.6	505.5	576.8	957.2
	Debt to INSS	48.8	51.4	51.4	56.5
	Other Internal Borrowing***	-	102.3	-	225.0
	External Borrowing	595.8	351.8	525.4	675.7
H.	To be covered by Cash Reserves	126.0	59.1	99.3	(224.8)

SOURCES: 1975 USAID May 1976 Report Nicaragua: Current Economic Situation
1976-1977 Budget - Ministry of Finance Budget
1976 Preliminary Actuals - Central Bank. Situation y Perspectivas
Enero-Septiembre 1976 and 1977 Program Budget, Ministry of Finance

TABLE C

NICARAGUA: BALANCE OF PAYMENTS
(US$ Millions)

		1974	1975	1976*	1977**
A.	Balance on Current Account	-256.7	-189.4	- 64.0	- 72.5
	Exports (FOB)	379.6	375.9	541.2	651.4
	Imports (FOB)	-540.2	-479.3	-496.2	-591.1
	Net Services	-111.6	- 99.5	-120.5	-143.8
	Ne Transfers	15.5	13.5	11.5	11.0
B.	Ptivate Capital	58.1	44.5	15.4	27.9
	Irvestment	13.8	13.0		
	Loan Drawdowns	9.1	10.0		
	Amortization	- 4.0	- 6.5		
	Suppliers Credit	39.2	28.0		
C.	Official Capital	173.4	110.9	95.7	83.1
	Loan Drawdowns	174.4	156.9		
	Amortization	- 20.3	- 20.9		
	Other, Incl. Withdrawals or Deposits Abroad	19.3	- 25.1		
D.	Errors and Omissions	- 13.7	- 7.3	- 7.4	-
E.	Balance of Payments	- 38.9	- 31.7	39.7	38.5
F.	Change in Net Reserves (-) equals Increase	+ 38.9	+ 31.7	+ 39.7	+ 38.5

* Preliminary
** Projected

SOURCE: Central Bank, Perspectivas, P. 20 and later estimates

PROGRAM BENEFICIARIES

Although this project in and of itself will only serve two specific regions of Nicaragua, it is expected that similar benefits will ultimately accrue to a more comprehensive segment of the total population as the project activities are replicated. Such an expected spread effect will benefit primarily an estimated 1.1 million children and youth who now comprise the 0 - 14 year old age group and who will either seek education and/or training in the next five years or who are now already moving through the educational system in one form or another. This spread effect will occur as more relevant primary level curricula and learning materials are developed, and as more effective instructional, technology and educational delivery and management systems are organized, tested, and installed for rural populations under this project.

The Rural Poor in Nicaragua: Of the total population of 2.2 million people, 1.2 million of these are classified as rural. The rural areas are traditionally those which receive only minimal services and benefits of public sector institutions. It has been estimated that of the 1.2 million rural people, over 900,000 are classified as being rural poor, receiving an average annual per capita income of $120 or less. This group is composed of small subsistence farmers, agricultural and rural laborers, the rural employed and underemployed, and their families. The greater portion of this group has only limited - if any - access to the benefits of public services and facilities, including educational services. The average poor family has six members with all of the able-bodied usually working whenever possible to bring in additional cash or home production necessary for survival.

Rural Sector planners have estimated that a minimum diet for a family of six would cost 24 córdobas (about $3.45) per day. However in the rural areas, the lowest 50 percent of families earn only about ten córdobas per day on the average. The next 30 percent of the families average only 28 córdobas per day, just enough to cover a basic diet if no emergencies occur. It is estimated that over 50 percent of the children in the 0-5 year old group suffer some degree of protein-calorie malnutrition. Although urban surveys indicate a labor force of about 65 percent male and 35 percent female, in the rural areas, women share a great deal of the work burden in the fields during harvest times and in the home and community during non-peak farm production seasons. Children also participate in family production in towns often in preference to education or training even if such opportunities exist. The Ministry of Health estimates that less than 20 percent of Nicaragua's rural population has access to adequate health facilities.

In addition to persistent problems of poverty and lack of access to adequate social services, the changes of the rural poor entering into more gainful employment are presently limited due to labor force/employment trends. In 1971, an estimated 825,000 of the total population were in the category of potential labor force with 646,000 of these considered to be economically active. 189,000 listed as unemployed of which 174,000 were without skills. Of these, 119,000 were living in rural areas, and 73,000 were between the ages of 10 and 14 years and not in school. Employment opportunities have traditionally grown more slowly that the potential labor force; the employed population grew only .5 percent annually between 1963-71 while the labor force expanded at a rate of 3.4 percent. The consistent lack of employment opportunities (being addressed under INVIERNO programs) coupled with limited education, literacy levels, and skills training produces despair and perpetuation of poverty for the rural poor. The rural poor in particular have a built in constraint to achieving productive roles in the economy because of low levels of education in rural areas. Lack of opportunities for basic education in rural areas further constraints the alternative areas for which a person can seek employment and self-improvement to increase family and personal income and to break the poverty cycle in which so many of the rural poor find themselves.

The preceding descriptions have outlined general conditions of the more than 900,000 rural poor in Nicaragua, many of whom will benefit both directly and indirectly from this project. The following represent a more discrete description of the more than 400,000 people in Regions II and V who comprise the more direct beneficiaries of this Education Sector Program.

In Region II, about 20 percent of the school age population (ages 7 - 19) are enrolled in school. In Region V, which is distinctly more rural than Region II and where project activities will be initiated, only 6 percent of the total estimated school age population are in school or training. It is estimated that the rural population of all ages in Regions II and V totals more than 520,000 people or somewhat less than half of Nicaragua's total rural population. Taking the 5 - 24 year old age group from this total, there are over 260,000 who could possibly benefit from this project. This is a prime target population, both from within the formal and non-formal education context for initiating necessary improvements in the existing educational infrastructure and the development of effective models for the more efficient delivery of relevant educational services to the rural poor. Within this 5 - 24 year old age group, there are a total of 113,000 potential project beneficiaries in Region II and another 147,000 in Region V. The target group for programs in rural primary education specifically would number over 160,000; and there are an additional 60,000 adolescents and youth in the 15 - 19 year

old age group who are potential beneficiaries from rural poor families in the target regions.

From this possible beneficiary group, it is estimated that over the life of this project and its component activities, more than 160,000 will benefit directly. Three primary beneficiaries groups have been a categorized and are quantified as follows:

1. The Rural Adolescent Centers and the Rural Family Education Centers will benefit over 11,000 youth and young adults.

2. The Rural Primary Education and Comarca School Programs will benefit over 93,000 children and youth, most of whom are in the 5 - 14 year old age group.

3. The Accelerated Basic Education Program will benefit a total of 55,000 youth, young adults, and adults who are not in school or training.

More than 1,300 rural communities will be expected to participate in education and community development decision making which stands to affect their status and welfare through local school committee organization and their coordination with other rural development programs now in effect. Four hundred new comarca school units are planned to be constructed under this project to provide facilities to expand access opportunities for 20,000 rural children per year. The selection of 400 members from the designated comarca school communities to serve as community teachers in these communities will benefit both the individuals selected and those communities who will have local teachers for the first time. The curriculum development and radio education components will provide more relevant curricular models, technology, expertise, experience and programming with high replicability potential for application to programs to be developed in other regions to better serve the educational/training needs of the rural poor.

ANNEX R

COMPONENT TIMETABLES

a. Component One The following component activities are summarized and listed in order in which they are expected to occur.

Description of Activity	Est.
Project Agreement Signed.	Sept 30, 1977
Formal announcement by the GON that the administrative structure of the MPE will be re-organized.	November 1977
MPE counterparts for technical assistance personnel are named and provided office space.	Feb. 1978
Radio technicians sent for long-term training.	March 1978
Technical assistance personnel in management, systems and evaluation arrive.	May 1978
Special studies begin.	May 1978
MPE takes positive action on the recommendations of the Administrative Study.	June 1978
Organizational Structure of the MPE revised, School Supervisory System modified, and materials distribution.	Dec. 1978
Policy Rules Procedures Handbook formally adopted and being used.	June 1979
School Maintenance Plan developed, accepted and implemented.	June 1979
Revised interdepartmental communication and records system.	Sept. 1979

Component Two The following Component Two activities highlight the major steps in the execution of this part of the project. Dates in this as in all other project components are based on the assumption that the project is authorized by March 31, 1977, the Agreement signed by May and initial Conditions Precedent to Disbursement have been met by June 1st.

Description	By
MPE staff hired and chief of Community Development Section named.	January 1978
Arrival of Community Development Advisor.	May 1978
Four MPE promoters are hired and trained for two months by the MPE staff and foreign expert.	July/August 1978
MPE promoters are placed in Region V with support materials.	September 1978
Initial 60 LSCs functioning.	January 1979
210 LSCs functioning	January 1980
One MPE promoter transferred to Region II.	January 1980
510 LSCs functioning.	January 1981
1,010 LSCs functioning.	January 1982
1,400 LSCs functioning.	November 1982

d. Component Three

The following activities indicate the major steps in the execution of this part of the loan. Dates are based on the premise that Conditions Precedent to Disbursement have been met.

Description	By
MPE staff ready in the following sections: Curriculum, Radio and TV, Primary, Materials, Agriculture Education, Community Development (Adult and Non-Formal) Interdepartmental conference held.	April 1978
Arrival of the technical assistance team.	May 1978
Curriculum for workshop for training staff of NEC, normal school teachers, supervisors, and master teachers completed.	June 1978
Curriculum for workshop for regular teachers, comarca teachers, and ABE teachers completed	August 1978
Arrival of two curriculum evaluators.	November 1978
Math curriculum broadcasts and materials in use in 60 rural primary classrooms (grade 1).	December 1978
New curriculum broadcasts and materials in use in 144 primary classrooms (grade 1) 40 adult classes and five (5) CFER/EAC schools (six (6) subject areas)	
Evaluation of curriculum, grade 1 adult education and CFER/EAC schools (six subject areas).	November-December, 1979

Description	By
New curriculum broadcasts and materials in use in 644 primary classes (grades 1 - 3), 120 adult classes, and 11 CFER/EAC schools (six subject areas).	February, 1980
60% of primary students enrolled successfully complete tests for advancement to next grade; 50% of adults enrolled successfully complete literacy tests.	November, 1980
New curriculum broadcasts and materials in use in 1,294 primary classrooms (grades 1 - 4), 400 adult classes, and 17 CFER/EAC schools.	February, 1981
50% of primary students enrolled successfully complete three years of primary work in four years or less.	November, 1981
Evaluation of curriculum as used in 1,294 primary classrooms, 400 adult classes and 17 CFER/EAC schools.	November - December, 1981
New curriculum broadcasts and materials in use in 1877 primary classrooms, 1,100 adult classes, and 17 CFER/EAC schools.	February, 1982
Year-end testing of primary children, adult classes, CFER/EAC schools using new curriculum.	November, 1982

Component Four

Description	FY
Technical Assistance for Training Component arrives.	August 1978
Completion of Training for 12 Teacher Trainers and 10 Supervisors (2 workshops)	October 1978
Completion of Initial Training of 60 Primary Teachers (3 workshops)	October 1978
Completion of Teacher and Supervisor Training (18 workshops)	October 1979
Completion of 47 Teacher and Supervisor training workshops for the year.	November 1980
Completion of 103 teacher and supervisor training workshops	November 1981
Completion of 163 teacher and supervisor training workshops	November 1982

ANNEX S

REGION II - PUBLIC SCHOOLS IN USE IN 1976 IDENTIFIED BY BUILDER

Department/Municipio	USAID	CARE	CARITAS	MPE (PEMEN)	COMMUNITY	OTHER	TOTAL
Carazo/Jinotepe	0	2	0	2	15	0	19
Carazo/Diriamba	0	14	0	0	14	0	28
Carazo/San Marcos	0	1	0	2	12	1	16
Carazo/Santa Teresa	0	9	0	1	13	0	23
Carazo/Dolores	0	0	0	1	1	0	2
Carazo/La Paz de Oriente	0	0	0	1	2	0	3
Carazo/La Conquista	0	0	0	0	8	0	8
Carazo/El Rosario	0	0	0	0	1	0	1
Granada/Granada	2	4	0	2	10	1	19
Granada/Nandaime	0	0	0	3	18	0	21
Granada/Diriomo	0	4	0	0	7	1	12
Granada/Diriá	0	3	0	0	2	0	5
Managua/Tipitapa	1	1	2	8	12	0	24
Managua/San Fco. del Carnicero	0	0	3	0	2	0	5
Managua/Managua, D.N.	10	1	0	9	16	6	42
Managua/San Rafael del Sur	0	1	6	3	24	2	36
Managua/El Carmen	0	0	0	2	9	0	11
Masaya/Masaya	10 w/CARE	15 (2 w/AID)	0	1	5	0	29
Masaya/Masatepe	1	4	0	0	1	1	7
Masaya/Niquinomo	0	5	0	0	0	0	5
Masaya/Nindirí	1	1	0	0	5	1	8
Masaya/La Concepcion	9	3 (1 MPE)	0	1 w/CARE	0	1	13
Masaya/Nandasmo	1 w/MAG	1	0	0	0	1 w/AID	2
Masaya/Catarina	0	0	0	0	1	0	1
Masaya/Tisma	2	0	0	0	1	0	3
Masaya/Ticuantepe	0	0	0	2	1	0	3
TOTAL:	37 (3 w/ Others)	69(3 w/ Others)	11	38 (1 w/CARE)	180	15(1 w/ A.I.D.)	346

REGION V - PUBLIC SCHOOLS IN USE IN 1976 IDENTIFIED BY BUILDER

Cont. . .

Department/Municipio	USAID	CARE	CARITAS	MPE (PEMEN)	COMMUNITY	OTHER	TOTAL
Esteli/Esteli	0	2	0	6	22	3	33
Esteli/Pueblo Nuevo	6 w/MPE	3	0	8 (6 w/AID)	11	5	26
Esteli/La Trinidad	0	0	0	4	21	2	27
Esteli/Condega	2 w/MPE	2	0	5 (2 w/AID)	14	1	22
Esteli/San Juan de Limay	0	0	0	2	15	0	17
Jinotega/Jinotega	0	0	0	10	58	2	70
Jinotega/San Rafael del Norte	1	0	0	0	11	2	14
Jinotega/La Concordia	0	0	0	1	7	1	9
Jinotega/Yali-San Sebastian	0	1	0	1	14	0	16
Matagalpa/Matagalpa	0	4	0	18	26	11	59
Matagalpa/Dario	12 w/MPE	2	0	20 (12 w/AID)	9	0	31
Matagalpa Esquipulas	0	0	0	6	4	0	10
Matagalpa/Muy Muy	0	0	0	3	2	0	5
Matagalpa/Matiguas	0	0	0	3	9	0	12
Matagalpa/Rio Blanco	0	0	0	2	2	0	4
Matagalpa/San Ramon	0	1	0	9	8	0	18
Matagalpa/San Dionisio	1	0	0	2	2	0	5
Matagalpa/Terrabona	0	0	0	4	5	0	9
Matagalpa/San Isidro	0	2	0	3	0	0	5
Matagalpa/Sebaco	1 PEMEN	2	0	3 w/AID	6	0	10
TOTAL:	23 (21 w/ GON)	19	0	110 (20 w/AID)	246	27	403
GRAND TOTALS: (Regions II and V)	60 (24 w/ Others)	88 (3 w/ Others)	11	148 (20 w/AID, 1 w/CARE)	514	42 (1 w/ AID)	746

NOTE: Not all these schools have teachers.

SOURCE: Ministry of Public Education, 1976.

Disbursement Schedule and Uses and Source of Funds

Component One

Administrative Reform and Management Improvement

Uses of Funds	TOTALS		1st. Year		2nd. Year		3rd. Year		4th. Year		5th. Year	
	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON
Technical Assistance	410,000	55,000	105,000	15,000	200,000	-	105,000	40,000	-	-	-	-
Special Studies	100,000	-	100,000	-	-	-	-	-	-	-	-	-
Training	240,000	-	50,000	-	95,000	-	95,000	-	-	-	-	-
Commodities	100,000	175,000	50,000	-	50,000	75,000	-	100,000	-	-	-	-
Operating Costs	75,000	600,000	25,000	200,000	25,000	200,000	25,000	200,000	-	-	-	-
T O T A L S	925,000	830,000	330,000	215,000	370,000	275,000	225,000	340,000	-	-	-	-
AID Financing:												
Grant	585,000	-	230,000	-	225,000	-	130,000	-	-	-	-	-
Loan	340,000	-	100,000	-	145,000	-	95,000	-	-	-	-	-

Disbursement Schedule and Uses and Sources of Funds

Component Two

Integrated Community Development

Uses of Funds	TOTALS		1st. year		2nd. Year		3rd. Year		4th. Year		5th. Year	
	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON
Technical Assistance	105,000	15,000	50,000	10,000	55,000	5,000	-	-	-	-	-	-
Vehicles	92,000	-	60,000	-	32,000	-	-	-	-	-	-	-
Operating Costs	-	361,000	-	35,100	-	82,000	-	81,280	-	81,280	-	81,280
T O T A L S	197,000	376,000	110,000	45,100	87,000	87,100	-	81,280	-	81,280	-	81,280
AID Financing												
Grant	105,000	-	50,000	-	55,000	-	-	-	-	-	-	
Loan	92,000	-	60,000	-	32,000	-	-	-	-	-	-	

Disbursement Schedule and Uses and Sources of Funds

Component Three

Curriculum Development and Related Materials Production

Uses of Funds	Totals		1st. Year		2nd. Year		3rd. Year		4th. Year		5th. Year	
	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON
Technical Assistance	1,405,000	165,000	570,000	30,000	585,000	45,000	250,000	30,000	-	30,000	-	30,000
Materials	1,740,000	1,684,000	197,000	-	363,000	-	358,000	119,000	449,000	449,000	373,000	1,116,000
Operating Costs	-	1,747,000	-	335,000	-	353,000	-	353,000	-	353,000	-	353,000
T O T A L S	3,145,000	3,596,000	767,000	365,000	948,000	398,000	608,000	502,000	449,000	832,000	373,000	1,499,000
AID Financing												
Grant	200,000	-	-	-	-	-	200,000	-	-	-	-	
Loan	2,945,000	-	767,000	-	948,000	-	408,000	-	449,000	-	373,000	

Disbursement Schedule and Uses and Sources of Funds

Component Four

Training for Supervision and Training

Uses of Funds	Totals		1st. Year		2nd. Year		3rd. Year		4th. Year		5th. Year	
	AID *	GON	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON
Technical Assistance	220,000	20,000	110,000	10,000	110,000	10,000	-	-	-	-	-	-
Materials and Equipment	42,000	-	19,400	-	9,400	-	4,400	-	4,400	-	4,400	-
Operating Costs	-	1,770,000	-	52,000	-	124,000	-	275,000	-	545,000	-	774,000
T O T A L S	262,000	1,790,000	129,400	62,000	119,400	134,000	4,400	275,000	4,400	545,000	4,400	774,000

* All Loan Funded

Disbursement Schedule and Uses and Sources of Funds

Component Five

Strengthening Rural Education Delivery System

Uses of Funds	Total		1st. Year		2nd. Year		3rd. Year		4th. Year		5th. Year	
	AID*	GON	AID	GON	AID	GON	AID	GON	AID	GON	AID	GON
Activity A												
Construction	1,970,000	-	-	-	39,000	-	394,000	-	591,000	-	945,000	-
Operating Costs	-	866,000	-	-	-	9,840	-	108,240	-	255,840	-	492,000
Activity B												
Repair and Reconstruction	-	795,000	-	-		90,000	-	180,000	-	225,000	-	300,000
Supervision	100,000	-	-	-	20,000	-	25,000	-	25,000	-	30,000	-
Operating Costs	-	847,000	-	-	-	90,000	-	252,000	-	252,000	-	252,000
Activity C												
Furnishings	398,000	-	-	-	30,000	-	51,000	-	137,000	-	180,000	-
Activity D												
Maintenance	-	955,000	-	-	-	225,000	-	230,000	-	245,000	-	255,000
Activity E												
Garden Kits	188,000	-	-	-	20,000	-	48,000	-	60,000	-	60,000	-
Vehicles	287,000	-	98,000	-	80,000	-	108,000	-	-	-	-	-
Operating Costs	-	1,042,000	-	91,000	-	177,000	-	258,000	-	258,000	-	258,000

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* All Loan Funded

Disbursement Schedule and Uses and Sources of Funds

Component Five

Strengthening Rural Education Delivery System

(continued)

Uses of Funds	Total AID	Total GON	1st. Year AID	1st. Year GON	2nd. Year AID	2nd. Year GON	3rd. Year AID	3rd. Year GON	4th. Year AID	4th. Year GON	5th. Year AID	5th. Year GON
Activity F												
Construction	-	1,080,000	-	-	-	-	-	360,000	-	360,000	-	360,000
Supervision	120,000	-	-	-	-	-	40,000	-	40,000	-	40,000	-
Equipment and Furnishings	188,000	-	-	-	-	-	63,000	-	63,000	-	64,000	-
Operating Costs	-	636,000	-	-	-	-	-	106,000	-	212,000	-	318,000
Activity G												
Land	-	20,000	-	-	-	10,000	-	10,000	-	-	-	-
Construction	-	40,000	-	-	-	20,000	-	20,000	-	-	-	-
Equipment	610,000	-	24,000	-	265,000	-	257,000	-	32,000	-	32,000	-
Operating Costs	-	927,000	-	8,000	-	19,000	-	180,000	-	360,000	-	360,000
TOTALS FOR COMPONENT FIVE	3,861,000	7,208,000	122,000	99,000	454,000	640,840	986,000	1,704,240	948,000	2,167,840	1,351,000	2,595,000

Dollar Costs/Local Currency Cost for AID

FINANCED INPUTS *

(000s of US$)

	DOLLARS	CORDOBAS	TOTAL
Input 1	200	725	925
Input 2	197	-	197
Input 3	1,405	1,740	3,145
Input 4	262	-	262
Input 5	1,273	2,588	3,861
TOTAL	3,337	5,053	8,390

* Grant included

ANNEX G

UNCLASSIFIED

MPE Replication Costs
(000s US$)

Activity		Amount
Administrative Reform		N/A
Integrated Community Development		515
Curriculum Development and Materials		3,948
Training for Supervision and Teaching		2,058
Strengthening the Rural Education Delivery System		
(1)	Comarca Schools	5,387
(2)	Improving Existing Schools	2,887
(3)	School Furnishings	444
(4)	School Maintenance	1,086
(5)	Education Support and Service	1,723
(6)	Rural Adolescent Center	2,525
(7)	Radio Education	6,358
	Sub-Total	20,410
	Total	26,931

The above amounts also include all personnel and operating costs for the 5 year replication period. After this 5 year period, the annual expenses associated with replication would amount to $5,235,000 (unadjusted for inflation).

It is anticipated that the above replication costs would be disbursed in the following manner.

MPE Replication Costs
(000s US$)

Year	Amount
6	2,080
7	4,331
8	5,604
9	7,273
10	7,643
Total	26,931

(d) Summary. To illustrate the total financial impact on the MPE, the following table shows the above described project costs, recurring costs and replication costs. As noted previously, the amounts for recurring costs and replication costs are unadjusted for any inflation which may occur after the fifth project year.

MPE Financial Impact Summary
(000s US$)

YEAR	Project Cost	Recurring Cost	Replication Cost	Total
1	433	-	-	433
2	1,430	-	-	1,430
3	2,076	-	-	2,076
4	3,343	225	-	3,568
5	4,260	225	-	4,485
6		4,608	2,080	6,688
7		4,608	4,331	8,939
8		4,608	5,604	10,212
9		4,608	7,273	11,881
10		4,608	7,643	12,251
11		4,608	5,235	9,843
12		4,608	5,235	9,843
Total Years 1 - 12	11,542	32,706	37,401	81,649

ANNEX V

UNCLASSIFIED

STANFORD RADIO MATH PROJECT
COST ANALYSIS METHODOLOGY

In the latest available cost analysis of this project, Leslie and Jamision 1/ measure program costs so that the annual total cost (TC) of using radio technology is a function of fixed and variable costs as follows:

$$TC = F + V_h \cdot H + V_n \cdot N$$

Where:

F = all annualized starting costs, project administration costs and research costs.

V_n = the cost of transmitting a 1/2 hour lesson once plus the cost of producing the lesson stated in annual terms.

H = the number of 1/2 hour broadcasts presented per year.

V_n = the cost of supervising and assisting an enrolled student per year.

N = the number of students enrolled for one year in the program.

Costs were annualized at 7.5% where necessary. Leslie and Jamision's cost estimates are as follows for the Mathematics Projects:

F = \$91,800 per year; V_h = \$176 per year; V_n = \$3.83 per year.

Total cost for any given program is then:

$$TC = \$91,800 + \$176\ H + \$3.83\ N$$

1/ Leslie, Joanne and Jamision, Dean: Applications of Instructional Technology in Latin America: Cost and Effectiveness, Dec. 1976.

Engineering Analysis

1. Comarca Circuits

Following analyses of construction costs and data gathered in field trips to the regions where the Comarca schools will be built, it appears that a self-help construction program using local building materials, to the greatest extent possible, would serve the best interests of the program.

It is proposed that CARE be contracted by the MPE to manage the self-help construction, with CARE working with the local school committees, hiring the local skilled labor necessary, arranging for regional training programs in the development of local construction materials, purchasing all materials, providing for orderly deliveries of purchases, and supervising the construction of the 400 Comarca schools and the 100 teachers' houses proposed under this project.

The self-help concept will serve three primary functions: (1) substantially lower the construction costs, (2) involve the community in the development of its own interests, and (3) provide some elementary training in construction techniques at the community level that will be useful in the maintenance of the schools.

CARE has already built some 90 schools in Regions II and V using volunteer labor, and this experience in the target area, plus experience in self-help programs makes CARE the ideal candidate for organizing, implementing and supervising the Comarca School Circuits project. It would be necessary that CARE increase its staff by 8 to 10 employees during the life of the project through transfer of direct-hire personnel to Nicaragua and through the contracting of Nicaraguan engineers and technicians.

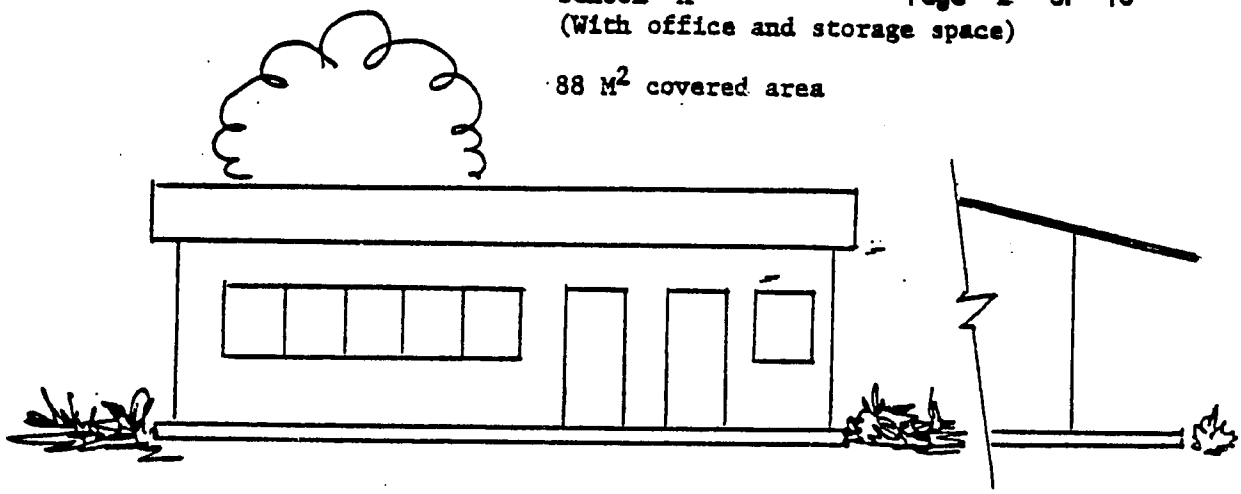
Design and Construction

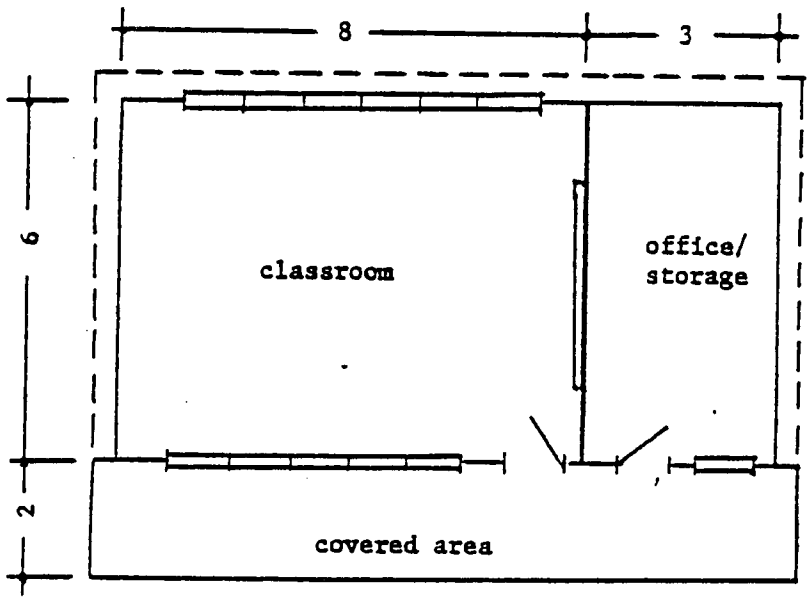
For both the schools and the master teacher houses, the basic structure will be either of asphalt stabilized adobe or locally made burnt brick, with reinforced concrete foundations, common clay tile flooring laid on a sand base, wooden rafters, corrugated asbestos cement roofing sheets, prefabricated wooden louvered windows, and plywood doors. Each school will have two latrines and the teacher's house, one. Water will be provided from wells and other delivery systems under current and future programs of the Ministry of Health and INVIERNO.

The sketches on the following three pages indicate the proposed sizes and arrangements of the buildings to be constructed under self-help program.

SCHOOL "A"
(With office and storage space)

88 M^2 covered area





Materials:

Foundations	Reinforced concrete
Floors	Red clay tiles on sand base
Roofing	Asbestos cement sheeting
Trusses	Local hard woods
Walls	Asphalt stabilized adobe, reinforced with locally gathered cane or bamboo
Windows	Prefabricated louvers of hardwoods
Doors	Plywood

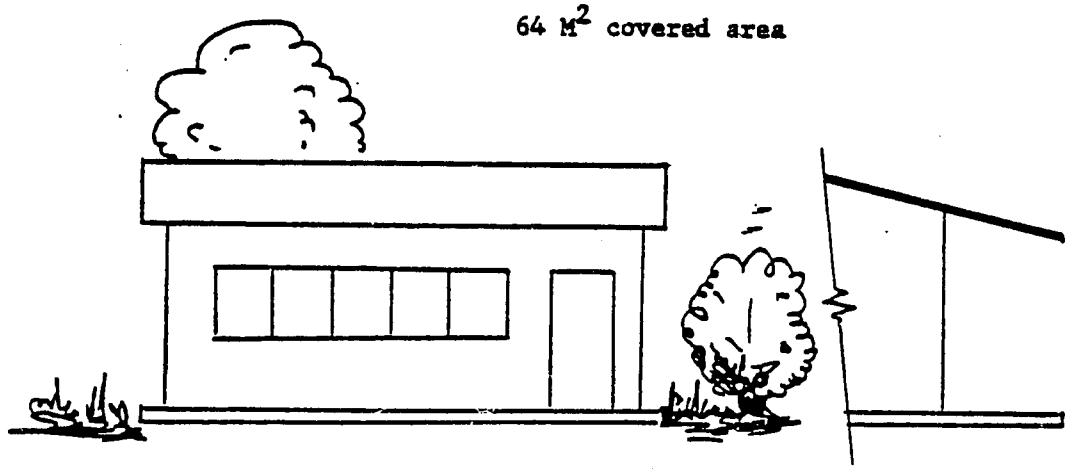
With:

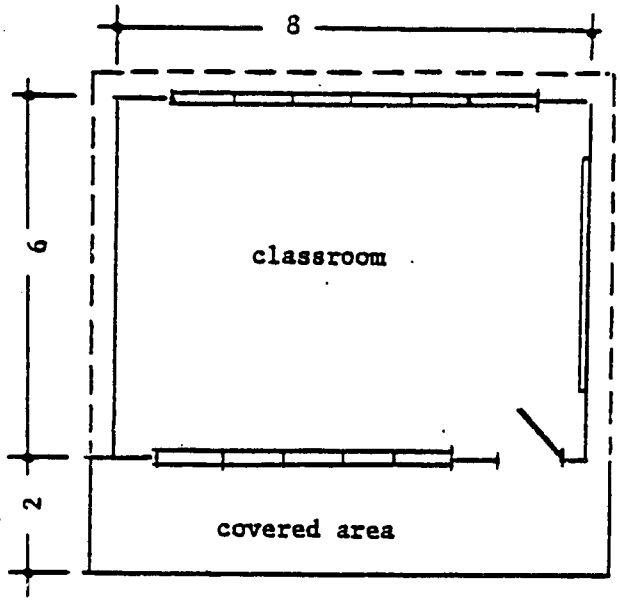
- Chalkboard
- Storage cabinets and shelving
- Two latrines

Estimated cost with self-help program - - - - - - - - - $3300

SCHOOL "B"

64 M^2 covered area



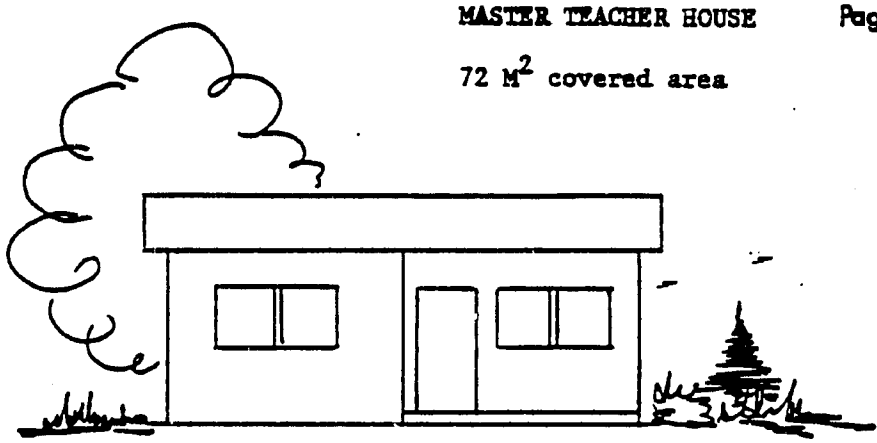


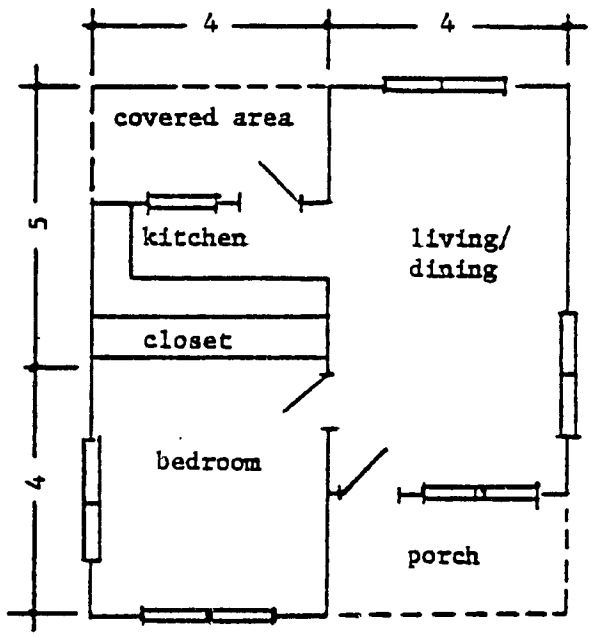
Materials:
Same as for School "A"

Estimated cost with self-help
program - - - - - - - - - - - $2,600

MASTER TEACHER HOUSE

72 M^2 covered area





Materials

Same as for School "A"

Estimated cost with self-help
program - - - - - - - - - $3700

School "A" has one 48 square meter classroom with separate office and teaching materials' storage area. In some villages, the office and storage area will be shared by the community Health Promotor (a trained para-medic) to serve as a small office and storage space for such emergency health supplies as simple medicines, stretcher, splints, sutures, etc. A six-foot wide covered porch runs along one side of the classroom as protection against the heavy rains. Additional classrooms may be added as required by the student population. Permanently installed equipment contemplated is an eight-foot blackboard for each classroom and shelves in both the classroom and office/storage area.

School "B" has only the 48 square meter classroom with covered porch but without office/storage.

The suggested design for the master teacher house provides for minimum living space, with adequate closets in the bedroom, some cabinets in the kitchen and a covered outdoor space attached to the kitchen for cooking with charcoal or open wood stoves in accordance with local custom. In most cases, it is anticipated that water will be carried to the teacher's house from the school-yard well.

The Peruvian experience in asphalt-stabilized adobe reinforced with cane or bamboo as a construction material provided a model for the use of on-site materials. The almost universal availability of adobe soils to be combined with an average of seven 50-gallon drums of asphalt or road oil per school reduces to the minimum the problem of transportation to remote rural areas. The finish will be a thin mixture of concrete and water to be applied as paint.

For best results in mixing the adobe soils with asphalt, 20 small gasoline operated mortar mixers will be purchased along with 20 "CINVARAM" hand-operated block making machines. These two pieces of equipment plus some hand tools will form an equipment package to be used at each school site for approximately ten days during which time all the blocks needed for a school construction can be made. Twenty adobe block making projects will be in operation simultaneously under the supervision of trained, skilled laborers. An estimated $30,000 will be reserved as capital investment for the equipment packages.

In some areas, red burnt brick is found. The bricks are hand formed and fired in small caves dug into hillsides using charcoal as fuel. Such little brick factories are usually operated by one man or one family. Depending on availability, the local burnt brick could be competitive in price with adobe blocks; however, the brick would require reinforced concrete columns, cement mortar, and the construction of forms for pouring columns.

During the construction phase, it is proposed that three skilled workmen, a job foreman, a bricklayer, and a carpenter, be hired for appropriate periods of time. The community will furnish 4 to 5 volunteer laborers daily during the approximately 10-week life of the construction period.

Wooden louvered windows are to be pre-fabricated, contracted to a regional carpentry shop since the window fabrication requires tools and skills normally not found in villages.

Other construction materials considered for the project were reinforced concrete, concrete blocks, pre-fabricated steel panels, laminated asbestos panels as well as traditional wood structures. These alternatives were discarded due to cost, problems in transportation, and the relatively sophisticated skills required for their use.

2. CFER and EAC Centers

To be located in the vicinity of market towns, the CFER and EAC centers will serve a geographic radius of at least 25 kilometers. It is assumed that the size of these centers, the comparative complexity of design, and the large geographic area from which students will be drawn preclude the use of self-help for construction. Therefore, these centers will be built by private construction companies and supervised by private consulting firms. Local construction firms (i.e. those outside of Managua) will be encouraged to participate in the construction of these centers. With only 2 CFER's and 2 EAC's programmed for construction each year for 3 years, bids will be asked for single centers and/or for package bids of one to six centers.

Designs, materials, and construction methods for these centers are completely different from the Comarca schools due to the nature and intended functions as described in Part II, G. Experience to date by FUNDE and the MPE has shown the existing designs to be suitable, and their use under this project should require little, if any, modification.

Although the designs for both these Centers call for extensive use of wood, there are some basic and noteworthy differences. The CFER design includes a roof structure composed of wood trusses topped by corrugated asbestos sheets. The EAC design uses structural steel trusses composed of back-to-back channels with single channel shapes as purlins. Corrugated asbestos sheets are also used to top-out the roof. The EAC design utilizes I-Beams as columns, whereas CFER utilizes timber. Both require reinforced concrete pedestal footings. Both call for the use of 3/4" x 12" wood sheathing as exterior finish.

Sanitary facilities in the EAC Centers are provided by lavatories with flush toilets and septic tanks. The CFER Centers have latrines. Both require the installation of electricity.

The Ministry of Public Education (MPE) will continue to work closely with the Nicaraguan Development Foundation (FUNDE) in the construction and operation of the CFERs. This cooperation is coordinated by the Agricultural Education Office of the MPE. FUNDE is responsible for choosing the site and monitoring the construction of the CFER. The MPE, FUNDE and the Ministry of Agriculture are then responsible for providing the staff and materials for the centers' operation. This inter-agency relationship has worked well in the past and will continue to be encouraged under this project. Both the MPE and the Ministry of Agriculture will provide materials and staff for the EAC Centers.

The construction of the EAC and CFER Centers will be supervised by private A&E Firms. Experience shows that there are Nicaraguan consulting firms fully qualified to supervise this type of construction. Additionally, similar experience will be gained by certain firms now engaged under the A.I.D. Managua Reconstruction Loan. These firms would certainly be interested and included in requests for technical proposals. Proposals will be asked for construction supervision of one to six centers.

As mentioned earlier, it is planned that the CFER and EAC centers' construction be carried out by small, regionally based contractors as opposed to large Managua based firms, although Managua contractors will not be excluded from bidding. In comparison with many developing countries, Nicaragua is fortunate in having an adequate supply of competent construction firms. Among these are firms which have built CFER and EAC centers under contracts to FUNDE and the Ministry of Education.

3. Project Management and Administration

The overall responsibility for the infrastructure phase of the project will lie with the MPE, specifically, with the Ministry's Office of Extension and Improvement (PEMEN), a 13-man unit of engineers, architects, and administrative personnel, located in Managua. This is the same unit that was charged with the construction of 834 classroom units in support of Managua Reconstruction under the recently terminated A.I.D. Loan No. 524-L-027. Accomplishment of this Loan was not without a substantial number of associated management problems. However, some major personnel changes, including a new Minister and PEMEN Director, did take

place just prior to implementing the last 135 classrooms. The degree of improvement noted in PEMEN's operations during this last phase was significant.

The management and administrative load for this project will be somewhat compounded by the distance from Managua to the project sites; and, except for the CFER and EAC centers, the construction consists of isolated single classroom buildings, on up to 400 different sites. Such project conditions will pose some additional managment and administrative burdens on PEMEN's present staff. As implied in the Administrative Reform section of this paper, recruitment of qualified staff remains a problem for the MPE. It seems likely that a minimal increase in PEMEN's staff will take place within the time frame of this project.

However, by the time the construction phase of this A.I.D. loan begins, the construction activities of the World Bank loan, for which PEMEN also bears monitoring and supervision responsibility, will be phasing down, thereby releasing personnel for this project.

PEMEN's major work for the Comarca School Circuits will terminate with the contracting of CARE and the establishment of procedures for purchasing, materials storage, disbursements and reimbursements. Following these initial implementation steps for the Comarca Schools, PEMEN's responsibility will be reduced to monitoring and light supervision.

4. Maintenance. Two of the internal MPE constraints addressed in Part III of this document were (a) the poor utilization of existing facilities and lack of school maintenance and (b) an inefficient central organization and administration. In embarking on this much needed project, it was seen that the maintenance of proposed facilities would have to be undertaken, at least for the foreseeable future, through other means. The present MPE/A.I.D. strategy poses a solution to this real and potential problem by utilizing the Local School Committees as maintenance implementers. This self-help maintenance approach is a logical follow-on to the self-help construction, especially since the villagers will have received some training in building techniques through participation in the construction of their village school, and presumably a greater interest in maintaining a facility produced by community efforts.

To assist the school committees in carrying out routine maintenance, a maintenance fund will be established by the MPE (See Part III, 5). These funds will be available for the purchase of a small supply of necessary hand tools. Funds for the purchase of additional items, such as paint, hardware, and miscellaneous fixtures will

also be provided by the MPE's maintenance fund. To effect this, the MPE will introduce the necessary line item into its project related budget requests to the Executive Branch. This will be a Condition Precedent to any major construction under this loan.

The maintenance of the CFER and EAC Centers will be by FUNDE and the MPE, respectively. The potential maintenance situation with these centers are markedly different from those of Comarca. These use materials of construction which require more frequent maintenance activities. One might assume that maintenance by the MPE, with its already poor record, will not be affected. Yet, the centers actually stand the chance of being the best maintained facilities. As a place where job skills, including carpentry, are taught, the use of students supervised by faculty provides a reasonable and effective means to carry out the required maintenance activities. As in the case of the Comarcas, moreover, funds for the purchase of required related items will have to be provided by the MPE through project related budget requests to the Executive Branch. Again, this will be a Condition Precedent to the construction of these centers.

Estimated Construction Costs For 88 Square Meter School

Skilled Labor Foreman Bricklayer Carpenter	$ 1,200
Foundations	575
Floors - 88 M^2 Red Tile on Sand Base	200
Truss Hardware (Community provided wood)	30
Roofing - 130 M^2 Asbestos Cement Sheets	275
Doors - (2)	30
Windows - Pre-Fabricated Hard-Wood Louvers	400
Walls - Adobe stabilized with 350 gallons of RC-250 road oil - cane or bamboo reinforcement locally gathered	190
Varnish - Windows and Doors	15
Cement - Cement Wash for Walls	15
Hinges	5
Locks	20
Slide Bolts	15
Chalkboard	30
Storage Shelves and Cabinets	100
Latrines (2)	200
($37.50/$M^2$)	$ 3,300

Estimated Costs

Comarca School Circuits

(Self-Help Construction)

Schools - 400 at $3,300	$ 1,320,000
Contingency	130,000
Sub-Total:	$ 1,450,000
Supervision	150,000
Master Teacher Houses 100 x $3,700 (Includes $30,000 capital investment costs)	370,000
Total, Comarca School Circuits:	$ 1,970,000

SOCIAL ANALYSIS

The rural population of Nicaragua, numbering some 1.2 million, is composed largely of small subsistence farmers, agricultural and rural laborers, landless unemployed, and their families. These groups account for the seventy-seven perdent of rural people who earn less than $120 per year, and whose low income results in impoverished living conditions in crowded adobe or thatch shelters, with low education levels, and poor health and nutrition. Most have very little access to government services and truly live on the margin of society and the economy.

The project area, Regions V and II (excluding Managua) covers 22,915 square kilometers of land mass; an area nearly one and three quarters the size of El Salvador. According to Ministry of Economy estimates for 1974 approximately 700,000 people inhabited these two regions. Region V is predominantly rural with 71.4% of the population living in rural areas. Region II has 51.6% of its population in urban areas while 48.4% are classified as living in a rural environment. The population growth rate is estimated at 3.37% in Region II, which is higher than the national average, and about 1.70% in Region V. Rural to urban migration accounts for the significant difference in the two rates.

Project objectives related to improving the learning/living conditions of the rural poor, will require overcoming a great deal of inertia on the part of much of the educational hierarchy in the Ministry of Public Education (MPE). This will mainly take the form of a transfer of emphasis on a traditionally urban-centered educational system to one encompassing rural areas with commitment to the ideals of rural development. The new MPE management team is committed to meeting the educational needs in the rural areas and breaking away from the traditional urban orientation.

Successful implementation of the national strategy for integrated rural development will require dedication to stated goals and broad national, socio-political considerations requiring another reorientation; that of developing effective linkages with other GON sectors concerned with rural development. Assuming a clear articulation and understanding of the goals and the provision of expertise and institutional means to transmit them into action, a pronounced spread effect can occur as greater numbers of GON personnel are involved in planning, research, program development and design. The Mission believes that the implementation of this program can result in positive MPE attitudinal changes and professional commitment; greater concern for the rural poor; and, a basic educational reorientation of MPE personnel and other concerned ministries and agencies towards improved education and skills for the rural poor target populations.

Concentration of project technical expertise in the MPE can serve to "recharge" selected MPE operating divisions in line with rural development objectives and rural primary education, thereby, serving as a bridge between conceptualization and actualization of planned development programs. This can result, over the long term, in improved social services to both urban and rural populations. This program will not deprive urban areas of needed assistance. Instead this project is making a larger part of a larger pie available to the rural areas.

Increased MPE capability to plan for effective rural primary education will result in increased opportunities for rural children and youth to benefit from the system of national education and skills training. Project assistance will not only increase relevance in rural primary education and numbers to be benefited, but will aim to reduce high drop-out rates which occur in and after the first four primary grades in rural areas. Very few rural students graduate from grade six and thus become candidates for secondary education. The education sector assessment found that in

rural areas, only 82 of 1,000 students who enter primary school graduate from the 4th grade while in urban areas there are 527 out of 1,000 entrants who enter 5th grade. The negative social implications of this are clear: children and youth in rural areas have only limited upward mobility and opportunities for further education leading to opportunities for increased responsibility and significant roles in the economic, social, and political life of Nicaragua. Not only can social benefits accrue to both individuals and the greater community as a result of increased number of students emerging from grade four, but the improved curriculum, and training programs to be planned with project assistance will provide skills training for children and youth who still must terminate their formal education early in the primary system. Instead of being "failures" or dropouts or pushouts, alternatives will be available for added training for these children and youth which will enable them to assume more productive and contributing roles in the rural society in which they live. The social impact of providing alternatives to failure or even achieving functional literacy is significant.

The community development activities of this project will provide the basis for an effectively operating and adequately maintained rural educational system. It is generally accepted that parents believe that their children should receive an education. The Education Sector Assessment noted that in Nicaragua, however, there is little interaction between rural communities and their schools. It is known that increased and positive levels of community involvement in the processes and content of education can improve relevance of learning to community action and development. Therefore, increased levels of community participation and local responsibility are essential components of this project.

Community involvement in the local school committees has been favorably demonstrated in the Family Rural Education Centers (CFERs) established and operated by FUNDE and the Ministry of Public Education. Parents and other interested individuals have taken an active interest in the objectives of the CFERs and have formed local committees to act as monitors of CFER activities and advisers to the Center's director. Similar community participation is possible provided the MPE through its rural education program provides the educational services the rural communities need.

This project is designed to produce better delivery systems for rural educational services. An alternative to complete reliance on the formal system of education for social and economic upward mobility will be developed. These education services, featuring non-formal approaches for education of rural children and youth,

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will be within the reach of anyone who has a radio and to those who have had only limited access previously to even the most basic education or skills training. This application of educational technology will facilitate conditions where educational services will be more accessible. Equity, and rural coverage coupled with planned revision and adaptation of curricula to complement basic development needs of the rural population in many fields can produce social fallout of great importance to improved economic development in rural areas; the basic point of economic health for the country as a whole. The improved planning, research, evaluation, management, and program development in the MPE through the grant project will result in educational change and reform which will further result in a basis for social change and the accomplishment of national rural development goals.

ANNEX Y

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POPULATION IMPACT STATEMENT

The following demographic description is abstracted from Chapter 5 "Maternal and Child Health and Population" of the Health Sector Assessment for Nicaragua, 1976. In Nicaragua, the average number of children per family is 4.0. Approximately 47% of the population is below 15 years of age and it is estimated that 21% of the population are women in the child bearing age from 14-45 years of age. Census data indicates that 52% of the population lives in rural areas. There are 84,000 live births per year which result in a crude birth rate of 47 per 1,000 births. This indicates a 3.4% population growth rate for the decade and a doubling of the population in 21 years assuming the growth rate remains at this level.

Unidad de Analisis del Sector Salud statistics indicate that the total combined population of Regions II and V approximate 55% of the Nicaraguan population. Region II has 39% of the total population and Region V has 16%. The 0-5 years old cohort in 1975 is 19% of the population of 824,900 in Region II and 22% of the population of 333,500 in Region V. It is this cohort which is now moving into the school aged population.

A statistical analysis of the Nicaraguan situation done by the Socio-economic Analysis Staff of the International Statistical Program Center of the U.S. Bureau of the Census, Washington, D.C., with population projections for 1970 through 2000, indicates a population increase of 11 percent between 1975 and 1980 and 25.5 percent from 1980-1985 for the national primary school age population. In rural areas an increase of 6 percent is expected to occur between 1975-80 and between 1980 and 1985, an increase of 19 percent. For urban areas, an increase of 16.3 percent in the 1975-80 percent is expected and 32.1 percent during the 1980-85 period. The total primary age population of Nicaragua is expected to increase by 39.4 percent over the 1975-85 period; in rural areas these increases will be 26.5 percent and in urban areas, 53.8 percent.

These figures show that without an education program supporting a continuing concentrated effort to lower fertility, the population growth rate will dilute the impact of the education sector development in Regions II and V. This is due to large cohort groups which continue to move into the primary school aged population. If the above indicated demographic trends continue with a 26.5% increase in the rural primary school aged population in the next ten (10) years, the present

educational facilities and manpower will be severely strained and the proposed educational inputs will be less effective in providing significantly improved educational opportunities for the target group.

To insure that resources invested in governmental and educational sector development programs achieve their maximum impact, a coordinated effort in providing family planning services and education is an essential aspect of this coordinated rural development program. The education sector is a vital link in "sensitizing" the population to important relationships between human sexuality, population dynamics and real economic growth, especially in terms of the family unit.

The importance of health/nutrition/evaluation/fertility linkages is not overlooked in this project. The health/nutrition curriculum to be developed in the project will emphasize basic concepts of responsible parenthood and family planning. The MPE is presently supporting pilot programs in Sex Education and Family Life for use in the schools. These are awareness and readiness indicators that conditions for population education on a much larger scale can soon be undertaken to reduce population growth rates. This project does not divert major priority or resources to population education as there seems to be sufficient momentum at this time in this area to ensure further attention as conditions continue to improve for more comprehensive program development. This does not, however, lessen the importance of addressing the fertility question through the involvement of major public institutions, such as those in the education sector. It is expected that initial momentum in population education will continue and increase to elicit a positive response from the MPE leading to program development in this area through this and other projects.