

DEPARTMENT OF AGRICULTURE
 HAITI
 PROJECT NUMBER (7 DIGITS) 521-0078
 PROJECT TITLE (MAXIMUM 40 CHARACTERS) 521-T-008
 INTEGRATED AGRICULTURAL DEVELOPMENT
 PROJECT ASSISTANCE COMPLETION DATE (MM DD YY) 01/31/84
 ESTIMATED DATE OF DEBILITATION
 INITIAL FY 76 QUARTER 4 FINAL FY 83
 (ENTER 1, 2, 3, OR 4)

A. FUNDING SOURCE	thru FY 79		LIFE OF PROJECT	
	F Y A	E T A	F Y A	E T A
1. APPROPRIATED TOTAL	12,090	12,090	10,494	12,106
GRANT	4,090	4,090	7,694	9,300
LOAN	8,000	8,000	2,800	2,800
OTHER U.S.				
OTHER COUNTRY		2,344		10,500
OTHER COUNTRIES				
TOTALS	12,090	2,344	14,434	22,600

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE Thru FY 79				N. 2ND FY 80		K. LIFE OF PROJ.	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	J. LOAN	L. GRANT	M. LOAN
1. FN	100			4,090	8,000	675	-5,200	9,300	2,800
2.									
3.									
4.									
TOTALS				4,090	8,000	675	-5,200	9,300	2,800

11. CODES

D. SECONDARY TECHNICAL CODES (MAXIMUM SIX CODES OF THREE POSITIONS EACH)
 230

E. SPECIAL CONCERNS CODES (MAXIMUM SEVEN CODES OF FOUR POSITIONS EACH)
 1. CODE BR

2. AMOUNT

3. PROJECT PURPOSE (MAXIMUM 400 CHARACTERS)

To develop the institutional capacity of the Ministry of Agriculture to deliver productive resources and services to small farmers.

SCHEDULED EVALUATIONS

INTERIM	MM	YY	MM	YY	FINAL	MM	YY
	0	6	8	1		0	1
						8	4

5. SOURCE/ORIGIN OF GOODS AND SERVICES
 OOD
 LOCAL
 OTHER (SPECIFY)

ORIGINATING OFFICE CLEARANCE
 SIGNATURE: Allan R. Furman
 TITLE: Director, USAID/Haiti
 DATE SIGNED: MM DD YY 11/12/79

17. DATE DOCUMENT RECEIVED IN SIDA/4, OR FOR AID/4 DOCUMENTS, DATE OF DISTRIBUTION
 MM DD YY 11/16/79

6. AMENDMENTS/NATURE OF CHANGE PROPOSED
 This amendment provides for increased technical assistance and training in the Irrigation and Soil Conservation subprojects while reducing the volume of physical outputs. The Research and Extension sub-projects are consolidated. The Agricultural Credit and Faculty of Agronomy and Veterinary Medicine sub-projects are eliminated. In addition \$5,200,000 in loan funds is deobligated. An additional \$5,200,000 in grant funds will be authorized over the life of the project.

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C. 20523

PROJECT AUTHORIZATION

(Amendment No. 1)

521-T-008

Name of Country : Haiti
Name of Project : Integrated Agricultural Development
Number of Project : 521-0078

1. Pursuant to Section 103 of the Foreign Assistance Act of 1961, as amended, the Integrated Agricultural Development project for Haiti was authorized on September 29, 1976. That authorization, evidenced by a Loan Authorization for the loan component and an Action Memorandum for the grant component, is hereby amended as follows:

(a) The Terminal Disbursement Date for the loan is hereby extended to January 31, 1984;

(b) the Estimated Final Contribution Date (or comparable date) for the grant is hereby extended to January 31, 1984;

(c) \$5.2 million of grant funding is hereby authorized, subject to the availability of funds in accordance with A.I.D. OYB/allotment process and subject to the prior deobligation of an equal amount of loan funding, to help in financing foreign exchange and local currency costs for the project; and

(d) as more specifically described in the Action Memorandum for this Project Authorization Amendment, the project will be modified as follows:

(i) reduction in the scope of the Irrigation and Soil Conservation sub-projects and redesign of related technical assistance and training elements;

(ii) consolidation of the Research and Development and Extension sub-projects; and

(iii) elimination of the Agricultural Credit and Faculty of Agronomy and Veterinary Medicine sub-projects.

2. Except as expressly amended or modified hereby, the authorization, evidenced by a Loan Authorization and an Action Memorandum, each dated September 29, 1976, remains in full force and effect.

PROJECT PAPER AMENDMENT NO. 1

INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT NO. 521-0078

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PROJECT PAPER AMENDMENT NO. 1

INTEGRATED AGRICULTURAL DEVELOPMENT PROJECT NO. 521-0078

I. SUMMARY AND RECOMMENDATIONS

A. Recommendations

The project amendment described herein recommends the following modifications to the Integrated Agricultural Development Project, in which the Grantee, the Government of Haiti (GOH), will continue to be represented by the Department of Agriculture, Natural Resources and Rural Development (DARNDR), the implementing agency.

1. Project Design

a. A reduction in the scope of the Irrigation and Soil Conservation sub-projects and the re-design of the technical assistance and training elements.

b. The consolidation of the Research & Development, and Extension components into one cohesive activity aimed at the development and dissemination of technological packages appropriate for traditional Haitian farmers.

c. The elimination of the Agricultural Credit and Faculty of Agronomy and Veterinary Medicine (FAMV) sub-projects.

2. Funding

The modification of the original \$12,100,000 funding package (\$8.0 million loan, \$4.1 million grant) to permit grant funding for all technical assistance and training. This will require the de-obligation of \$5.2 million of the existing loan and the authorization of an equal amount in grant funds. It is recommended that this financial restructuring be conducted on an incremental basis over the life of the project. There will be no change in the project funding level as demonstrated below.*

* Note: The original grant of \$4.1 million has been fully obligated.

The proposed disbursement schedule is presented in the Financial Analysis, Section IV.

5x

	<u>GRANT</u>	<u>LOAN</u>	<u>TOTAL</u> (\$ MILLION)
Original authorization levels (Sept. 1976)	\$4.1	8.0	12.1
Recommended funding levels	\$ 9.3	2.8	12.1

3. Implementation Period

The extension of the Project Assistance Completion Date (PACD) to January 31, 1984. This would provide an additional 28 months for the implementation of the activities proposed in this amendment.

B. Summary of Program Components

This Project Amendment is the result of a joint DARNDR and USAID review of the Project's progress to date, and reflects the experience gained during the initial three years of the project. The review was conducted in order to formulate alternatives for future Project implementation in light of the delays which have precluded the start-up of all project components except for one (the Project Administration activity). During the review period it became quite evident to both DARNDR and USAID that the Project, as originally designed, was entirely too ambitious given DARNDR's institutional weaknesses. Furthermore, it was agreed that unless the scope of the Project was reduced to a degree commensurate with DARNDR's technical and managerial capabilities, the Project would not continue.*

Therefore, although it is now clear that two of the seven sub-projects in the original Project Paper cannot be realistically implemented at this time, the activities presented in this Project amendment remain consistent with the Project's original goal and purpose, and both the GOH and USAID are confident that the Project's overall objectives can be attained.

The focus of the Project is, and will continue to be under the proposed amendment, on the improvement of the operational and administrative capacity of DARNDR. The recommended assistance is aimed at strengthening the four primary services of DARNDR:

* Refer to Section II, Background & Rationale pp. 7-18 for an extensive treatment of implementation problems to date and the rationale in support of this amendment.

(1) administration, (2) irrigation, (3) soil conservation, and (4) research and extension. By developing the above departments of DARNDR it is anticipated that the Ministry will be able to increase the quantity and quality of developmental and support services it provides to small farmers in Haiti.

The funding provided under this amendment will be utilized for technical assistance (\$7,709,000) long & short term participant training (\$961,000), equipment/supplies/vehicles (\$1,142,000), construction costs (\$1,428,000), evaluation (\$200,000) and contingency (\$660,000).

These resources will be utilized in four sub-projects:

- Project Administration
- Irrigation Systems
- Soil Conservation
- Research & Extension.

1. Project Administration Component

The objectives of this activity were not altered under this amendment. Currently, this component is the only active part of the Project and it is believed that the strategy presented in the Project Paper is still valid.

The key to the successful implementation of the Project will be DARNDR's ability to use efficiently the financial and human resources at its command. This component focusses on assistance to the Administrative Group of DARNDR, which is responsible for the administration and coordination of the inputs of the various sub-projects. The funding under this component will provide \$1,800,000 for technical assistance (238 PM), commodities and training to develop an improved administrative capability in DARNDR. This technical assistance is now being provided in the form of a Management Implementation Team (MIT). The MIT, in place since January 1979, will continue to assist and provide in-service training to the Administrative Group in the areas of project planning, procurement, evaluation, management systems, and personnel. Further discussion of the MIT's role is presented in Section III B, "Detailed Description", pp. 20-21.

2. Irrigation Systems Sub-Project

Under this amendment the objective of the irrigation sub-project continues to be the strengthening of the Irrigation Service of DARNDR. It is anticipated that by the end of the project period, the Irrigation Service will have improved its capacity to develop and manage the water resource systems of Haiti. However, the scope of the rehabilitation activities was reduced substantially during Project re-design. The new target is to rehabilitate approximately 2,100 hectares in two phases over the next four years. This new rehabilitation effort, which will involve a maximum of four systems, was tailored to DARNDR's planned manpower levels over the next four year period and is considered to be a rational goal for the understaffed Irrigation Service. Activities in support of the water user associations will be implemented as initially outlined in the Project Paper.

Approximately \$3,400,000 will be provided for technical assistance (198 PM), commodities, and construction activities. Although this is comparable to the funding levels in the Project Paper, it does not reflect the adjustments in the new funding package. Both the technical assistance requirements and construction costs have been scaled down in relation to the reduction in the number of systems. However, no cost savings were realized due to the elapse of three years and the corresponding inflationary impact. Furthermore, given the elimination of the FAMV program a training component is included in the amended sub-project and an additional \$300,000 is allocated for overseas training in watershed/irrigation development and management. An extensive discussion of the new sub-project activities are presented in Section III. C "Detailed Description", pp. 22-30.

3. Soil Conservation Sub-Project

Although the basic objectives of this sub-project remain unchanged, a significant increase in AID funding is proposed in this amendment. This augmented support, almost entirely for long term technical assistance (an additional 279 PM), reflects:

(1) the in-depth review of the Soil Conservation Service's needs and limitations in relationship to Project targets, (2) the importance of watershed management/erosion control on a national basis. The amended sub-project will provide the resources required to establish and implement soil conservation practices in a minimum of four watersheds of approximately 18,000 hectares. Farmer organizations will be formed to ensure the long term maintenance of soil conservation structures and techniques. Approximately \$3,200,000 will be allocated for technical assistance (381 PM), training, and commodities. The Detailed Description, Section III. D pp. 31-37, provides a comprehensive discussion of the sub-project's revised strategy.

4. Research and Development, Agricultural Extension

The modified sub-project is a consolidation of the Research & Development and Agricultural Extension components. As such, the objective of this activity is to strengthen the linkages between the research and extension departments in DARNDR. This will be achieved through the development of technological packages for traditional Haitian food crops by the research unit and the creation in the extension section of the capacity to disseminate these production improvement techniques to the target farmers. Thus the new emphasis will now be placed upon the establishment of a research/extension system designed to deliver cropping information tailored to the needs of the Haitian small farmer. To this end, approximately \$2,600,000 will be provided to fund technical assistance (201 PM), training costs, commodities, and the construction of two pilot research facilities. The new program is described in detail in Section III. E, "Detailed Description", pp. 39-44.

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C. RECOMMENDED FUNDING LEVELS (\$000)
(AID FINANCING)

<u>PROJECT COMPONENTS:</u>	<u>ORIGINAL LEVELS:</u>			<u>RECOMMENDED LEVELS</u>		
	<u>GRANT</u>	<u>LOAN</u>	<u>TOTAL</u>	<u>GRANT</u>	<u>LOAN</u>	<u>LEVEL</u>
1. Project Administration	2,000	138	2,138	1,839	141	1,980
2. Irrigation		3,762	3,762	2,158	1,678	3,836
3. Soil Conservation		769	769	3,122	318	3,440
4. Research & Extension*	700	1,373	2,073	2,181	663	2,844
5. Credit		1,425	1,425	-	-	-
6. FAMV	1,400	533	1,933	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	4,100	8,000	12,100	9,300	2,800	12,100

* Previously Funded
As two (2) components: Research & Development and Extension

II. BACKGROUND & RATIONALE

A. Project Agreements

The original Project design called for a \$12,100,000 program of grant and loan financing. The initial grant agreement for \$1,690,000 was signed in September 1976. Two more project agreements were signed subsequent to this in Sept. 1977 and March 1978, (521-77-7, 521-78-7), in the amounts of \$1,700,000 and \$700,000 respectively. Thus, as of April 1978, the grant portion of the Project (\$4.1 million) had been fully obligated. Approximately \$314,000 has been expended to date and the current PACD is Sept. 30, 1980 for the grant funds.

The loan agreement, for \$8,000,000, was signed in April 1977, and to date no expenditures have been made under the loan. The terminal disbursement date is presently August 27, 1982.

B. Original Project Design

The following discussion summarizes the original project components.

1. Project Administration

The Project involved a number of inputs and related activities that required efficient administration and coordination to achieve the desired objectives. The DARNDR entity responsible for this is its Administrative Group. The assessment of DARNDR's institutional capacity made in the Project Paper noted serious limitations regarding its ability to carry out any large-scale agricultural development activity effectively. The sub-project, therefore, provided \$138,000 of loan financing for commodities and \$2.0 million of grant financing for 19 person years of technical assistance in the form of a Management Implementation Team (MIT) to assist DARNDR's Administration Group in meeting the administrative requirements of the project (e.g., preparation of implementation plans, procurement of loan-financed goods and services, contract administration, reporting, evaluation, etc.). In addition, the MIT was responsible for assisting DARNDR in upgrading its management systems (e.g., inventory, accounting, information, personnel, etc).

2. Irrigation Systems Sub-Project

The original design of this sub-project called for \$3.8 million in financing for technical assistance and commodities to develop DARNDR's capacity to perform feasibility studies , rehabilitate small irrigation systems and provide continued services to water user associations.

In addition, approximately 15 systems serving 9,000 hectares were to be rehabilitated. For each of these systems a water user association was to be organized and members trained to ensure continued maintenance and effective operation of the system after the rehabilitation work is completed.

3. Soil Conservation Sub-Project

The project initially provided approximately \$800,000 of loan financing for technical assistance, participant training and commodities to develop DARNDR's capacity to carry out soil conservation programs. The programs included the organization, training and supervision of farmer groups to implement soil conservation practices on watershed areas. It was planned to implement soil conservation practices on approximately 20,000 hectares adjoining four principal irrigation areas.

4. Research and Development, Agricultural Extension

As described in the Project Paper, approximately \$1,100,000 of loan and grant financing for technical assistance, participant training, commodities and construction of facilities were programmed, aimed at increasing DARNDR's capacity for applied research and the development of improved plant materials. Two research stations were to be established for the development of improved plant materials and appropriate technical packages for small farmer cropping systems. Approximately 50 village nurseries were to be established and farmer groups trained in their operation. These village nurseries represented the second tier in the system of propagation, multiplication and distribution of improved plant materials.

The agricultural extension sub-project called for \$1,000,000 of loan and grant financing for technical assistance, participant training, and commodities in support of DARNDR's extension service. Approximately 80 extension agents were to be trained, and audiovisual methodologies/materials were to be developed for extension work under the original project design.

5. Agricultural Credit

Approximately \$1.4 million in loan funds were budgeted for the Bureau of Agricultural Credit (BCA)* to develop its capacity to implement a credit program in the project regions. Funds were provided (\$1.0 million) for production credit, and \$425,000 were programmed for technical assistance and training. It was anticipated that the credit would not be required before the third year of the project, contingent upon the rehabilitation of the target irrigation systems. The technical assistance and training programs were designed to assist BCA's staff in the implementation of the regional expansion program, and to reinforce the technical assistance BCA was receiving under the AID funded Small Farmer Development Project (521-0073).

6. Faculty of Agronomy and Veterinary Medicine (FAMV)

Both the GOH and USAID identified FAMV as the logical site for the establishment of a training program in soil conservation and irrigation. It was agreed that the development of national capability in these critical disciplines would be appropriate, given the goals of the Project. To achieve this a complex assistance program was designed to provide approximately \$1.4 million of grant financing and \$500,000 of loan financing for technical assistance, participant training, commodities and construction necessary to develop a fifth year program at the FAMV to provide training in the areas of soil conservation/erosion control and irrigation/watershed development and management. It was anticipated that FAMV would be able to train 12 to 15 students per year. The school would initially function with an imported faculty while overseas training of permanent faculty was taking place.

* A semiautonomous agency of DARNDR.

C. Implementation Problems

The Integrated Agricultural Development Project represented DARNDR's first involvement in a multi-faceted project whose purpose was to build the administrative and organizational skills heretofore not available under DARNDR's on-going programs. These institutional weaknesses were exacerbated by the complex but rational requirements established under the Conditions Precedent. The principal CPs to disbursement required that DARNDR take the actions summarized below: 1/

- (1) design a plan for implementing increased salary levels for Ministry employees, and a description of the organizational structure adopted by the Ministry for project implementation;
- (2) Prepare detailed procedures and criteria for selection of irrigation systems eligible for rehabilitation, and the preparation of plans for operating and maintaining rehabilitated irrigation systems;
- (3) Establish an Agricultural Credit Fund and design a strategy for minimizing decapitalization of the BCA; and
- (4) Prepare an implementation plan for the programmed overseas training, including means of assuring the return of participants to Haiti.

The CPs to loan disbursement were met in April 1979, 24 months after execution of the loan agreement. As is evident the necessary actions preliminary to initiating the implementation of the Project, under both the grant and the loan, were not completed on a timely basis and therefore project implementation is at a virtual standstill. The inability of the relatively inexperienced DARNDR staff to meet the CPs within a reasonable length of time was, in hindsight, probably a predictable occurrence, given the nature of the CPs. It should be noted that in anticipation of this problem, AID grant financed the services of a management implementation team (MIT). However, because of the inexperience of the DARNDR staff and their unfamiliarity with the host country contracting process, two years were required to secure this technical assistance, and thus the MIT was unable to assist the Ministry in the execution of the CPs. Due to the absence of in-house administrative capability and without access to the MIT, DARNDR experienced major problems in meeting the CPs necessary for Project implementation.

1/ For specific text of C.P.s refer to Loan Agreement #521-T-008.

In conjunction with the CPs, and host country contracting difficulties, the organizational framework for project implementation became a major problem. To address this DARNDR established a special unit responsible for project implementation. The purpose of the project unit was to attract to the project top quality Haitian technicians, in or out of DARNDR, who in turn would coordinate project activities through the appropriate technical offices and thereby provide efficient project implementation. Initially USAID concurred with this GOH initiative and regarded this unit as the focal point for channeling the programmed inputs to the appropriate offices of the Ministry. Unfortunately, it soon became apparent to USAID that the project unit was not developing the necessary relationships with the DARNDR technical offices (Irrigation, Soil Conservation, Research, and Extension) who were directly responsible for executing the Project's activities. Thus, a situation was created whereby the intended institutional strengthening of DARNDR could not occur if the unit's initiatives were not coordinated with the appropriate offices. These problems were recognized during the joint review of the Project leading to this Amendment. As a result, DARNDR and USAID agreed that the special unit should be dismantled and the responsibilities for implementation of Project activities incorporated into the respective technical offices of DARNDR. Similarly, the DARNDR Administrative office has assumed the coordination role previously held by the project unit and is now responsible for the coordination between USAID and the DARNDR technical offices. Although this operational re-structuring required approximately seven months (February - September 1979) of difficult joint discussions and negotiations, its satisfactory completion is a significant indication of DARNDR's resolve to revitalize the Project.

D. Rationale in Support of Program Modification

1. General Considerations

In retrospect the original Project represented an overambitious effort in too many program areas. This was demonstrated primarily by DARNDR's inability to meet the CPs in a timely fashion. DARNDR also did not allocate adequate resources to support activities in several different areas. The redesign proposed in this Amendment represents a scaling down of the various sub-projects and components to more realistic levels.

During the review process it also became clear that DARNDR must concentrate its human and financial resources in those areas of maximum potential and greatest national concern. Therefore, it was imperative that the Project's resources be redirected toward those activities which were consistent with GOH priorities. In addition, the Mission believes that by building an improved capacity within DARNDR to implement irrigation, soil conservation and research activities and by giving DARNDR personnel experience in implementing these activities, the Ministry's ability to obtain increased funding for its rural development activities from GOH budgetary resources will be enhanced.

Further, through its compliance with the difficult CPs, albeit slowly, DARNDR has demonstrated organizational strength, gained insight into its programming capabilities, and become cognizant of the potential benefits to be secured through the Project on both a national and institutional basis. Therefore, the difficult process which the Ministry underwent during the past three years has established the framework for successful implementation of the revised Project. Finally, it should be noted that USAID's involvement with DARNDR over the past three years provided the Mission with a greater awareness of the Ministry's capabilities, needs, and limitations, while sharpening USAID's sensitivity to the constraints under which this key development institution must function.

2. Rationale for Project Redesign

The joint DARNDR and USAID project review (February - September 1979) had three objectives:

- (1) to assess, in a comprehensive manner, the adequacy of the original Project design in relation to DARNDR's present institutional capabilities;
- (2) to elaborate desired modifications in the current Project structure; and
- (3) to formulate the strategy required for future project implementation.

The principal conclusion of the joint review was the reiteration of the GOH's desire to continue with the Project, as modified to reflect DARNDR's current objectives and capabilities. The deviations from the original Project were carefully discussed and the necessary modifications will be incorporated into the basic Project design as an integral part of future project activities.

It was recommended that the amended project be comprised of the following four sub-projects or components:

- Project Administration
- Irrigation
- Soil Conservation
- Research & Extension

The FAMV, and Agricultural Credit sub-projects were eliminated from the Project, while the Research & Development and Extension components were merged into one activity. The rationale which led to the exclusion of the above two activities, and to the redesign of the Research and Extension components is presented below.

a. Faculty of Agronomy and Veterinary Medicine
(FAMV)

The conclusion of the joint review was that assistance to FAMV be eliminated under the current Project. During the period of project design USAID was optimistic that this inherently weak institution could use the programmed resources, but neither FAMV's nor DARNDR's management now feel that the planned funding can be effectively utilized at this time. This assessment is based on the following factors:

- (1) the need to examine, prior to new initiatives, the overall curriculum to determine whether the institution can produce agronomists with both the theoretical and practical skills needed to deliver services to small farmers in Haiti;
- (2) the uncertainty as to the validity of a fifth year program, in light of existing perceived basic curriculum deficiencies, and the diversion of scarce institutional resources that would be required to develop the specialized fifth year;
- (3) FAMV is currently receiving assistance from both the Canadian and French governments. This support of approximately \$3.6 million is aimed at the improvement of the core curriculum in agronomy and veterinary medicine, the creation of a core staff of full time professors, and in-service training of DARNDR agronomists (who are graduates of FAMV). This multiple donor participation is severely taxing the administrative resources of FAMV and it is doubtful that FAMV can readily absorb any additional resources at this time.

USAID assisted FAMV in its appraisal of current programs and the potential for implementing this sub-project as designed. USAID concurs with FAMV's view that the intended assistance could not be used effectively, and that AID's support to FAMV would be premature at this time. This decision seems particularly appropriate given the level of funding FAMV is receiving from the above two donors. This assistance, which was started during the exploratory phase of USAID's project design process, involves activities critical to the improvement of FAMV and the Mission fully supports the multiple donor participation. Furthermore, the developmental work achieved under Canadian and French auspices will be advantageous to USAID's future planning with FAMV which is an institution of utmost importance in the agricultural sector. Therefore, in order to address the need for an adequate number of agronomists trained in the priority areas (irrigation, watershed management, soil conservation), the funding intended for FAMV will be re-allocated to increase funds for short-term and long term training in Soil Conservation, Irrigation and Research & Extension. The specifics of this proposed training are presented in the Detailed Description of this amendment.

Despite this change, the Mission will maintain contact with FAMV in order to assist its staff in their efforts to formulate an institutional development plan and to ascertain the appropriate time to initiate future program involvement, perhaps as a discrete project.

b. Agricultural Production Credit

It was determined during the joint USAID/GOH review that the Agricultural Credit component be eliminated in the amended Project. This decision was based on two considerations: (1) BCA's institutional inability to provide the credit services in the Project regions and (2) the development of the new Strengthening Rural Credit Institutions Project.

The status of the assistance provided to BCA under the Small Farmer Development project (521-0073) was one of the principal factors taken into consideration. Since the resumption of the AID program in 1973-74, the BCA has received five years of technical assistance aimed at improving its credit operations and overall administration. In early 1979 at BCA's request the contractor, CUNA, conducted an in-depth study of BCA's present operations.^{2/} The principal issues identified by CUNA were:

^{2/} Report to the Management of the Bureau De Crédit Agricole on Institutional Performance, Credit Union National Association (CUNA), April 1979.

- The rapid growth of BCA's operating deficit despite substantial increases in annual revenues.
- Major deficiencies in loan portfolio management due to excessive documentation requirements, inefficient loan processing, and weak delinquency control.
- BCA's inability to provide credit and support services to increased numbers of client organizations (small farmer credit societies-SACs).
- The lack of organizational planning by BCA's management which has created serious problems in the areas of institutional development and personnel management.

As an integral part of their analyses the CUNA team made the following recommendations aimed at the overall improvement of BCA's operations:

- BCA should develop a long term capitalization strategy consistent with the stabilization of its operating deficits.
- A redesign process should be initiated that will result in a 50% reduction of the loan documentation currently required, in conjunction with the integration of improved portfolio management into BCA's operations manual.
- BCA should curtail the formation of any new SACs in order to focus its management resources on the institutional strengthening activities recommended by CUNA.
- Additional technical assistance should be provided to BCA in the areas of organizational analysis/planning, and personnel management.

BCA reacted positively to the report and has formed action committees for each of the problem areas. It is anticipated that by early 1980 most of the necessary actions will be initiated.

The conclusions and recommendations of the CUNA report were a key element in the decision to eliminate the agricultural credit activity from the Project. The inclusion of the credit component would require BCA to establish offices in the project regions, thereby stimulating the formation of new SACs and thus forcing BCA to expand beyond its current institutional capacity.

Therefore, it was determined that the continuation of this activity would be counterproductive to the long term improvement of the BCA.

USAID agrees with the new BCA strategy and is making a concerted effort with BCA to design a separate project which provides a better focus on their overall needs rather than on a piecemeal basis. This assistance is proposed in the "Strengthening Rural Credit Institutions" project (521-0121). The purpose of this three year project will be to strengthen BCA's capacity to deliver credit and related financial services to increased numbers of small farmers. Funding will be provided to BCA to address its fundamental problems of inadequate financing, a costly and inefficient credit delivery system, and internal management deficiencies. The proposed assistance to BCA under this new project will give primary emphasis to implementation of a long term capitalization and revenue strategy, the expansion and improvement of the credit delivery system, and improving of BCA's overall financial and administrative management systems. USAID believes that the "Rural Credit Institution" project is the appropriate vehicle for the strengthening of the BCA, and that all AID assistance directed at this institution should be concentrated in this unified project. Furthermore, this strategy will complement the activities planned under the amended Project in that the proposed implementation plan for the credit project will allow the BCA sufficient time to install outreach systems in the Project regions.

c. Research and Extension Sub-Project

During the review of this sub-project three factors, one internal and the two external, were considered to be of sufficient significance that a major revision of the research and extension sub-projects was called for. The original project design entailed discrete activities designed to improve and expand the services offered by the two departments. This strategy, although reasonable in a general agricultural sense, did not focus on the development and use of research appropriate for the Haitian milieu, or on the delivery system necessary to reach the target farmer. It was also necessary to examine the interrelationships between this sub-project and the Agricultural Development Support II project (521-0092) which will support the planned reorganization and strengthening of the Research Service (SERA). In addition to the AID activities, an assistance program for DARNDR's Extension Service was recently proposed by FAO, and this new initiative is addressed in this project amendment.

As DARNDR recognized during Project development, its research and extension efforts were severely hindered by a lack of qualified agronomists, the absence of applied research data for traditional food crops, and weak or non-existent linkage between the research and extension departments. Thus, the intent of the original Project was to improve, on a parallel basis, both the extension and research programs in DARNDR. This ambitious objective now does not appear attainable and the new strategy will focus on the development of technological packages for traditional Haitian food crops that can be effectively disseminated to small farmers.

To achieve this it is imperative that research and extension be considered conceptually as one, in order to create the channels for transferring improved production techniques to the farmers. This will be accomplished through the strengthening of the research department, especially in terms of assimilating applied research data; and by creating joint research/extension methodologies for reaching the target group farmers. There is a wealth of basic research on cereals, pulses, and root crops in the tropics. Thus, the new sub-project will focus on adapting this research to the Haitian situation. Once the required tech packages are developed (through the combined efforts of researchers, extension agents and farmers), this adaptive agronomic data will be delivered by the extension service.

In August 1978, the GOH and USAID signed a Project Agreement for the Agricultural Development II Project (ADS II 521-0092). Under this project, AID will provide substantial technical assistance, specialized training opportunities, and equipment for the reorganization of SERA and the development of a national program of agricultural economics and statistics. ADS II will support this Research & Extension activity through the development of basic research programs (e.g. pest control, soil fertility, multiple cropping systems) necessary to backstop the food crops program, and the training of SERA personnel. Additional complementarity exists in that ADS II will rely upon the extension outreach mechanisms designed under this Project to reach traditional farmers.

On a parallel basis to the AID assistance the GOH is currently considering a proposal for an FAO-supported project aimed at reorganizing the Extension Service, training its staff, extending its reach and improving the quality of services it provides to peasants and peasant organizations. All of the activities contemplated in the original Extension-Information component of this project will be undertaken under this GOH-FAO project. Initial indications are that FAO assistance will initially focus on the reorganization of the headquarters operations of the Service, and will not be directly concerned with field programs as such for quite some time. The recommended Research-Extension component will specifically address the basic problems of production technology and the development of research/extension linkages at the field level, both of which are necessary for the successful implementation of the GOH-FAO project.

III. DETAILED DESCRIPTION

A. Goal and Purpose

The goal and purpose of the Project remain unchanged except for a somewhat reduced scope of action 3/.

The goal is to increase the production, and incomes of Haitian small farmers. In order to achieve the Project's goal it will be necessary to increase the productive resources and services available to small farmers. Thus, the Project will continue to have dual and interrelated purposes:

- (1) to develop an institutional capacity for delivering the necessary resources and services to the target group; and
- (2) to implement such a system on a pilot basis in selected regions.

The specific components or sub-projects of the modified Project are:

- Project administration
- Irrigation Services
- Soil Conservation Services
- Research & Extension Services

Although the purpose of the amended Project reflects the original conceptual framework, the experience gained to date by USAID and DARNDR has caused a shift in Project emphasis. Events over the past three years have demonstrated that the Project as originally designed was overambitious and unrealistic in terms of what can be achieved in the Haitian agricultural sector, in a relatively short period of time.

The reduced scope of the revised Project activities will permit a more orderly use of project resources and thus facilitate DARNDR's ability to reach its target clientele, i.e. the traditional small farmers engaged in subsistence agriculture.

3/ A comprehensive treatment of this section is provided in the original Project Paper.

B. Project Administration

This component was not modified, and detailed description in the Project Paper remains valid 4/.

1. Management Implementation Team (MIT)

The original Project Paper stressed the fact that DARNDR lacks the necessary administrative and management systems to support successfully the activities of the technical services. The areas where there is a particular need include financial reporting, inventory control, procurement, and personnel systems 5/.

In view of this limited administrative capability, resources are provided for the services of a Management Implementation Team (MIT) to assist the administrative unit at DARNDR to develop the required management systems and to train counterpart personnel in the high priority areas of accounting, inventory control, procurement and personnel.

The MIT will be responsible for assisting DARNDR in carrying out and coordinating the various administrative requirements of the Project such as procurement of technical services and commodities, arranging for training activities, project reporting and evaluation activities, and interdepartmental coordination. Given the complexity of the Project and the limited institutional capability of DARNDR, it is crucial that this type of technical assistance be made available during the life of the project in order to achieve effective Project administration and to strengthen DARNDR's project management capacity.

In December 1978, DARNDR signed a contract (\$911,000) with Servicios Tecnicos del Caribe to provide the necessary technical services envisioned for the MIT. Servicios Tecnicos del Caribe has four long-term consultants assigned to the Administrative Division of DARNDR at this time*. The contract calls for 192 work months

4/. Refer to Section III.C.1, pp. 20-21, "Detailed Description", of the Project Paper.

5/. See Institutional Analysis of Project Paper, pp. 99-101, Section V.A.1.

* The MIT is comprised of:

- Chief of party, who has had experience in agricultural development and public administration;
- Financial management specialist;
- Procurement specialist; and
- Personnel management specialist.

of long-term technical assistance in four areas: general administration, accounting and finance, personnel and procurement. In addition, 46 work months of short-term services will be provided in such areas as systems analysis, information systems, transportation and evaluation. (The scope of work of the MIT is included in Annex A). Total estimated cost of the technical assistance is \$1,600,000 for the life of the project.

The team of long-term advisors has been working at DARNDR since January 1979, helping to develop the required systems and to train counterpart personnel. Activities have included the preliminary design of a personnel system, the development of a program of training needs, and the organization of a seminar in management systems for district agronomes.

2. Communications Systems

Telephone service from Port-au-Prince to rural areas is inadequate, if it is available at all. Therefore, current information on agricultural production and marketing in rural areas is often not available at DARNDR. Furthermore, due to poor communications, DARNDR is often unable to give the proper support to its field units.

To help alleviate this condition in the project areas, this amendment will fund the establishment of a basic telecommunications network in the project areas (\$54,000). This network will eventually serve as the nucleus for a communications systems for DARNDR, that will serve the entire country. The design of the system was financed by A.I.D. through a contract with Teleconsult Inc. of Washington D.C.

Under this Project, A.I.D. will finance the installation of the communications network in the office of the district agronomes where the project activities are located, as well as the backbone system located at DARNDR headquarters. Another A.I.D.-financed project Small Farmer Marketing (521-0083), will expand this system further, linking the district offices in project areas to DARNDR headquarters.

The firm selected to supply this system will be required to train DARNDR personnel on the proper operation and maintenance of the equipment.

3. Training

Short-term overseas training will be provided in the areas of accounting, personnel, procurement and administration. An estimated \$89,000 is budgeted for these activities.

C. Irrigation Sub-Project

1. Objective

The objective of this sub-project remains unchanged, i.e. to strengthen the capacity of the Irrigation Service to develop and manage the existing or potential water systems throughout the country. To achieve this goal the following inputs will be provided under the Project over a period of four years.

a. The rehabilitation of selected irrigation systems will require an estimated \$1,700,000 million for construction costs, vehicles, tools and materials.

b. One hundred sixty two person-months of long-term T.A. at an estimated cost of \$1,400,000 will be provided to the Irrigation Service through the Project. Additionally, short-term consultants will be employed as needed (36 person-months) at an estimated cost of \$300,000*. The long-term T.A. team will comprise:

1 Engineering Management Specialist (Team Leader)	45	person-months
1 Irrigation Engineer (Design and Construction)	36	" "
1 Irrigation Engineer (Operation and Maintenance)	45	" "
1 On-Farm Irrigation Specialist (Irrigation Practices)	36	" "
TOTAL....	162	person-months

Consultants will provide expertise in irrigation project management, irrigation systems planning, in-service training, irrigation design & construction, water systems operations and maintenance, on-farm usage of irrigation, and irrigation feasibility studies.

* The short-term technical assistance will be in the fields of hydrology agricultural economics, and rural sociology.

Scopes of work for the technical assistance team have been developed by DARNDR, and approved by USAID*. An 8 (a) minority firm is being considered for this assignment based on the expertise it has demonstrated in a similar projects in the U.S., Iran, Nigeria and Haiti. Once this Project amendment is authorized, a proposal will be immediately requested.

c. Long and short-term training, both in-country and overseas will be made available to Irrigation Service personnel at an estimated cost of \$300,000.

2. Sub-Project Outputs

By the end of the project the sub-project's goal and the following outputs will be achieved:

1. Establishment of a procedure for the selection of irrigation systems, on a priority basis, for rehabilitation.
2. Preparation of guidelines for establishing the technical and economic feasibility of rehabilitating individual systems and for examining land tenure patterns.
3. Preparation of designs and rehabilitation work plans, and supervision of the rehabilitation of selected systems.
4. Execution and/or supervision of rehabilitation of selected irrigation systems.
5. Preparation of operation and maintenance plans for each irrigation system, not only those being reconstructed/rehabilitated, but other systems under the control of the Irrigation Service.
6. Organization of water user associations (irrigation districts) which will, in time, take over the day-to day operation and maintenance of the systems.
7. Establishment of training programs for operation and maintenance personnel, including watermasters,

* Refer to Annex B

ditchriders, gate-tenders, and farmers in water control and operation and maintenance of irrigation and drainage systems.

8. Establishment of training programs in on-farm irrigation practices for Irrigation Service personnel and participating farmers.
 9. Establishment of training programs for senior staff members of the Irrigation Service.
 10. Preparation of an organizational and staffing plan for the Irrigation Service together with a manual outlining the duties and responsibilities of each position.
 11. Elaboration of feasibility studies for the rehabilitation of future water systems, based on sites previously selected.
3. Implementation Strategy

The implementation of this component will differ somewhat from the original project paper in order to minimize the human resources constraint that now hinders the Irrigation Service's operations. The original Project proposed to rehabilitate 15 water systems, which would impact on 9,000 hectares, over the life of the Project.^{6/} Current thinking is that if DARNDR had attempted to rehabilitate the above systems as planned, the Irrigation Service would have encountered impossible logistical problems associated with the movement of the required personnel and equipment. Furthermore, although the mobilization problem alone would have been monumental, during the 1976-78 period the Service did not have in its employ sufficient field engineers to initiate the sub-project. As a result of its weak institutional base, the irrigation staff dedicated most of the first three years of the Project to the activities necessary for C.P. compliance and the implementation of a limited number of irrigation projects financed by the GOH.

^{6/} The irrigation system scenario in Haiti, and the feasibility studies performed to date are discussed in sections III.C.2 pp. 21-24 and IV.A.1. pp. 39-45 of the Project Paper, Detailed Description and Technical Analysis respectively.

Because of these unfortunate delays, during the joint review USAID and DARNDR agreed to use a two-tier approach for project implementation as a means of maximizing the Irrigation Service's limited resources. The principal focus will be on the rehabilitation of the two major systems, Dubreuil and Jean Rabel, for which feasibility studies have been completed. The Dubreuil system includes approximately 900 hectares and will serve an estimated 5,900 farm families, while the Jean Rabel system (400 hectares) will serve an estimated 4,300 families. The second phase of this strategy will incorporate at least two smaller irrigation systems into the rehabilitation effort. These secondary irrigation targets will be selected from the original list of fifteen.

In addition to the availability of key feasibility data, the Dubreuil/Acul system (Les Cayes region) and the Jean-Rabel system were selected on the basis of the following rationale: the two locations fit the selection criteria established in the Project Paper 7/; offer the best potential for immediate and significant target group benefits; are included in the original list of 15 systems; are adjacent to the watersheds selected for the Soil Conservation sub-project; and offer substantial agricultural potential. The other advantage to this approach is that under the new irrigation scheme DARNDR will be able to concentrate its personnel in a centralized location and to develop a standardized training program under optimal field conditions.

The elimination of the FAMV activity from the overall Project created a vacuum from an irrigation training standpoint. Under the original sub-project design, there was no provision made for overseas or in-country training in irrigation. This, of course, anticipated an enhanced training capability at FAMV. Therefore, an irrigation training program will be developed under this Project amendment and provide both in-country and overseas training for Irrigation Service personnel.

Related to the above training activities, assistance will also be provided to the Irrigation Service for the development of an on-going capacity to identify/select water systems eligible for rehabilitation. This assistance will be provided by the technical assistance team which will assist the Service in the elaboration of a series of irrigation feasibility studies. These studies will assess the potential for rehabilitating irrigation systems not included in this Project. 8/ The Service's staff will receive on the

7/ The selection criteria are discussed in Section III.C.2, pp.22-23 of the Detailed Description.

8/ The potential systems were identified in the "Water Resources Study for Haiti", HARZA Engineering Co. June 1979.

job guidance and gain experience in the preparation of feasibility analyses. It is anticipated that through these activities the Irrigation Service will begin to develop an in-house capability in this key area.

4. Rehabilitation Activities

In the original project design local firms were to be contracted for the rehabilitation of the above systems. This strategy has been changed due to the problems encountered in securing the participation of local construction companies in the Agricultural Feeder Roads Project*. Experience under the Feeder Roads project has demonstrated that local private contractors are not capable of carrying out, at reasonable cost levels, construction activities in isolated rural areas. Local firms generally lack qualified personnel willing to work outside of Port-au-Prince, and tend to be small scale operations without the capacity to mobilize for construction work in rural areas. Also, numerous profitable construction activities exist for private contractors in urban areas and these projects offer the additional advantage of reduced levels of business risk. Consequently, it is doubtful that local companies can now be found to execute the rehabilitation activities within the budgetary guidelines of the Project.

Therefore, it is planned that the Irrigation Service, with the assistance of the technical assistance team, will rehabilitate the irrigation systems by force account**. The systems will be restored through the use of labor intensive methods. The estimated costs of the rehabilitation are \$877,000 for Dubreuil and \$475,000 for Jean Rabel.*** The equipment required for these activities will be leased from the Equipment Leasing Service (SLELC) of the Department of Public Works, Transportation and Communication (TPTC). This equipment will be made available to DARNDR to assist with the force account work in the two irrigation systems.

Rehabilitation activities will begin in the Dubreuil/Acul watershed area which will be the initial focal point for both the irrigation and soil conservation sub-projects. During the first 18 months of project implementation (Jan. 1980-Sept. 1981) all rehabilitation/conservation, and in-country training activities for these two sub-projects will be carried out in the Les Cayes region. Therefore, this region will become the principal field office for Irrigation Service personnel involved in the Project and serve as the coordination center for both the irrigation and soil conservation sub-projects. The Dubreuil system will also serve as a training site for the irrigation engineers and technicians assigned to the Project. Irrigation Service personnel will receive direct field training from the technical assistance team during the rehabilitation of the system and actively participate in the supervision of any firms selected for the engineering and construction activities.

* An extensive discussion of these problems is presented in amendment No.2 of the Agricultural Feeder Roads Project (521-0074), submitted 11/1/79, pp 19-20.

** However, local firms will be contacted and bids solicited prior to making the final decision concerning their participation in the Project.

*** For detailed costs refer to Annex D.

In September 1981 work will begin in the Jean-Rabel area after personnel in the Irrigation Service have been trained in the Dubreuil system. Also, the time devoted to the Dubreuil area will allow the technical assistance team and DARNDR personnel to develop the professional relationships necessary for the successful execution of the sub-project, and provide the opportunity to test and standardize the field procedures required to manage the irrigation systems.

In September 1982, after the completion of the Dubreuil system, rehabilitation work will begin in the secondary systems. Field reviews and feasibility studies will be conducted on the most promising of the original fifteen systems. An attempt will be made to select small community systems in proximity to the Dubreuil and Jean Rabel areas in order to maximize the Irrigation Service's resources in adjacent sites which will allow the simultaneous use, where possible, of personnel and equipment already located in the above two areas.

The level of technical sophistication found in these small community irrigation systems is low, making the systems well adapted to rehabilitation using labor-intensive methods. In no case are structures found that cannot be repaired or reconstructed using a minimum of equipment. Local skilled labor (masons, carpenters) will be recruited and unskilled labor is abundant. Construction materials are available locally in all systems. The Irrigation Service, with the assistance of the water-users associations, will hire and supervise the local labor necessary for the reconstruction of these systems. The input of the technical assistance team will be to assist DARNDR personnel in assuring that the reconstruction is carried out to adequate standards, that water is used efficiently and systems maintained. By working on the rehabilitation, local people will also learn the skills they need to maintain their system (masonry, concrete work, simple formwork, etc.). GOH technicians and other craftsmen will also receive on-the-job training in technical skills, work planning and work supervision, organization and management.

The major share of the financing for the secondary systems will be provided by the GOH in the form of local labor. It is anticipated that approximately 500-800 hectares will be rehabilitated, at an estimated cost of \$712 per hectare ^{9/} or an estimated \$570,000 in counterpart funds. AID will fund the purchase of \$63,000 worth of tools and a small amount of materials (almost exclusively cement) for this irrigation rehabilitation work, and \$20,000 worth of office equipment and supplies. Tools will be hand tools except for the purchase of 4 small cement mixers and some specialized tools required for Project implementation.

The vehicles required for the irrigation sub-project will be funded by AID. Six 4-wheel drive vehicles will be purchased at an estimated unit price of \$12,000. Four flat

^{9/}Based on estimates presented in Technical Analysis of Project Paper, Section IV A.I. (adjusted by 10% inflation factor over a three year period), p.42.

* These tools and equipment will become the property of the water-users associations and will be used for the on-going maintenance and operation of the systems.

bed trucks will be purchased at an estimated unit price of \$15,000 and two pick-up trucks will be purchased at an estimated \$9,000 each. Twenty percent of the vehicles purchase price is budgeted for spare parts. The total estimated cost of vehicles needed for implementation of this project component is \$185,000. Each member of the technical assistance team will be furnished with a vehicle and the trucks will be assigned to the irrigation sites.

5. Staffing Requirements and the Training Program

Adequate staffing for implementation of the Project cannot be accomplished entirely by local recruitment. Few Haitian engineers have specialized in irrigation and none are available to work with DARNDR. The Engineering College of the National University of Haiti trains civil engineers but offers no training in irrigation. In May 1979 the Irrigation Service had in its employ three professionals including one irrigation engineer. In response to the proposed Project redesign, DARNDR has hired and assigned twenty recent graduates of the Engineering College to the Irrigation Service. These new employees will receive on the job training from the T.A. team during the rehabilitation activities and some formal training in irrigation.

Training Program

In addition to the in-country training provided by Project funded T.A., Irrigation Service personnel will receive overseas short and long term training. The recently graduated engineers will be the primary recipients of this training.

Detailed training plans will be developed by DARNDR officials with the assistance of the T.A. team. Up to five Irrigation Service technicians will be sent overseas for short term training of up to 6 months during the first year of the Project. Five more will be sent overseas for similar periods during each of the remaining three years of the Project. Short term training will consist of individually tailored programs under the supervision of the U.S. Bureau of Reclamation and/or the USDA Soil Conservation Service.

Three candidates will be selected for long-term, graduate level training during Project implementation. They will be sent overseas in two phases, and will have returned and be actively involved in Project implementation six months before the completion of the Project.

It is now planned that graduate level training will take place at an appropriate U.S. university. The objective of the graduate training will be to train the participants in the disciplines represented by the long-term T.A. team. T.A. team members will participate actively in designing graduate training programs for those who will be trained in their respective fields. Total cost of the above training activities is estimated at \$308,000.

6. Water Users Associations

As rehabilitation work starts in the various irrigation systems targeted under the Project, two members of the T.A. team will work closely with their counterparts to develop training programs for the operation and maintenance of irrigation and drainage systems, and in the preparation of operation and maintenance plans for each system. This ultimately will lead to the formation of a water-users association among farmers in each rehabilitated system.

Irrigation Service personnel will train water users association members so that these farmers will be able to control, maintain, and operate their irrigation systems in the most efficient way possible^{10/}. The operations and maintenance engineer and the farm irrigation specialist will be responsible for the achievement of this fundamental project objective until Irrigation Service personnel can take over and train the association members. Training programs, funded by the GOH, will be established for farmers, watermasters, ditchriders, and gatekeepers to achieve this end.

While the above activities will establish a basis for farmer involvement in the operation and maintenance of the irrigations systems, additional research on the long range effect of the rehabilitation work is required^{11/}. The proposed research will examine land tenure patterns in the Project's target areas and produce recommendations for

^{10/} These water-user relationships are analyzed in section IV.A.1. pp. 43-44 "Technical Analysis" of the Project Paper.

^{11/} Refer to Social Analysis in the Project Paper, section IV.E. pp. 69-81

ensuring that land held by small farmers in target areas remains in their hands throughout and after the completion of Project financed improvements. To this end AID funds will support a study to examine the Project's potential long term impact on the participating small farmers. This study will be financed with the short term technical assistance funds budgeted in this sub-project.

D. Soil Conservation Sub-Project

1. Objective

The objective of this component is to strengthen the capacity of the Soil Conservation Service (SCS) of the DARNDR to provide services to hillside small farmers through the design, implementation and maintenance of soil conservation and watershed management programs.

The following inputs will be provided over a period of four years in order to meet this objective.

a. Three hundred fifty one (351) person-months of long-term T.A. at an estimated cost of \$2,400,000 will be provided to DARNDR through this Project component. Also, an estimated 30 PM of short term technical assistance is envisioned for this sub-project at an estimated cost of \$270,000.*

The long term T.A. team will be comprised of:

1 Watershed Management Specialist	45	person-months
1 Soil Conservation Specialist	45	person-months
1 Tropical Forester	45	" "
1 Soil Scientist	36	" "
4 Soil Conservation Technicians	180	" "
Total:		<u>351</u> person-months

Consultants will be contracted to provide expertise in watershed management, soil conservation, tropical forestry, soil fertility, and watershed restoration.

Scopes of work for this technical assistance were developed by the S.C.S. and approved by USAID**. Two possible sources are under consideration for this project, the USDA's Soil Conservation Service or a firm with extensive experience in the field.

b. Long and short term overseas training, will be financed for S.C.S. personnel (\$288,000).

* The short term technical assistance will tentatively be in the fields of agronomy and rural sociology/anthropology.

** Refer also to Annex C for the detailed scopes of work for the long term consultants.

c. An estimated \$262,000 to purchase tools, materials and vehicles required for the construction of erosion control structures and mobilization of technical assistance team and their DARNDR counterparts.

2. Sub-Project Outputs

The achievement of the sub-project's goal will result in the following outputs:

1. Preparation and design of overall watershed restoration plans, and establishment of a procedure within DARNDR for the selection and prioritization of future watershed restoration works.
2. Establishment of a capacity to supervise watershed restoration works.
3. Preparation and installation of long-term watershed protection systems appropriate for the vegetative, agronomic and socio-economic characteristics of the target watersheds.
4. Establishment of nurseries for the production of vegetative materials required in the watershed restoration effort taking into consideration acceptability of species and level of technology required to protect seedlings.
5. Formation of farmer organizations to institutionalize watershed protection techniques.
6. Establishment of training programs for S.C.S. personnel and target area farmers in soil conservation practices.
7. Preparation of an organizational plan for the S.C.S. together with a manual outlining the staffing requirements and duties of each position.
8. Establishment of training programs to train senior staff members of the S.C.S. in the performance of the duties described in the above-mentioned manual.

3. Implementation Strategy

An extensive treatise on the soil erosion problems in Haiti and the selected techniques to alleviate this extremely critical situation was presented in the Project Paper 12/. The intent of this Project Amendment is to proceed as planned with the proposed strategy, but with a significant increase in project assistance levels. The major inputs that

12/ Refer to Sections III.C.4, pp. 27-29 and IV.A.2, pp. 45-53, Detailed Description and Technical Analysis.

will be augmented are technical assistance and training. The Project Paper called for 72 P.M. of long-term technical assistance (two persons) to the S.C.S. in the areas of soil conservation and conservation engineering. However, as a result of the joint review conducted by DARNDR and USAID, it is proposed that the Soil Conservation sub-project receive a level of support directly proportional to the pivotal role it has in the Haitian agricultural sector.

The new focus entails a significant change in the composition of the technical assistance team. The revised team will consist of four senior level consultants and four field technicians. The senior persons will provide expertise in watershed management, soil conservation, tropical forestry and soils science. Four experienced consultants with broad conservation/watershed restoration credentials will be contracted to provide the required services (171 PM). These senior level contractors will form the in-house advisory team to the chief of the S.C.S. The above disciplines were selected to provide the technical input necessary for each component of the watershed restoration program.

The second part of the modified technical assistance strategy involves the contracting of four soil conservation technicians who will function as the field managers for the senior advisors. Expatriate soil conservation field specialists were not provided for under the original Project design, based on the expectation that in-service training and new staffing levels in the S.C.S. would fulfill the program requirements. These plans have not materialized because of overall Project delays and lower staffing levels than anticipated at S.C.S. Therefore, four experienced field technicians (180 PM) will be added to the technical assistance team to provide rapid execution of field level operations during the start-up phase, to conduct the in-service training activity, to provide on-site technical support to their S.C.S. counterparts, and to coordinate the organization and training of farmer groups involved in this sub-project.

Given its limited human resource base, concern was expressed by USAID and DARNDR about the ability of the S.C.S. to carry out an effective soil conservation program in the proposed four watershed areas as designed in the Project. Therefore, it was determined that watershed

restoration activities will begin in the vicinity of Les Cayes, in the Acul River watershed, which includes the priority Dubreuil irrigation system. The Soil Conservation Service will focus its attention and the resources made available to it through the Project on this watershed which encompasses approximately 15,000 hectares and contains an estimated 12,000 farmers. S.C.S. personnel will receive their initial training in this watershed prior to their assignment to other watersheds. The Jean Rabel watershed* will be the next area of operations followed by other watersheds adjacent to the irrigation systems selected for rehabilitation in the Irrigation component of this Project. During the life of this Project rehabilitation of the Acul, Jean Rabel and two other watersheds will be undertaken.

4. Soil Conservation/Watershed Restoration

The conservation/restoration activities will promote the planting of economic tree crops on highly erodable land while allowing for the continued use of the land for food crops. This method is necessary because the extreme population pressure on existing arable land precludes traditional approaches to soil erosion problems. Although farmers could not be convinced to remove land from food production merely to save the environment, they can be convinced to terrace their land and plant tree crops if the economic benefits can be demonstrated. The project activities in soil conservation will provide for a tree crop/food crop mix of management practices that are appropriate on a technical and cultural basis.

Plans will be developed for each watershed, including use of new planting materials and cropping systems to be used, development of simple plans for terrace structures of rock earth and plant materials and development of plans for the use of farm labor in construction activities. Under the supervision of the Soil Conservation Service, terraces will be constructed by farmers who will be paid on the same basis as those workers involved in the rehabilitation of irrigation systems described in Section 3. Trees propagated in village nurseries and plant materials from other sources will be planted by participating farmers. Bench terraces will be used to the extent possible as a relatively permanent erosion control structures. Agro-

* This being the other priority area under the Irrigation Sub-project, with a watershed of 900 hectares and 2,000 farm families.

forestation, woodlots and tree-intercropping in agricultural areas will be introduced in order to reduce pressure on remaining stands of trees on the higher, steeper slopes of the target watersheds.

A nursery will be established in close proximity to each target watershed or in an easily accessible location where more than one watershed in a given area is being treated. Since watershed restoration activity in this Project will follow irrigation rehabilitation work (in order to stabilize slopes and thus reduce run-off and downstream siltation), it is likely that one nursery will serve the Acul area and another the Jean-Rabel area. This will be determined by S.C.S. officials with the advice of the T.A. team.

The nursery now located at Levy Farm near Camp Perrin in the Les Cayes area was initially intended to serve the Acul watershed restoration effort. This nursery will be phased out and replaced by another at Ducis, nearer to the Acul watershed. Levy farm will become a research station under the Research/Extension component of this Project. A decision on the value of retaining or replacing the nursery at Nan Vincent in the Jean Rabel area will be made after review of the situation by the T.A. team. The operation of village nurseries to produce fruit trees and selected forest species will provide a source of planting materials for participating farmers. The approach will be to provide resources and services to farmer groups located in the watershed areas to enable them to change to production methods and crop mixes which are more conducive to soil conservation.

Basic intercropping techniques* that use fruit trees as both food crops and soil conservation crops will be introduced. An effort will be made to improve traditional cropping systems in order to: (1) add new crops to farmers' usual crop mix; (2) ensure a minimal level of inputs, seeds or trees; and (3) to improve cultural practices (weeding, mulching, soil preparation, etc.). The principal benefits anticipated from the above activities are: reduction of soil erosion in project areas accompanied by reduced deterioration in downstream irrigation systems, improved soil conservation skills of participating farmers, a general increase in soil fertility and water retention in project areas, establishment of a resource base for better plant

* Defined as single or sets of rows of two crops occupying land in an alternative pattern.

materials, and the diversification of crops produced in target areas resulting in an increase of produce available for consumption and sale.

The Project will fund the purchase of \$125,000 worth of tools and materials for the watershed restoration effort. Tools purchased will be hand tools and some specialized instruments required for watershed restoration design and implementation*. Labor costs will be paid out of GOH counterpart funds.

Six 4-wheel drive vehicles will be purchased at an estimated cost of \$12,000 per unit. One flatbed truck and three pick up trucks will be purchased at an estimated cost of \$42,000. Twenty percent of the vehicles purchase price is budgeted for spare parts. The total estimated cost of the vehicles and spare parts required for project implementation is \$137,000. The 4-wheel drive vehicles will be provided for the use of the technical assistance team, and the trucks will be assigned to the individual watershed areas for use by DARNDR personnel.

5. Staffing Requirements and the Training Program

A small nucleus of qualified personnel, including seven agronomists, are now assigned to the S.C.S. Personnel levels will be increased by at least five more agronomists before the arrival of the long-term T.A. team. This expanded core of agronomists will receive overseas training.

Training

In addition to in-country training of S.C.S. personnel by T.A. team members, the project will fund overseas short and long-term training. Detailed training plans will be developed by S.C.S. officials with the assistance of the T.A. team. Two S.C.S. agronomists will receive short term training of up to six months during the first year of Project implementation; three will be sent overseas for similar periods during each of the remaining three years of Project implementation.

* These tools and equipment will become the property of the farmers organizations involved in the conservation activities.

Individual short-term training courses will be designed and will take place at Mayaguez Institute of Tropical Agriculture in Puerto Rico, and Centro Agropecuria Tropical de Investigaciones y Ensenanza (CATIE) in Costa Rica. Overseas, short term training will begin 4-6 months after the arrival of the long term T.A. team.

Four candidates for long-term, overseas graduate-level training will be selected. The first two will be sent abroad for two years during the first year of the Project; two others will be sent overseas for two years, during the second year of the Project. Graduate level training at the M.S. level at suitable U.S. universities will concentrate on soil conservation/watershed management. The total cost of the above training programs is estimated at \$290,000.

6. Farmer Organizations

Farmers cropping a given hillside must cooperate if the soil conservation program is to succeed. Typically, in Haiti, farmers will crop several plots which are owned, rented or share-cropped at different locations on a particular hillside. Therefore in order to connect all terraces on a given contour, all farmers on a particular slope must participate if the program is to be successful.

This physical interdependency of plots with regard to soil erosion control will be reflected organizationally in formal associations of farmers in each target watershed. These associations are essential to the success of the Project, particularly in the maintenance phase. The exact form the associations will take will be determined in the early stages of Project implementation. The association model of the "Hillside Unit" suggested by earlier USAID sponsored research ^{13/} will probably be used with some modification. This model places special emphasis on agricultural rather than residential proximity as the basis for farmer organizations. Thus, the basic organizational model will be based on farmers cropping a given hillside rather than farmers living in close proximity to one another. Short term Social Scientist consultants working with the Watershed Management Specialist, the Soil Conservation and their counterparts in the S.C.S. will develop the appropriate association model.

^{13/}"Hillside Units, Wage Labor, and Rural Haitian Land Tenure: A Proposal for the Organization of Erosion Control Projects." G. Murray, August 1978.

The Watershed Management Specialist, the Soil Conservation Specialist, the Technicians, and their S.C.S. counterparts will be responsible for the formation and training of the appropriate farmer organizations. Technical assistance in the form of farmer leader training, field days, communication media, demonstrations and personal contact will be provided to farmer groups to guide them in use of improved plant materials, cultural practices and farming systems designed to reduce soil erosion.

E. Research/Extension Sub-Project

1. Objective

This sub-project will strengthen the Research Service's (SERA) ability to develop and make available basic food crop production packages to small farmers in order to increase their productivity on a sustained and economical basis. The following inputs will be provided:

a. One hundred and fifty-six person-months of long-term technical assistance totalling \$1,375,000 will be provided to SERA. Additionally, an estimated 45 person-months of short-term assistance will be provided at a cost of \$373,000.

The long-term team will consist of:

1 Cereals Agronomist	39 person-months
1 Pulses Agronomist	39 person-months
1 Root Crop Agronomist	39 person-months
1 Farm Management Specialist	39 person-months

Short-term advisors will be needed in the following areas: entomology, pathology, soil fertility, farming systems, and extension delivery systems.

b. Long and short-term overseas training for up to 20 SERA technicians at an estimated cost of \$276,000, in addition to in-country training to be provided by the technical assistance team.

c. The construction (\$76,000) and equipping (\$450,000) of two research stations.

d. Project-related vehicles \$79,000.

2. Sub-Project Outputs

At the end of the Project, the following sub-project outputs will be achieved:

1. Two functioning research stations, one at Damien Farm near DARNDR headquarters, the other at Levy Farm near Les Cayes.

2) Preparation and execution of research plans aimed at determining economically applicable production packages.

3) Establishment of cooperative, DARNDR-farmer trials and demonstration plots.

4) Establishment of training programs for SERA personnel and small farmers.

5) Establishment of pilot production packages for use by small farmers.

3. Implementation Strategy

In the original Project design research and extension were separate components. Research activities focussed on the development of production packages on food crops as well as on cash crops such as sugar cane and cotton. Extension was focussed on training local rural groups in soil conservation techniques, proper irrigation practices, in addition to the dissemination of production packages developed under the research component. Furthermore, funds were provided for the establishment of an elaborate information communication system.

During the joint USAID-DARNDR review the revised strategy for the research and extension subproject was based on the following considerations:

1) There does not exist, in Haiti, a viable applied research program geared to the production of technological packages that are economically applicable by the vast majority of small farmers;

2) SERA does not have the skilled human resources needed to carry out the research program as originally envisioned;

3) There is no link between SERA and the Extension Service needed to reach target farmers.

In view of these constraints it was agreed to establish an applied research program to support a major program to increase food production, which DARNDR started two years ago. The program (Production Vivrière) has experimented with such crops as corn, millet, sorghum, peas, potatoes and sweet potatoes. Although a spotty, piecemeal approach has been used encouraging results have been obtained and it is likely that these modest successes will be increased over the next two years if adequate resources are available and favorable climatic conditions prevail. However, without an effective applied research program, these spotty successes cannot and will not become the norms which must be achieved if Haiti is to overcome

its increasing food deficit and at the same time, improve the income and welfare of its peasants. The Research/Extension sub-project will establish a food crop applied research program to provide the missing but essential foundation for the eventual, nationwide success of the Food Production Program.

4. Research and Extension Program

The Project will fund the construction and establishment of research stations at Damien and Levy Farm. Research will focus on the three crop areas included in the Production Vivrière Program: Cereals (corn, sorghum and millet), pulses and root and tubercrops as well as research on appropriate small farming techniques and systems.

Organizing and operating a food crop research program that will benefit the Haitian peasant will be a difficult task. At the outset such a program must be a Haitian program and it must initially establish a degree of credibility that will justify continued support on the part of the GOH and active cooperation on the part of the peasant. The program can succeed only to the extent that DARNDR provides adequate human and material resources. SERA is not now able to undertake such a program. As of June, 1979, SERA had 31 agronomists and technicians. All but one were hired in late 1978 and most are now involved in on-going activities. If an applied research program is to succeed, many of these inexperienced technicians will require training. In addition, SERA will have to hire additional personnel and provide for their training. Therefore, the Research/Extension sub-project will enable SERA to start the program and train some of the scientists and technicians needed to operate it on a continuing basis.

USAID will fund the services of four long-term advisors for a period of 39 person-months each. Three of the advisors will be production agronomists who have had experience in tropical agronomy and who are familiar with suitable production packages that might prove suitable for use in Haiti and have been developed at international research organizations, such as CIMMYT, CIAT, and IITA. The project will provide one specialist in cereal crops and two specialists in pulses, and tuber crops and an agricultural economist with experience in farm management and farming systems. Short-term consultants will support the long-term team. The counterparts to the long-term advisors will be the agronomists and technicians now working on research activities at Levy Farm and at Damien.

Initially, the advisors will help identify suitable production packages and farming techniques, organize the operations of the two research stations, and develop in-country training programs. After this initial phase, the research program will commence.

Research activities will focus on areas where irrigation water is available. However, the problems of rainfed production will also be investigated. Off-farm cooperative trials will be started as soon as proper research station trials have been completed. The research/extension activities may be expanded to include the hilly and mountainous areas, particularly those where soil conservation programs have been established.

While the Extension Service is being reorganized under the FAO Project ^{14/} agents from the Service will be recruited to work with SERA under this Project. The training and experience gained from activities at the research stations and the organization of farm groups and establishment of on-farm test sites will help train extension agents to help the peasant outreach program of the Extension Service, when that component of the FAO Project is ready to be implemented.

To establish the pilot food crop research and production effort, two simple three-room centers will be constructed at Levy and Damien to carry out the research program and provide space for office, laboratory and store room equipment and supplies. Field equipment, such as small tractors, seeders and handtools, in addition to plant materials and fertilizers will be purchased. Demonstration plots will be established to train farmers on the use of production packages and improved farming techniques. Four, 4-wheel drive utility-type vehicles will be purchased and used by the long-term advisors. In addition, two pick-up trucks will be purchased, and will be assigned to each of the research stations for Project related activities.

5. Training Program

Long and short-term overseas training will be provided to strengthen the technical services of SERA to carry out the food production program. Three SERA agronomists will be selected to go for two year graduate training programs in

^{14/} For a description of the FAO Extension Project, see Section II, p. 18 Background and Rationale, of this Amendment.

the three crop areas. The training will be in the United States at suitable universities. All three trainees will return to Haiti before the long-term technical advisors leave and take over management of the program.

In addition, over the life of the project, up to 20 SERA technicians will attend four to six month training courses in research and extension available at CIMMYT in Mexico City, CIAT in Cali, Columbia, and possibly IITA in Nigeria and ICRISAT in India. At these Centers, the trainees will be exposed to the operation and management of well run research and extension programs in developing countries. Candidates will come from existing SERA staff and from graduates of FAMV who will be hired by SERA, and have taken part in the in-country training programs developed by the technical advisors.

At the end of this Project, there will be two functioning research stations. Programs in improved farming techniques and some improved plant and seed varieties will have been developed and field tested. There will be a trained cadre of scientists and technicians to carry on further research in these crops, the results of which, will ultimately be disseminated nationwide.

In addition to strengthening the agricultural economics and statistics capability of SERA, ~~ADS II-15/ will~~ provide funds to develop applied research programs in additional crop areas. Programs that are being considered are research in fruit crops, forage crops, vegetables and livestock, as well as programs in hillside farming systems. Funds will also be provided to train SERA staff in such fields as entomology, pathology and soil science. These are the back-up scientists needed to support a successful national applied research program. National research in coffee, now funded under the AID financed Small Farmer Improvement Project (521-0073), will be funded under ADS II, when that Project is completed in June 1980.

15/ See Section II, p.17 Background and Rationale for a description of this Project.

IV. FINANCIAL ANALYSIS

The total cost of this amendment will be \$22.6 million. The A.I.D. contribution will be \$12.1 million, consisting of \$9.3 million in grant funds and \$2.8 million in loan funds. This will require deobligating \$5.2 million in grant funds over the remaining life of the project. The GOH will contribute \$10.5 million or 46 percent of total project costs.

As of October 31, 1979, \$314,000 in AID grant funds have been disbursed since the beginning of the Project. Most of this amount financed the technical assistance contract with Servicios Technicos del Caribe (\$203,000). Other costs include short-term technical assistance (\$15,000), a management seminar (\$25,000), overseas training (\$16,000), and the emergency procurement of seven project related vehicles (\$55,000). The GOH has contributed the gourde equivalent of \$208,000 to project activities. According to the latest available GOH figures, these include \$63,000 for salaries, \$109,000 for equipment and supplies, and \$36,000 for contract services.

A. Rationale for Grant Financing Technical Assistance and Training

At the time of the original DAEC review, sufficient grant funds were not available to grant fund the entire technical assistance program of the Project. Subsequently, however, additional funds became available, and USAID was asked to request AID/Washington to amend the Project Authorization and Request for Allotment of Funds (PAF) to include the grant financing of all technical assistance funded under the Project. (State 210869 (9/3/77), State 241706 (10/12/77)). These cables are contained in Annex E.

In addition to grant financing technical assistance, USAID also proposes grant funding all anticipated training costs of the project. If the quality of life of the small Haitian farmer is to be improved, much of the improvement will come about through the ability of the Ministry of Agriculture to deliver productive services to the small farmer. This amendment realizes this fact; indeed this is the principal reason for the increased emphasis on technical assistance and training. Because of the symbiotic relationship of these two components, in addition to the pilot nature of the program, USAID recommends that all technical assistance and training costs be financed with grant funds.

B. Financial Plan

a. A.I.D. Contribution

1. Technical Assistance (\$7,709,000 - Grant)

These funds will be used to finance up to 22 work years of long-term and 13 work years of short-term technical assistance to reinforce the technical capabilities of the administration, irrigation, soil conservation and research services of the DARNDR.

2. Rehabilitation/Construction (\$1,428,000 - Loan)

Approximately \$1,352,000 is provided to rehabilitate the Dubreuil and the Jean-Rabel irrigation systems. These two systems consist of approximately 1300 hectares. The J. G. White Corporation completed detailed feasibility studies for both systems in 1977. The original cost estimates of these studies have been updated to take account of inflation. Two research stations, one near Les Cayes and the other at the experimental farm located at DARNDR headquarters, will be constructed at an estimated cost of \$76,000.

3. Training (\$961,000 - Grant)

Approximately \$567,000 will be provided for short-term training for up to 55 employees from the technical services at DARNDR. The training will last from four to six months and will take place in the United States and in appropriate Third World countries. Two year graduate level training for up to 10 DARNDR technicians will cost approximately \$394,000.

4. Equipment/Supplies (\$724,000 - Loan)

Basic equipment and supplies such as handtools, cement mixers, and specialized equipment for the technical assistance teams to support project activities will cost \$670,000. Approximately \$54,000 will be provided to establish a basic telecommunications network linking DARNDR headquarters with the office of the district agronomes at each pilot site.

5. Vehicles/Spare Parts (\$418,000 - Loan)

These funds will be provided to purchase up to thirty-three vehicles and a one-year supply of spare parts. The vehicles include four wheel drive utility vehicles, pick-up and flat-bed trucks.

6. Evaluation (\$200,000 - Grant)

Funds are provided for five independent evaluations during the life of project, including a final evaluation at the end of the project.

7. Contingency (\$430,000 - Grant; \$230,000 - Loan)

These funds will provide for unforeseen expenses over the life of project. Annual inflation has been calculated for each line item. See page 50 for an explanation of inflation rates used.

b. GOH Contribution

1. Local Labor (\$8,600,000)

These funds will pay the salaries of laborers hired by the Irrigation and Soil Conservation Services, in addition to subsidies to farmers for the on-farm testing of production packages.

2. Personnel Costs (\$1,327,000)

These funds will pay the salaries of DANRDR personnel involved in project activities.

3. Operations and Maintenance (\$570,000)

These funds will purchase gasoline, oil and maintenance of project vehicles, the rental and furnishing of suitable housing; in Les Cayes, to house DANRDR employees while participating in on-the-job training courses, as well as material costs associated with small system irrigation rehabilitation and soil conservation work.

INTEGRATED AGRICULTURAL DEVELOPMENT

Revised Summary Cost Estimates and Financial Plan

(U.S. \$000)

<u>A.I.D.</u>	<u>F.X.</u>	<u>L.C.</u>	<u>TOTAL</u>
<u>I. Technical Assistance</u>	<u>7,709</u>		<u>7,709</u>
<u>Project Administration (238 P.M.)</u>	<u>1,593</u>		<u>1,593</u>
General Administration (48 P.M.)	322		322
Accounting/Finance (48 P.M.)	322		322
Personnel (48 P.M.)	322		322
Procurement (48 P.M.)	322		322
Short-Term Advisors (46 P.M.)	305		305
<u>Irrigation (198 P.M.)</u>	<u>1,693</u>		<u>1,693</u>
Irrigation Mgmt. Specialist (45 P.M.)	389		389
Irrigation (Design/Construction) (36 P.M.)	306		306
Irrigation (Operation/Mnt) (45 P.M.)	389		389
On Farm Irrigation Specialist (36 P.M.)	306		306
Short-Term Advisors (36 P.M.)	303		303
<u>Soil Conservation (381 P.M.)</u>	<u>2,675</u>		<u>2,675</u>
Soil Conservation Specialist (45 P.M.)	389		389
Watershed Mgmt. Specialist (45 P.M.)	389		389
Tropical Forester (45 P.M.)	389		389
Soil Scientist (36 P.M.)	306		306
4 Technicians (45 P.M. each)	936		936
Short-Term Advisors (30 P.M.)	266		266
<u>Research/Extension (201 P.M.)</u>	<u>1,748</u>		<u>1,748</u>
Agronomist-Cereals (39 P.M.)	339		339
Agronomist-Pulses (39 P.M.)	339		339
Agronomist-Root Crops (39 P.M.)	339		339
Farm Management Specialist (39 P.M.)	339		339
Short-Term Advisors (45 P.M.)	392		392

II. <u>Rehabilitation/Construction</u>	<u>1,428</u>	<u>1,428</u>
<u>Irrigation Rehabilitation</u>	<u>1,352</u>	<u>1,352</u>
Dubreuil System	877	877
Jean Rabel System	475	475
<u>Research Stations</u>	<u>76</u>	<u>76</u>
Levy Farm	38	38
Damien	38	38
III. <u>Training</u>	<u>961</u>	<u>961</u>
<u>Project Administration</u>	<u>89</u>	<u>89</u>
Short-Term Overseas	64	64
Management Seminar	25	25
<u>Irrigation</u>	<u>308</u>	<u>308</u>
Graduate	107	107
Short-Term Overseas	201	201
<u>Soil Conservation</u>	<u>288</u>	<u>288</u>
Graduate	180	180
Short-Term Overseas	108	108
<u>Research Extension</u>	<u>276</u>	<u>276</u>
Graduate	107	107
Short-Term Overseas	169	169
IV. <u>Vehicles/Spare Parts</u>	<u>418</u>	<u>418</u>
Motor Vehicles	337	337
Spare Parts	56	56
V. <u>Equipment/Supplies</u>	<u>635</u>	<u>724</u>
<u>Project Administration</u>	<u>54</u>	<u>66</u>
Telecommunications Systems	54	54
Office Equipment	12	12

<u>Irrigation</u>	<u>70</u>	<u>13</u>	<u>83</u>
Tools	70		70
Equipment/Supplies		13	13
<u>Soil Conservation</u>	<u>112</u>	<u>13</u>	<u>125</u>
Tools	112		112
Equipment/Supplies		13	13
<u>Research/Extension</u>	<u>399</u>	<u>51</u>	<u>450</u>
Research Station Equipment	359		359
Plant Materials	60		60
Demonstration Plots		36	36
Office Equipment/Supplies		15	15
<u>VI. Evaluation</u>	<u>200</u>		<u>200</u>
Contingency	571	89	660
Total A.I.D.	10,494	1,606	12,100

<u>GOH</u>			
<u>Personnel Costs</u>	<u>1,327</u>		<u>1,327</u>
Project Administration	201		201
Irrigation	382		382
Soil Conservation	374		374
Research/Extension	370		370
<u>Local Labor</u>	<u>8,314</u>		<u>8,314</u>
Irrigation	866		866
Soil Conservation	7,200		7,200
Research/Extension	248		248
<u>Operations and Maintenance</u>	<u>859</u>		<u>859</u>
Project Administration	150		150
Irrigation	289		289
Soil Conservation	270		270
Research/Extension	150		150
Total GOH	10,500		10,500
A.I.D.	\$12,100	53.5%	
GOH	<u>10,500</u>	<u>46.5%</u>	
<u>TOTAL</u>	<u>\$22,600</u>	<u>100.0%</u>	

INTEGRATED AGRICULTURAL DEVELOPMENT
Revised A.I.D. Disbursement Schedule
(U.S. \$000)

	<u>Thru</u> <u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>TOTAL</u>
Technical Assistance	198	1,148	2,205	2,182	1,594	382	7,709
Rehabilitation/Construction		176	575	577	100		1,428
Training	41	75	250	350	245		961
Vehicles/Spares Parts	55	193	93	77			418
Equipment Supplies		464	141	65	49	5	724
Evaluation		20	50	35		95	200
Contingency		<u>116</u>	<u>198</u>	<u>198</u>	<u>119</u>	<u>29</u>	<u>660</u>
<u>TOTAL</u>	<u>294</u>	<u>2,192</u>	<u>3,512</u>	<u>3,484</u>	<u>2,107</u>	<u>511</u>	<u>12,100</u>

- 1) Technical Assistance: 5% compounded starting in FY 81, except for Project Administration.
- 2) Rehabilitation/Construction: 15% compounded starting in FY 81.
- 3) Equipment/Materials: 10% compounded beginning in FY 80.
- 4) Vehicles and Training: 10% compounded starting in FY 81.

INPUT/OUTPUT MATRIX

(U.S. \$000)

Inputs \ Outputs	Project Administration	Irrigation	Soil Conservation	Research Extension	Total
<u>A.I.D.</u>					
Technical Assistance	1,593	1,693	2,675	1,748	7,709
Rehabilitation/Construction		1,352		76	1,428
Training	89	308	288	276	961
Vehicles/Spare Parts	17	185	137	79	418
Equipment/Supplies	66	83	127	450	724
Evaluation	50	50	50	50	200
Contingency	<u>165</u>	<u>165</u>	<u>165</u>	<u>165</u>	<u>660</u>
<u>Total A.I.D.</u>	<u>1,980</u>	<u>3,836</u>	<u>3,440</u>	<u>2,844</u>	<u>12,100</u>
<u>GOH</u>					
Personnel Costs	201	382	374	370	1,327
Local Labor		866	7,200	248	8,314
Operations and Maintenance	<u>150</u>	<u>289</u>	<u>270</u>	<u>150</u>	<u>859</u>
<u>Total GOH</u>	<u>351</u>	<u>1,537</u>	<u>7,844</u>	<u>768</u>	<u>10,500</u>
<u>Total (AID plus GOH)</u>	<u>2,331</u>	<u>5,373</u>	<u>11,284</u>	<u>3,612</u>	<u>22,600</u>

V. IMPLEMENTATION PLAN

A. Schedule of Major Events

The following is a schedule of major events that will occur throughout the remaining life of project.

FY 80

1. Project Paper amendment approved by AID/
Washington December 1979
 2. Amended project agreement signed February, 1980
- I. Project Administration (MIT)
1. Evaluation of Management Implementation
Team January, 1980
 2. Submit procurement plan for Project
commodities* February, 1980
 3. Prepare documentation for procurement
of commodities February, 1980
 4. Prepare documentation for telecommunica-
tions net work** February, 1980
 5. Procure housing in Les Cayes for trainees.
Start remodelling and furnishing March, 1980
 6. Candidates for first years overseas
training in project administration,
irrigation, soil conservation and
research/extension selected March, 1981
 7. PIO/P's for short-term training prepared April, 1980
 8. Contracts signed for commodities and
telecommunications network June, 1980
 9. Plan for design of management systems
submitted and approved. First years
short-term trainees depart. July, 1980
 10. PIO/P prepared for first year candi-
dates for graduate training August, 1980

11. Implementation of management systems begins August, 1980
12. Commodities arrive September, 1980
13. Telecommunications equipment arrives: September, 1980
14. Candidates for first years graduate training depart September, 1980
15. Installation of communication network commences FY 81 October, 1980
16. First year's short-term trainees return to Haiti and begin work in their respective services October, 1980
17. Training commences for operation and maintenance of telecommunications network November, 1980
18. Candidates selected for second year training* January, 1981
19. PIO/Ps prepared for short-term training February, 1981
20. Second year's short-term trainees depart March, 1981
21. PIO/P's prepared for second year candidates for graduate training August, 1981
22. Second years short-term trainees return September, 1981
23. Candidates for second year's graduate training depart September, 1981
24. Candidates selected for third year short-term training* FY 82 January, 1982
25. PIO/P's prepared for third year's short-term training February, 1982
26. Third years short-term trainees depart March, 1982
27. First years graduate level trainees return to Haiti and begin working in their respective services June, 1982
28. Third years short-term trainees return September, 1982

FY 83

- | | |
|---|-----------------|
| 29. Candidates selected for fourth year of short-term training* | January, 1983 |
| 30. PIO/P's prepared | February, 1983 |
| 31. Fourth years short-term trainees depart | March, 1983 |
| 32. Second years graduate trainees return | June, 1983 |
| 33. Fourth years short-term trainees return | September, 1983 |

FY 84

- | | |
|--|----------------|
| 34. Management systems installed and operational | December, 1983 |
| 35. Final Fvaluation | January, 1984 |

Accomplished in conjunction with technical services and/or technical advisors.

** Accomplished in conjunction with Project 521-0083 (Small Farmer Marketing).

II. Irrigation

FY 80

- | | |
|--|----------------|
| 1. Technical assistance contract signed with Williams/Sheladia | February, 1980 |
| 2. Long-Term advisors arrive | April, 1980 |
| 3. Short-term social scientists arrive, begin study of land-tenure and irrigation maintenance problems | May, 1980 |
| 4. Work commences on Dubreuil System | August, 1980 |
| 5. In country training programs for DARNDR irrigation technicians begins | July, 1980 |

6. Training programs for farmers, ditchriders, gatekeepers and water masters begins September, 1980
 7. Formation of Dubreuil Water-Users Association, and smaller systems associations begins October, 1980
 8. Irrigation component evaluated June, 1981
 9. Work commences on Jean Rabel System September, 1981
- FY 82
10. DARNDR begins feasibility studies for additional irrigation system rehabilitation October, 1981
 11. Training programs for farmers, ditchriders, gatekeepers and water masters begins November, 1981
 12. Formation of Jean-Rabel Water-Users Association begins December, 1981
 13. Work on Dubreuil System is completed September, 1982
 14. DARNDR has completed feasibility studies on systems comprising 500 hectares August, 1982
- FY 83
15. Mobilization for smaller system rehabilitation begins October, 1983
 16. Smaller system rehabilitation begins October, 1982
 17. Work on the Jean-Rabel System is completed February, 1983
 18. DARNDR has completed feasibility studies on irrigation systems comprising an additional 750 hectares September, 1983

- 19. Rehabilitation of smaller irrigation systems completed. Water users associations are functioning. December, 1983
- 20. Final evaluation January, 1984

III. Soil Conservation

- 1. PIO/T prepared for PASA with USDA January, 1980
- 2. PASA signed February, 1980
- 3. Long-term advisors arrive April, 1980
- 4. Survey of Acul watershed begins May, 1980
- 5. In-country training programs for DARNOR soil conservation technicians begins June, 1980
- 6. Nursery established for Acul Watershed July, 1980
- 7. Ground survey and evaluation of Acul Watershed complete September, 1980
FV 81
- 8. Farmer organizational model developed, farmer organization begins October, 1980
- 9. Restoration plan for Acul Watershed completed, fullscale restoration work begins November, 1980
- 10. Survey of Jean-Rabel watershed begins December, 1980
- 11. Nursery established for Jean Rabel Watershed February, 1981
- 12. Farmer organization begins, fullscale restoration work begins in the Jean Rabel May, 1981
- 13. Soil Conservation component evaluated June, 1981
- 14. Two additional watersheds selected, survey begins, nurseries established July, 1981
- 15. Restoration plans completed, restoration work begins. Restoration of Acul Watershed completed November, 1982
FV 82
- 16. Restoration of Jean-Rabel watershed completed March, 1983
- 17. Two additional watersheds restored December, 1983
FV 84
- 18. Final evaluation January, 1984

IV. Research/Extension

FY 80

1. IFB published for the construction of research centers February, 1980
2. Scope of work for technical assistance team prepared March, 1980
3. RFP published in Commerce Business Daily April, 1980
4. Proposals for construction of research centers received April, 1980
5. Proposals for technical assistance received June, 1980
6. Contract signed for construction of research centers June, 1980
7. Construction of research centers commences July, 1980
8. Contracts signed for technical assistance August, 1980
9. Long-term advisors arrive ~~September, 1980~~
FY 81
10. Construction of research centers completed December, 1980
11. Research stations operational. On-station screening for environmental adaptability begins February, 1980
12. On-station cropping trials begins August, 1980
FY 82
13. On-farm cropping trials commence. On farm farmer acceptance tests begin February, 1982
14. Research and Extension evaluated June, 1982
15. On-farm result demonstrations begin. Preeder seed increase begins August, 1982

FY 83

16. Introduction campaign begins October, 1983

FY 84

17. Final evaluation January, 1984

B. Implementation Arrangements

This Project amendment will finance four major technical assistance contracts totalling over \$7.7 million. In order to insure the timely implementation of the remaining technical assistance contracts, USAID recommends that the direct AID contracting mode be used for the procurement of the remaining technical assistance contracts. This recommendation is made taking into account the types of contracts envisioned and limited institutional and human resources capability of DARNDR in host-country contracting (it took over one year to advertise, select and negotiate a contract for the MIT). This recommendation is consistent with guidance contained in PD-68 and the Auditor General's "Review of the Application of Host Country Mode" dated May 18, 1979.

Types of Technical Assistance Contracts Envisioned

Irrigation: For the technical assistance for the irrigation component USAID plans an 8 (a) set-aside with the Small Business Administration (SBA). USAID has identified the firm of Williams and Sheladia as qualified to perform the services required and the SBA has agreed. USAID has entered into discussions with the firm and feels confident that Williams and Sheladia can perform the required services. A contract will be signed and the required technicians mobilized shortly after signing of the amended Project Agreement.

Soil Conservation: For the technical services under this component USAID is planning a PASA with the Soil Conservation Service of the USDA. At this time; USAID has had only preliminary discussions with the USDA on providing the necessary assistance. If for some reason the USDA cannot provide the necessary services; USAID plans a competitively awarded direct contract with a firm.

Research/Extension: For the technical services envisioned under this component USAID is planning a competitively awarded direct contract with a firm or university.

Training

Project Administration: It is envisioned that candidates will attend appropriate short-term training courses in the United States, sponsored by U.S. Government agencies.

Irrigation: Short-term training will consist of programs under the supervision of the Bureau of Reclamation or the Soil Conservation Service of the USDA. Graduate level training will take place at appropriate institutions such as Colorado or Utah State.

Soil Conservation: It is planned that short-term training programs will take place at suitable third world institutions, such as Mayaguez Institute of Tropical Agriculture in Puerto Rico, Centro Agropecuria Tropical de Investigaciones y Ensenanza in Costa Rica, and possibly various sites in the Phillipines and Taiwan. Graduate training will take place at appropriate U.S. institutions such as Colorado State or Texas A&M.

Research and Extension: Short-term training courses will probably take place at CIMMYT in Mexico City, CIAT in Cali, Columbia, and possibly IITA in Nigeria and ICRISAT in India. Graduate training will be in the United States, at such universities as Louisiana State, Florida, or Texas, A&M.

Vehicles, Commodities and Construction: All procurement of A.I.D. financed vehicles, commodities and construction services will conform to guidelines established in A.I.D. Handbook's 11 and 15.

C. Evaluation Plan

Each sub-project will be independently evaluated at least once during the life of the project. Funds are also provided for an end of project evaluation.

Each sub-project evaluation will focus on activities which have occurred in that particular area, particularly as they relate to the institutional reinforcement of the particular administrative and technical services at DARNDR and how this reinforcement activity is related to the delivery of services to the small farmer. Recommendations will focus on how the inputs supplied can be better utilized, or modified, if necessary, to achieve each sub-project objective.

The end of project evaluation will examine the activity of each sub-project and how the implementation of these sub-projects relates to the over-all project objective.

Provisions for the collection of baseline data have been included in estimates for technical assistance. The collection of baseline data will commence immediately after the

arrival of the different technical assistance teams. The baseline data along with the schedule of major events contained in this amendment will serve as a means of measuring progress throughout the life of the project 16/.

.....
16/ Annex IV, Exhibit 4 or original Project Paper contains evaluation criteria which can be used for determining progress indicators.

Scope of Work for Management Implementation Team

The members of the Management Implementation Team will provide the following services:

- a) Assist in the general management of the Integrated Agricultural Development Project.
- b) Assist in the preparation of specifications and evaluation of contract proposals; assist in the administration and supervision of construction contracts, technical and engineering services, and assist in the supervision and evaluation of the Contractor's performance.
- c) Assist in determining needs and in drafting specifications for bidding and evaluation of proposals for the purchase of vehicles, equipment furniture and materials for DARNDR.
- d) Assist in coordinating and supervising the training programs in Haiti and in the selection of candidates and taking care of the necessary administrative formalities.
- e) Design and implement a detailed and comprehensive system for the supervision of operations so as to provide donors the base for controlling and evaluating all the activities of the project.
- f) Develop and assist in the implementation of a personnel training program to establish a new procurement and inventory control system.
- g) Develop and assist in the implementation of a personnel training program to establish a new system of financial management and accounting.
- h) Develop and assist in the implementation of a personnel training program to establish a new personnel administration system which will motivate employees to continuously look for professional improvement in order to achieve higher level of efficiency and better results in their work.
- i) Develop and assist in the installation and in the training of personnel to establish a new management system for the garage of the Department and for the purchase of equipment destined to serve the rural areas.
- j) Orientation and training of counterpart personnel assigned to work with the Management Implementation Team.

SCOPE OF WORK FOR IRRIGATION TEAM (DRAFT)

1. The Engineering Management Specialist:

- The Team Leader and Advisor to the Head of the Irrigation Service, the Director-General of DARNDR and the USAID/Haiti on the overall management, coordination and implementation of the rehabilitation of irrigation systems targeted for Project attention.
- Have the prime responsibility for assisting in the preparation of the organization plan for the Irrigation Service.
- Assist the Irrigation Services in the design and execution of feasibility studies for future irrigation development
- Assist the Irrigation Service in planning future programs and in developing overall training programs for Irrigation Service Personnel.
- Assist the Irrigation Service in planning the design and organization of water users.

2. The Design & Construction Engineer:

- Assist in the preparation of designs, work plans and cost estimates for all irrigation systems selected for rehabilitation under the Project.
- Assist in the supervision of construction work whether such work is being performed by a contractor or directly by the Irrigation Service.

- Provide on the job training for construction supervisors, assist in the selection of candidates for overseas training and in the planning of this training.
- Assist in the preparation of feasibility studies for the irrigation systems to be rehabilitated and in the review, evaluation and up dating of studies already completed.
- Provide assistance in the design and execution of feasibility studies.

3. The Operation and Maintenance Engineer:

- Assist in the preparation and implementation of operation and maintenance plans for the irrigation systems being rehabilitated under the project.
- Assist in the training of water users associations members.
- Assist in the review of such plans as may exist for other irrigation systems under the control of the Irrigation Service.
- Assist in the establishment of training programs for operation and maintenance personnel, including extension agents of the Irrigation Service and participating farmers.
- Assist in the selection of candidates for overseas training and in the design of this training.

4. The On Farm Irrigation Specialist:

- Provide on the job training for Irrigation Service professionals and technicians in land preparation, irrigation practices, irrigation schedules and drainage requirements.
- Assist in the development of cropping patterns for each selected system.
- Assist in the preparation of training programs for farmers.
- Assist in the design of off-shore training programs for Irrigation Service personnel.

SCOPE OF WORK FOR SOIL CONSERVATION TEAM (DRAFT)

1. Watershed Management Specialist:

- The team leader and Advisor to the Chief of the Soil Conservation Service (SCS), the Director General of DARNDR, and USAID/Haiti on the overall management, coordination and implementation effort of the Project.
- Responsible for the preparation of the organization plan for the SCS, for assisting the SCS in planning future activities, and for developing overall training programs for SCS personnel and target areas farmers.
- Provide the major T.A. team technical input in the utilization of vegetative structures for the development of watershed protection plans for Project target areas.

2. The Soil Conservation Specialist:

- Responsible for the development and detailed design of watershed protection plans with primary technical responsibility for the selection and design of appropriate physical structures.
- Responsible for the optimal utilization of space and soil resources for hillside farming and, with the assistance of the Watershed Management Specialist

and Tropical Forester, will develop cropping patterns for each watershed subcatchment basin employing agro-forestation where appropriate.

- Provide on the job training for SCS personnel and local farmers and be directly responsible for supervising the work of the Soil Conservation Technicians.

3. The Tropical Forester:

- Assist SCS counterpart in the establishment of nurseries, in the selection and in the propagation by techniques appropriate to local transportation realities of species to be used in the watershed restoration effort.
- Responsible for ensuring that species selected are acceptable to target area farmers and that maximum consideration be given to the possibilities of agro-forestation, woodlots, shade and fruit trees and other techniques to produce the maximum amount of tree cover compatible with hillside farming necessities.
- Responsible for training of SCS personnel in tree propagation and outplanting and of farmers in care and protection of outplanted seedlings.

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4. The Soil Scientist:

- Assist SCS counterpart and train in organizing, conducting, completing and interpreting soil surveys in target watersheds.
- Assist the Soil Conservationist in the design of structures and cropping patterns for each target area.

5. The Soil Conservation Technicians:

- (4) will work directly, day to day, with counterpart SCS personnel and with local farmers in the actual physical work of watershed restoration in the target areas.
- Responsible for daily on the job training and for reinforcement of the lessons learned in off-shore training provided SCS personnel through the Project.
- Responsible for ensuring that watershed restoration plans are implemented correctly on the ground.
- Assist in the training programs in the Acul Watershed, and eventually assigned with SCS personnel to provide on-site technical support in other target watersheds.

DUBREUIL IRRIGATION SYSTEM
RECONSTRUCTION/REHABILITATION PROGRAM
COST ESTIMATES BY MAJOR WORK ITEMS 1/

<u>Work Item</u>	<u>E.C.E. 2/</u>	<u>J. G. White 3/</u>	<u>1979 4/</u>
	\$	\$	\$
1. Diversion Dam with Appurtenance	1,800	1,940	2,230
2. Main Canal	16,000	8,790	10,110
3. Laterals	161,800	556,211	639,630
4. Drains	11,500	12,675	14,575
5.a. Buildings (Office, Depot, Shop)	15,100	-	-
5.b. Community Center	-	10,000	11,500
6. Road	1,500	1,600	1,840
7.a. Other Cost (10%)	20,800	-	-
7.b. L'Acul River Channer Improvement	-	1,920	2,210
8. Supervision and Administration (10%)	20,800	DARNDR	- <u>5/</u>
9. Contingencies (20%)	<u>41,700</u>	<u>116,311</u>	<u>133,745</u>
<u>Totals:</u>	\$291,000	709,447	815,840

- 1/ Information from J.G. White "TASK A" Report, Dubreuil Rehabilitation (DEC. 1976)
- 2/ Engineering Consultants, Inc. (ECI) prepare the engineering designs and cost estimates. August 1975.
- 3/ Cost estimates up-dated and revised (1977) by J.G. White.
- 4/ J.G. White cost estimates up-dated by cost factor of 15% (1979)
- 5/ Partly covered by T.A. Program

JEAN RABEL IRRIGATION SYSTEM
RECONSTRUCTION/REHABILITATION PROGRAM
COST ESTIMATES BY MAJOR WORK ITEM

	<u>Work Item</u>	<u>J.G.White 1/</u>	<u>1979 2/</u>
1.	Roads	10,750	12,900
2.	Diversion Dam	8,485	10,180
3.	Canals and Laterals	211,377	253,650
4.	Structures for Unlined Canals	25,400	30,480
5.	Other Costs (10%)	25,601	30,720
6.	Supervision and Administration (10%)	<u>25,601</u>	<u>30,720</u>
	Sub-Totals	307,214	368,650
7.	Contingencies (20%)	<u>61,443</u>	<u>73,730</u>
	<u>Totals:</u>	368,657	442,380

1/ Cost estimates from J.G.White "TASK-B", Jean Rabel, Feasibility Report, September 1976.

2/ J.G.White cost estimates up-dated by a cost factor of 20%. (1979)

P 021748Z SEP 77
FM SECSTATE WASHDC
TO: AMEMBASSY PORT AU PRINCE PRIORITY 2464
BI
UNCLAS. STATE 210869

AIDAC

E.O. 11552: NA

TAGS:

SUBJECT: LOAN/GRANT FUNDING OF T.A. - INTEGRATED AG. DEVELOPMENT PROJECT

REF: PORT AU PRINCE 2640, PORT AU PRINCE 3027

1. Addition FY 1977 Grant Funding

Might still be available for the Project although it will depend on how much funding OPS out of other Missions.

OYB's and whether other projects require increased funding in FY 1977.

2. By week of September 6-9 we should know how much funding available, at which point we would notify USAID so that PROAG could be revised and submit a notification to Congress. If notification submitted by September 9, obligation of additional funds could be made during final week of September.

3. Advise if above course of action not RPT not acceptable. Otherwise we will proceed per Para. 2.

4. In addition, FY 1978 Grant Budget for the Project was increased by Dols. 781,222 to a new total of Dols. 1,481,230 and FY 1979 Budget was increased by Dols. 426,232. to a new total of Dols. 1,386,000. These are of course preliminary Budget levels since FY 1975 probably will not be set until latter part of September and OP levels for FY 1979 will not be finalized until November/December.

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5. Also PAF Amendment should be prepared to reflect Grant Funding of all technical assistance (existing PAF does not RPT not have to be changed to cover increase in FY 1977 funding. Christopher.

BT

#0869

R 071332 OCT. 77

FM SECSTATE WASHDC

TO: AMEMBASSY PORT AU PRINCE 2818

BT

UNCLASSIFIED PORT AU PRINCE STATE 241706

AIDAC

E.O. 11652: N/A

TAGS:

SUBJECT: REVIEW OF FY 1979 ABS AND PIDS

1. Ongoing Projects

-- A. Budget for Integrated Agricultural Development Project was raised to Dols. 1,481,000 in FY 1978 and Dols. 1,386,000 in FY 1979 to allow for Grant Funding of all technical assistance... (only Relevant Section)...

X