

PD-AA4-632

<b>AGENCY FOR INTERNATIONAL DEVELOPMENT</b> <b>PROJECT DATA SHEET</b>	1. TRANSACTION CODE <input checked="" type="checkbox"/> A = Add C = Change D = Delete	Amendment Number <b>Three</b>	DOCUMENT CODE <b>3</b>
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2. COUNTRY/ENTITY <b>PERU</b>	3. PROJECT NUMBER <b>527-0244</b> <span style="float: right;">ISA 58924</span>
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4. BUREAU/OFFICE <b>LAC</b> <span style="float: right;"><input type="checkbox"/> 05</span>	5. PROJECT TITLE (maximum 40 characters) <b>Upper Huallaga Area Development Project</b>
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <b>09 15 91</b>	7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4) A. Initial FY <b>88</b> B. Quarter <b>4</b> C. Final FY <b>90</b>
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8. COSTS (\$000 OR EQUIVALENT \$1 = )						
A. FUNDING SOURCE	FIRST FY <b>81</b>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	5,058	10,692	15,750	11,281	16,619	27,900
(Grant)	( 750 )	( -- )	( 750 )	( 6,973 )	( 5,927 )	( 12,900 )
(Loan)	( 4,308 )	( 10,692 )	( 15,000 )	( 4,308 )	( 10,692 )	( 15,000 )
Other U.S.	1.					
	2.					
Host Country	--	8,500	8,500	--	13,858	13,858
Other Donor(s)						
<b>TOTALS</b>	<b>5,058</b>	<b>19,192</b>	<b>24,250</b>	<b>11,281</b>	<b>30,477</b>	<b>41,758</b>

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ES	233B	000		5,400	--	3,800	--	9,200	--
(2) DA	233B	000	000	3,000	15,000	700	--	3,700	15,000
(3)									
(4)									
<b>TOTALS</b>				<b>8,400</b>	<b>15,000</b>	<b>4,500</b>	<b>--</b>	<b>12,900</b>	<b>15,000</b>

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each) 010      060      080	11. SECONDARY PURPOSE CODE
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12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each) A. Code      BR      BF      BS B. Amount
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13. PROJECT PURPOSE (maximum 480 characters)

To support GOP development and narcotics control objectives in the Upper Huallaga Valley by strengthening public sector agricultural support services and expanding rural and community development activities.

14. SCHEDULED EVALUATIONS Interim MM YY <b>08 06</b> Final MM YY <b>07 91</b>	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input type="checkbox"/> Local <input type="checkbox"/> Other (Specify)
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

17. APPROVED BY	Signature <i>Donor M. Lion</i>	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
	Title: Donor M. Lion Mission Director	
	Date Signed MM DD YY <b>09 30 88</b>	MM DD YY

ACTION MEMORANDUM TO THE DIRECTOR

FROM : Bruce Blackman   
Chief, Office of Development Resources

DATE: September 30, 1988

SUBJECT : Upper Huallaga Area Development Project (No. 527-0244); Approval of Project Paper (PP) Supplement and Amended Project Authorization

I. Purpose.

The purpose of this Action Memorandum is to forward and recommend that you approve the following:

A. The subject PP Supplement (TAB A).

B. The Authorization Amendment for subject Project (TAB B) which will:

- Extend the PACD 32.5 months, from December 31, 1988 to September 14, 1991.
- Provide a total of \$4.5 million additional A.I.D. Grant funds for the Project to be obligated on an incremental basis. The initial increment of \$500,000 (CN waiting period expired on August 24, 1988 - State 271981) is from the ARDN account of Development Assistance (DA), while subsequent increments are planned from either the DA or the Economic Support Fund (ESF) account. A.I.D. funding will be complemented by the local currency equivalent of some \$2.8 million in GOP resources.

The PP Supplement has been developed and fully reviewed by the USAID Project Development Committee and the Regional Legal Advisor has cleared the Authorization Amendment. The project extension is found to be sound and appropriate. It is based on the priority accorded this project within the U.S.-Peruvian anti-narcotics program. Currently available loan and grant funds---and the \$500,000 in grant funds to be obligated in FY 1988---will continue development activities under the project until the remaining \$4 million is obligated in future fiscal years.

II. Discussion.

The Upper Huallaga Area Development Project was authorized on September 8, 1981, to develop the legitimate agricultural and economic potential of the Upper Huallaga Valley (UHV). The project has an overall anti-narcotics objective of reducing coca production in the UHV. It is the developmental element of the GOP's narcotics control program and is intended to support crop substitution in areas targeted for coca eradication.

The project's aim is to strengthen public sector agricultural support services and to develop and test agricultural production packages in the UHV region of the Peruvian high jungle. In June 1986, the statement of project purpose was modified to emphasize the overall anti-narcotics objective of reducing coca production; to support GOP development and narcotics control activities in the UHV by strengthening public sector agricultural support services and expanding rural and community development activities. This PP Supplement continues with the current project design, while clearly recognizing that project implementation will need to conform to conditions in the UHV, such as heightened political terrorism in an environment where illicit production of coca is the major economic activity.

With this extension and additional funding, the project will continue identifying and targeting resources to assist:

- (i) eligible local farmers of legitimate agricultural crops whose coca cultivation have been eradicated, and
- (ii) those farmers who are potential coca cultivators if their land and time is not drawn into other financially viable crops.

There will be continued emphasis on automating and linking existing GOP information sources on UHV and systematically analyzing and disseminating the data to participating ministries and agencies. This will facilitate impact on target producers.

An institutional objective in the extended period will be to assist the GOP to return PEAH to its originally conceived role as a (horizontal) coordinating agency---and away from its current (vertical) role as prime implementor of project components. This will require a renewed commitment by line ministries to provide basic services in the UHV and adequate technical and administrative backstopping from Lima in support of project elements. A Liaison Office will be set up in Lima by the National Development Institute (INADE) and PEAH to facilitate this process. Continued support for operations in the UHV will help ensure adequate and timely resource allocation for priority agricultural and community development efforts.

The principal components of this project remain unchanged and are grouped into three broad categories:

- A. Those that directly assist the targeted farmers (e.g. agricultural extension, provision of seeds and seedlings, other farm inputs, credit, marketing assistance, and land titling assistance).
- B. Those that support these farming systems and indirectly assist the farmers (e.g. agricultural research, a Center for Training and Technology Transfer (CTTT) supported by the University of High Jungle, and establishment of a geographic information service).

- C. Those that improve or augment community infrastructure (e.g. community level production/marketing facilities, school rooms, road maintenance, water and sewerage systems).

Appropriate management staff have reviewed the project documentation and have concluded that the project, as presented, is technically, administratively, and financially feasible.

### III. Issues.

#### A. Lack of Baseline Data.

DAEC review of the PID raised concern about the lack of baseline data for measuring project progress and impact. We have made the development of a plan to periodically collect baseline data in a systematic and consistent way a condition precedent to disbursement.

#### B. Project Complexity and Management.

AID/W concern about the project's complexity is more difficult to address. The GOP has agreed to a condition precedent requiring that a Liaison Office be established in Lima to assist with technical and administrative backstopping of project operations in the UHV. Also, the GOP covenants to involve formally the line ministries in the UHV.

#### C. Credit.

In response to DAEC concern, we have negotiated a significant credit component to support crop substitution. It will be funded by the GOP. The form of credit operations will be adapted to UHV conditions and further defined during implementation.

#### D. USAID Project Management.

The Special Projects Division of the Office of Development Resources is responsible for the management of the project. The management requirements related to this project were taken into consideration in the analysis and establishment of the personnel ceiling and operating expense levels for that division, as reflected in the Staffing and OE Reduction Plan of December 1987, approved by Washington.

### IV. Other Concerns.

#### A. Women in Development.

Principal project beneficiaries are local farm families. There is no specific targeting of project components or resources on women in

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the UHV. But it is planned that women will benefit as members of farming families selected for training courses at the CTTT as well as from improved community infrastructure and other benefits arising from the provision of A.I.D. and GOP resources to the Project.

B. Gray Amendment.

The PP Supplement anticipates that technical assistance procurement under the project extension will draw---as feasible and appropriate---the needed expertise from existing A.I.D. IQCs and centrally managed contracts, thus permitting minority firm participation. For instance, this project evaluation has been identified by USAID/Peru as one appropriate for execution by a suitable Gray Amendment firm.

V. Environmental Determination.

Per State 312384, the IAC Chief Environmental Officer has advised his concurrence with our recommendation for an approval on the Amended Environmental Assessment.

The approval was given with two provisions:

- (i) prior to any purchase, use or recommendation of pesticides under this project, an amended environmental assessment must be prepared and approved by the LAC, Chief Environmental Officer.
- (ii) No A.I.D. funds will be used for the procurement or application of herbicides for coca eradication.

No herbicide or pesticide purchase or application is to be funded under the Project; concern about their use and impact in the UHV will be a continuing issue in monitoring the Project.

VI. Congressional Notification.

The appropriate committees of Congress have been informed of this activity; the Congressional Notification waiting period expired on August 24, 1988. We expect to receive the FY 1988 budget allowance totalling \$500,000 shortly.

VII. Conditions Precedent and Covenants.

- A. Conditions Precedent to disbursement of Grant funds provided under Amendment No. 6 to the Grant Agreement.

- (1) A plan to collect baseline data periodically, including, but not limited to, the characteristics of agricultural and agroindustrial production, input supply, produce marketing and processing, and population demographics in the Upper Huallaga Valley and to periodically collect and evaluate a preestablished set of baseline data which will measure the delivery of project services, the farm level impact of these services, and their effect on the regional economy.
- (2) Evidence that INADE-PEAH has established a liaison office in Lima which will obtain technical and administrative backstop for Project operations in the Upper Huallaga Valley."

B. Other Covenants.

- (1) INADE and PEAH will sign agreements with the Ministry of Transport and Communications, the Ministry of Agriculture, the Regional Development Corporations of Huanuco and San Martin, DISABAR, SENAPA, and INIAA no later than March 31, 1989, which will have as their objective the establishment by these GOP institutions of an operational capability within the Upper Huallaga Valley to carry out their nationally mandated responsibilities. The agreements should contain the following terms and conditions:
  - (a) A description of the program of services to be delivered, including how, where, and when the program is to be executed.
  - (b) A description of the personnel, equipment, and budget resources required to deliver the program of service, including the source of funds.
  - (c) A commitment by PEAH to transfer from its inventory relevant equipment in the project inventory as well as the employment contracts of trained personnel.
  - (d) A commitment by the GOP institutions to carry out the program as described with adequate non-project financial resources budgeted in the Public Treasury.
  - (e) A mechanism for monitoring the transfer of goods and personnel and the progress of operations and resolving problems in meeting the objectives of the agreements.
- (2) In connection with progress made by the GOP institutions under the agreements mentioned in Sections 6.2.(8) of the Agreement and the availability of remaining project funds, PEAH will develop a plan no later than June 30, 1989, for the management structure and staff levels which will be implemented by the end of calendar year 1990.

These Conditions, Precedent and Covenants emphasize the improvements that are judged necessary and doable in this priority undertaking. In brief, design of this Project extension proceeds logically from experience with the joint U.S.-Peruvian anti-narcotics effort. Annexes IV and VI to the PP Supplement summarize how the Project takes account of recommendations arising from the 1986 Project evaluation and the mid-1988 AID/W PID review.

VIII. Recommendation.

It is recommended that you indicate your approval of the Upper Hualлага Area Development Project Paper Supplement, (Project No. 527-0244), and authorize up to \$4,500,000 in additional grant funding for the project by signing (a) the Project Paper Supplement Facesheet (TAB A) and (b) the amended Project Authorization (TAB B).

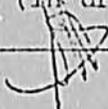
  
SPD:W [signature] cy

Clearances:

CONT:PKramer (in draft)

APROG: EVarillas (in draft)

RLA: ANewton (in draft)

DD: ASilva 

*Approved*  
*Josua Lee-Turn*  
*30 SEPT. '88*

PROJECT AUTHORIZATION

Amendment No. 3

Name of Country:	Peru
Name of Project:	Upper Huallaga Area Development
Number of Project:	527-0244
Number of Loan:	527-T-077

1. Pursuant to the Foreign Assistance Act of 1961, as amended, the Upper Huallaga Area Development Project for Peru was authorized on September 8, 1981 and amended on January 6, 1982 and again on June 25, 1986 (the "Authorization"). That Authorization is hereby further amended as follows:

- a. The authorized life-of-project grant funding is increased by US\$4,500,000, from US\$8,400,000 to US\$12,900,000.
- b. The planned life of the project is extended to 10 years from the date of initial obligation, i.e. to September 14, 1991.
- c. Insert new section "3f." as follows:

"f. Conditions Precedent to Disbursement of Grant Funds Provided under Amendment No. 6 to the Grant Agreement

Prior to any disbursement under the Grant in excess of US\$8,400,000 or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, Peru will, except as the Parties may otherwise agree in writing, present to A.I.D., in form and substance satisfactory to A.I.D.:

- (1) A plan to collect baseline data periodically, including, but not limited to, the characteristics of agricultural and agroindustrial production, input supply, produce marketing and processing, and population demographics in the Upper Huallaga Valley and to periodically collect and evaluate a preestablished set of baseline data which will measure the delivery of project services, the farm-level impact of these services, and their effect on the regional economy.
  - (2) Evidence that INADE-PEAH has established a liaison office in Lima which will obtain technical and administrative backstop for Project operations in the Upper Huallaga Valley."
- d. Sections 3f., 3g. and 3h. in the Authorization are hereby relabeled 3g., 3h. and 3i.
  - e. Insert new section "3g. (4) and (5)" as follows:

"f. Other Covenants

- (4) INADE and PEAH will sign agreements with the Ministry of Transport and Communications, the Ministry of Agriculture, the Regional Development Corporations of Huanuco and San

Martin, DISABAR, SENAPA, and INIAA no later than March 31, 1989, which will have as their objective the establishment by these GOP institutions of an operational capability within the Upper Huallaga Valley to carry out their nationally mandated responsibilities. The agreements should contain the following terms and conditions:

- (a) A description of the program of services to be delivered, including how, where, and when the program is to be executed.
- (b) A description of the personnel, equipment, and budget resources required to deliver the program of service, including the source of funds.
- (c) A commitment by PEAH to transfer from its inventory relevant equipment in the project inventory as well as the employment contracts of trained personnel.
- (d) A commitment by the GOP institutions to carry out the program as described with adequate non-project financial resources budgeted in the Public Treasury.
- (e) A mechanism for monitoring the transfer of goods and personnel and the progress of operations and resolving problems in meeting the objectives of the agreements.

(5) In connection with progress made by the GOP institutions under the agreements mentioned in Sections 6.2.(8) of the Agreement and the availability of remaining project funds, PEAH will develop a plan no later than June 30, 1989, for the management structure and staff levels which will be implemented by the end of calendar year 1990."

2. Except as expressly modified or amended hereby, the Authorization remains in full force and effect.

Date: 30 SEPT. 88

*Donor M. Lion*

Donor M. Lion  
Director  
USAID/Peru

Drafted by: <sup>DNW</sup>RLA:ANewton  
Clearances:  
SPD:WBinns WB  
DR:DBlackman (in draft)  
PROG:EVarillas (in draft)  
CONT:PKramer (in draft) PK  
DD:ASilva AS

PROJECT PAPER SUPPLEMENT

UPPER HUALLAGA AREA DEVELOPMENT PROJECT (No. 527-0244)

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- 1. Map of Peru showing location of PEAI
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LIST OF ABBREVIATIONS AND ACRONYMS

AID - Agency for International Development  
ARDN - Agricultural Rural Development Nutrition  
ASDS - Agricultural Support Delivery System  
BAP - Peruvian Agricultural Bank  
CECAEXTO - Tocache Training and Extension Center  
CEDRO - Center for Information and Education on Prevention of Drug Abuse  
CORAH - INM/GOP Funded Coca Eradication Agency  
CORDES - Departamental Development Corporation  
CTTT - Center for Training and Technology Transfer  
DA - Development Assistance  
DEA - Drug Enforcement Administration  
DEPA - Drug Education and Public Awareness  
DIDEPA - Directorate of Agricultural Development and Promotion  
DIPOD - Special Anti-Drug Unit under the Civil Guard  
DISABAR - Directorate of Basic Rural Sanitation  
DGRA - Directorate of Agrarian Reform  
EA - Environmental Assessment  
ENACO - National Coca Marketing Enterprise  
ENCI - National Input Marketing Company  
ESF - Economic Support Fund  
FSN - Foreign Service National  
GIS - Geographic Information System  
GOP - Government of Peru  
HAS - Hectares  
IDB - Interamerican Development Bank  
INADE - National Development Institute  
INIAA - National Agricultural and Agro-Industrial Research Institute  
INM - Bureau for International Narcotics Matters  
IQC - Indefinite Quantity Contract  
IRD - Integrated Regional Development  
IRR - Internal Rate of Return  
KM - Kilometer  
LAC - Bureau for Latin America and the Caribbean  
MBA - Master in Business Administration  
MOI - Ministry of Interior  
MRTA - Tupac Amaru Revolutionary Movement  
MTC - Ministry of Transport and Communications  
NAU - Narcotics Assistance Unit  
OCEPU - Coordination Office for University Extension and Outreach  
OGCR - General Office of Rural Cadastre  
CNERN - National Office of Rural Resource Evaluation  
OSE - Sectoral Statistics Office  
PACD - Project Assistance Completion Date  
PC - Peruvian Customs Service  
PEAH - Upper Huallaga Special Project Office  
PESIP - Integrated Program of Agricultural Development in Areas of Eradicated  
Coca Cultivation  
PID - Project Identification Document  
PIP - Peruvian Investigative Police

PP - Project Paper  
PROAG - Project Agreement  
PVO - Private Voluntary Organization  
SDR - Special Drawing Rights  
SENAMA - National Agricultural Machinery Service  
SENAPA - National Water and Sewerage Service  
UNIAD - Upper Huallaga Area Development Project  
UHV - Upper Huallaga Valley  
UMOPAR - A Special Rural Police Unit under Civil Guard Police  
UNAS - National University of the High Jungle  
UNFDAC - United Nations Fund for Drug Abuse Control  
USIA - United States Information Agency  
USG - United States Government  
USIS - United States Information Service

PP SUPPLEMENT UPPER HUALLAGA AREA DEVELOPMENT PROJECT  
(Project No. 527-0244)

I. Summary

A. Recommendations

1. USAID/Peru recommends approval of a Project design for the Upper Huallaga Area Development (UHAD) Project to continue AID supported development activities as an element of the joint United States Government/Government of Peru (USG/GOP) anti-narcotics program. To carry out the amended Project design described in this PP Supplement, the following actions will be taken:

a. Extend the PACD 32.5 months, from December 31, 1988, to September 14, 1991.

b. Provide a total of \$4.5 million additional A.I.D. Grant funds to the Project which will be obligated on an incremental basis.

The additional funds increase total AID life-of-Project funding to \$27.9 million (Loan, \$15 million, Grant \$12.9 million, of which \$5.4 million is Economic Support Fund (ESF) and \$7.5 million is Development Assistance (DA) Account).

B. Project Amendment Summary

The Upper Huallaga Area Development Project was authorized by the Administrator on September 8, 1981. The Project Loan and Grant Agreement was signed with the GOP on September 15, 1981, with an initial obligation of \$15 million (Loan). Grant funds were obligated in increments thereafter, the most recent obligation of \$5.4 million (ESF Grant) was signed June 27, 1986, bringing a total AID LOP funding to its current level of \$23.4 million. The PACD was extended by the Mission Director for 24 months, from September 15, 1986, to September 14, 1988.

The original PP and the PROAG stated that the goal of the Project was "to increase and diversify agricultural production in the Peruvian High Jungle." The stated purpose of the Project was "to strengthen public sector agricultural support services and to develop and test agricultural production packages in the Upper Huallaga Region of the Peruvian High Jungle." These goal and purpose statements did not mention the overall anti-narcotics objective of reducing coca production (even though the PP contained an extensive analysis of the coca substitution potential of the Project) and the long-term objective of developing agricultural technologies applicable to other high jungle areas.

In June 1986 a PP Supplement was prepared. The Project purpose was modified "to support GOP development and narcotics control activities in the Upper Huallaga Valley (UHV) by strengthening public sector agricultural support services and expanding rural and community development activities." Project activities were adjusted accordingly, e.g. the long-term research and

participant training budget was reduced, while activities impacting, directly and rapidly on target beneficiaries were expanded. The revised Project design was expressed in an amendment to the PROAG, which specifically indicated that the Project should be coordinated "with the Peruvian coca eradication program in the UHV."

Based on careful review of Project progress to date, the amended Project design herein will update certain original concepts to conform to existing conditions in the Project area including prospects for future progress. Specifically, it will extend project assistance and help to:

1. identify and assist eligible local farmers of legitimate agricultural production;
2. develop a renewed commitment by the GOP to provide basic services in the UHV with line ministry programs;
3. ensure adequate and efficient resource allocation for priority agricultural and community development support, and,
4. assure adequate technical and administrative backstopping from Lima.

The amended Project design provides for transition from a traditional Integrated Regional Development (IRD) Project - which functions in an environment where illicit production of coca is a major economic activity - to a Project which, using elements of an integrated regional development strategy, directly supports legitimate agricultural production as a complement to overall anti-narcotics efforts in the UHV. Within an implementation environment that is dominated and distributed by the coca trade and seemingly uncontrollable political and social violence, adjustments are needed. Accordingly, the Project area will be reduced; certain components will be combined and reshaped, and it is planned basic service functions which are provided by ongoing line ministry programs in other areas of Peru, will be transferred to these institutions. These and other appropriate adjustments will assist the Project to identify eligible beneficiaries, select priority communities or groups and appropriate resources to deliver, provide vital agricultural development support to legitimate farmers, and expand the program to meet increased demand for agricultural development services if the planned increase in eradication and/or improved security transform the economic and social environment in the UHV.

The Project amendment will provide resources to assist the GOP carry out the proposed design. Specifically, during the three year extension to the implementation period, AID resources will finance (1) selected salaries of key Project personnel, (2) short-term training in-country in extension methodologies, computer operation, and other topics, (3) agricultural inputs and supplies, and (4) re-equipping of the Project in vehicles and equipment. In order to finance these Project expenses AID proposes to provide an additional approximately \$4.5 million (Grant) and the GOP will provide an

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additional \$2 million counterpart. The total life-of-Project funding will increase to \$41 million; total AID \$27.9 million (Loan, \$15 million, Grant \$5.4 ESF, \$7.5 million DA/ARDN), and total GOP Counterpart \$13.1 million.

## II. Background

### A. Introduction

The UHV has a relatively short history of settlement. Tocache, the northernmost urban center in the Project area, was founded with the clearing of land for a private farm in 1933. At the southern end of the area, Tingo Maria began in 1938 as a camp for workers during the construction of the highway from Lima to Pucallpa. Population increased slowly until the early 1960s when the area north of Tingo Maria was chosen as a site for a regional colonization scheme financed by the InterAmerican Development Bank (IDB). During the same period the so called Marginal Highway was constructed through the Huallaga Valley from Tingo Maria running north to Tarapoto. With the opening of the highway, new settlements grew rapidly, including the towns of Aucayacu and Uchiza, and agricultural production increased.

In 1980 with the first democratic election in Peru since 1965, the presidency was returned to Fernando Belaunde Terry, who had been removed in 1968 by a military coup. Belaunde Terry had long believed that priority should be given to developing the agricultural potential of the high jungle areas of Peru to produce food to meet the increasing demand from rapidly growing urban areas. Earlier, his support for developing this area resulted in the construction of the Marginal Highway. In 1980, when he regained the presidency, he again promoted high jungle development. His request to AID for support in this objective coincided with two other events which pushed the U.S. Mission to support the Belaunde request: (1) the recently successful conclusion to an IRD Project in the Central Huallaga Valley area and the desire to replicate it, and, (2) the growing pressure within the USG to mount an anti-narcotics program in the major coca producing area of Peru, the UHV, which would include an economic development element to promote legitimate alternative crop production.

As a result, a Project was designed and approved to combine these desires and respond to the development needs of the UHV. The Project provided resources to institutions - government ministries, public sector agencies, the local university, and other groups - already working in the area through a specially created counterpart agency, the Upper Huallaga Special Project Office (PEAH). PEAH's function was to channel the Project funds and coordinate implementation. Research was given top priority as the vehicle for development, since the testing of new high yield, high income crops was expected to provide the "alternative" to coca production. The increased demand expected from farmers driven out of coca production by the then planned (1983) operational eradication effort would be assisted through the existing programs, strengthened by additional equipment and trained personnel.

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## B. Project Implementation Progress

Since 1983, the Project has achieved significant progress in meeting output targets involving the strengthening of the capacity of the GOP to deliver basic services to the local population.

1. Agricultural Research. The UHV Experimental Station of Tulumayo was rehabilitated, re-equipped, and restaffed. Experiments conducted there have identified improved varieties of traditional food and cash crops, as well as suitable new high income crops. Seeds and seedlings, produced locally and imported, have been distributed to eligible local farmers.

2. Agricultural Extension. The Project funded personnel who are most vulnerable to acts of violence are the field-based extension agents. In spite of the threat and a high staff turnover rate, there are currently 33 trained agents managing over 600 demonstration plots and making periodic visits to local farmers. The Integrated Program of Agricultural Development in Areas of Eradicated Coca Cultivation (PESIP) has successfully tested and begun implementing a system of targetted assistance to ex-coca growers.

3. Agricultural Training. A total of nineteen National University of the High Jungle (UNAS) instructors and public sector research and extension technicians were sent abroad for graduate training. The UNAS teaching and laboratory research infrastructure was rehabilitated and re-equipped.

4. Agricultural Credit. A total of \$2.7 million provided to the Peruvian Agricultural Bank (BAP) has been lent to approximately 2,000 local farmers covering 8,400 hectares. The nominal value in local currency of the rotating credit fund has increased by approximately 80% from interest earnings. However, as a result of low interest rates, inflation and devaluations, the current dollar value of the fund has shrunk to between \$350,000 and \$1,350,000, depending on the exchange rate used. Over 90% of the total value of the fund is currently committed to outstanding loans or to approved loans awaiting disbursement. In spite of decapitalization, from interest rates which have been inadequate to maintain the value of the fund in the face of high inflation, the current nominal value of the rotating fund, together with BAP's own capital should be sufficient to meet the demands of eligible local farmers.

5. Development and Interpretation of Resource Information. Aerial photos, supplemented by ground verification, are being used to prepare and maintain updated cadastral maps. Periodic statistical reports and bulletins on the UHV economy, agriculture, and demographics (from household and farm survey information) are produced and distributed.

6. Farm Production Services. Since 1983, over 20,000 farm plots covering 63,000 hectares have been inspected and 4,000 farmers have received land use rights, which makes them eligible for BAP credit. The Project has financed an expansion of corn and rice processing and storage capacity for

local farmers. The local fabrication of simple farm processing machinery has begun under PEAM direction and is being demonstrated on a small scale.

7. Road Maintenance. The heavy equipment fleet was rebuilt and a mechanic shop to maintain and repair it was installed. The equipment and personnel have repaired and maintained over 1,000 km of rural and urban roads, repaired 14 bridges, and constructed 12 river defense works.

8. Community Development. In 1986 the Potable Water and Sanitation component was expanded to encompass a comprehensive program to improve basic services with community participation. In addition to 19 potable water systems installed and 255 latrines constructed, nearly 200 classrooms and 25 medical posts have been constructed or repaired and re-equipped. Primary health care, teacher certification, and community organization training has been provided to over 1,000 local residents.

In spite of the measurable success in achieving Project output targets, relatively little progress has been made toward reaching the goal and purpose level indicators. This situation indicates either that the output indicators are not sufficient in quantity or quality or that the assumptions were incorrectly determined or new external factors not originally incorporated in the design are influencing Project progress. In the case of the UHAD Project, dispassionate observation of the conditions in the UHV will quickly force one to conclude that several new, and destructive, external factors are at work in the Project area:

a. The loss of effective GOP political and social control in large sections of the Project area, which permits threats and violence against personnel and property by subversive groups and individuals; and

b. The inability to deal effectively with the problem of coca production and the increasing use and abuse of land, capital, and persons by the illicit drug trade.

Ample evidence can be provided to support the conclusion that these two factors are decisive in determining Project progress, a quote from the interim Project evaluation report completed in December 1986 succinctly puts the problem in perspective:

It is impossible to conceive of a development Project in the Upper Huallaga without considering the problems generated by subversion and terrorism, by drug trafficking and by the expansion of coca cultivation.

These two factors have had far ranging impact throughout the area on the political, social, and economic structure of the society. Detailed analyses of the nature and effects of these impacts have been set forth in the Project Analyses section of this PP Supplement. The conclusions derived from these analyses have been incorporated in the revised Project design proposed herein. However, it should be noted that the PP Supplement



assumes no fundamental change in the existing implementation environment - violence, destruction, economic and social distortions. Therefore, the Project will use its resources to identify "windows of opportunity" for consolidating legitimate agriculture production and to reach quickly and flexibly the successes in support of the eradication and interdiction field, while recognizing the tremendous obstacles being confronted.

C. Coca Eradication and Interdiction

The success of legitimate agricultural development is directly related to the degree of progress achieved in the repression of coca production, processing, and sale (by eradication and interdiction). The need to employ coercive measures to force local farmers from the lucrative, but illicit, production of coca, was recognized in the original Project design. As a result, a Condition Precedent was included in the Project to require joint agreement between the GOP and the USG on the terms of a coca eradication program prior to disbursements of AID funds for the development Project. The agreement was signed in 1981 and actual eradication by manual means began in 1983.

The joint USG/GOP coca eradication agreement provided U.S. financing to cover the costs of eradicating unregistered (by the GOP coca marketing and control entity-ENACO) coca fields, of enforcing the limits on the size of legal coca fields, and of assuring all coca was produced and sold to the licit markets. The objectives were to be achieved by employing a brigade of workers who would dig up the illegal coca and burn the roots. During the years following its formation the brigade has fluctuated between 500 and 1,000 workers.

During the period 1983-1986 the coca eradication effort funded by the International Narcotics Matters (INM) of the U.S. Department of State and carried out by GOP Counterpart Agency (CORAH) reported the eradication of approximately 10,000 hectares of coca cultivation using manual methods. Unfortunately, while some progress was being achieved in eradicating existing fields, new fields were cleared and planted at a much faster rate. In fact, in spite of eradication, current estimates of coca cultivation put the total area at greater than 75,000 hectares in the UHV. The reasons for the increase are clear; the eradication effort has not been able to raise the cost of illegal coca production or stop illegal cultivation from expanding into additional fields. Thus the returns from legitimate production remain grossly inferior to illicit coca earnings. Coca producers can earn profits of from 3 to 10 times that achieved by legitimate farmers. The Peruvian economy has deteriorated during this period and the income which can be earned from coca has attracted, and continues to attract, significant labor migration into the UHV.

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The table below clearly shows the increasing dominance of coca in the UHV.

Agricultural Land Utilization  
(Hectares)

	1982	%	1986	%
Total Agricultural Land Area	296,300	100	207,800	100
Area Planted (Annual and permanent crops)	82,150	28	116,000	56
Other (Forestry, fallow land protected land)	197,150	67	16,800	8
Coca <sup>1/</sup>	17,000	5	75,000	36

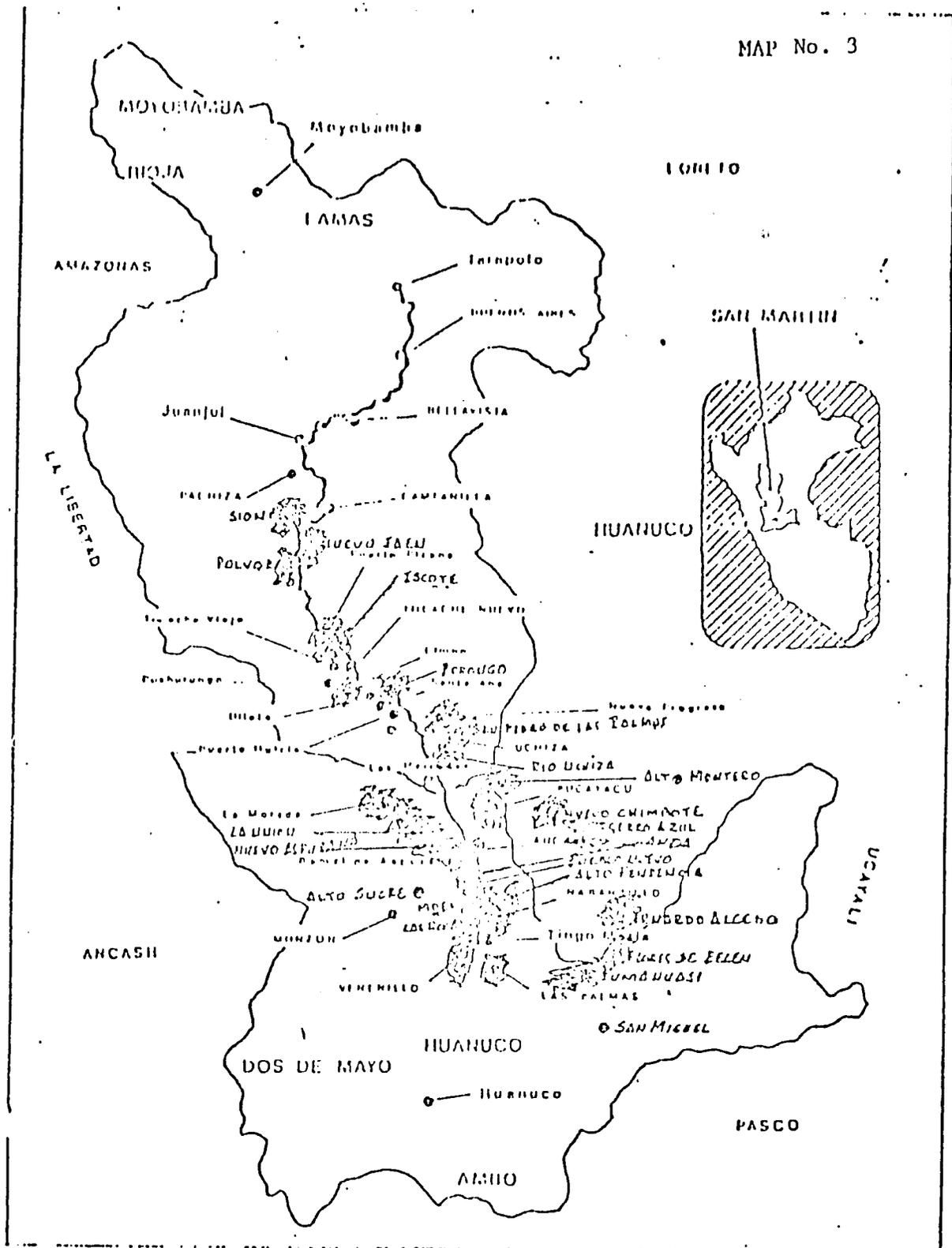
Source: Sectoral Statistics Office (OSE), as revised by American Embassy (NAU) estimates.

As stated in the initial joint Agreement signed by the USG and GOP in August 1981 creating the eradication effort,

The elimination of coca cultivation, or its reduction to levels that meet demand in the legal market, will be necessary to assure the success of the concurrent agricultural development Project.

While this statement remains valid as a long range objective, the destruction of illicit coca production and the development of the legitimate agricultural potential of the UHV must adapt in the short-term, to the difficult conditions which now characterize the area. The Project can provide a vital contribution to the GOP effort to regain civil-military control of the area by showing that the central government is concerned with the economic growth of this important region and is prepared to invest resources to see that this objective is achieved.

<sup>1/</sup> The OSE figures are 12,500 and 15,000 hectares respectively for 1982 and 1986 verses the 17,000 and 75,000 hac. estimates of the Embassy. The Embassy figures reflect estimates based on photo interpretation while the OSE estimates reflect sample surveys of local farmers which probably miss the inaccessible coca growers who are the recent arrivals. The Embassy figures are presented here as the more realistic.



ZONES WITH GREATEST CONCENTRATION OF SUBVERSIVE GROUPS

Handwritten mark or signature.

D. Political Subversion and Violence

By 1983, the start-up date for coca eradication in the UHV, a group of radical leftists known as Sendero Luminoso (The Shining Path) had begun a campaign of political and social terror in the Sierra, primarily Ayacucho, aimed at the eventual destruction of the newly established democratic political structure in Peru. Members of the group began to infiltrate the Upper Huallaga Valley, seeing there an opportunity to promote their program of political and social organization and to attack central government authority and, eventually, eliminate its control.

With a series of attacks on physical infrastructure, such as the destruction of bridges and communications posts, and demonstrations of power, such as blocking transit on the Marginal Highway and conducting ambushes of police and military forces, the Sendero solidified its position in the area. When the evidence of increasing Sendero presence in the UHV became impossible to ignore, the first of a series of temporary declarations of a state emergency were called in 1984. The declaration of emergency allowed direct military control and administration of the civil-political process and the suspension of certain rights and guarantees. With almost total control of the area the military was given free rein to seek out and destroy the Sendero threat.

An undesirable side effect of the declaration was that the military, whose function was to carry out an anti-terrorist action, ordered the local Civil Guard Police (UMOPAR) back to its barracks. Because protection of the CORAH eradication workers was provided by UMOPAR, this action by the military paralyzed the eradication effort. Meanwhile, in spite of the efforts of the military, the influence of Sendero continued to expand in the area. The political platform of Sendero called for the continued production of coca and rejection of the GOP coca eradication program and for the defense of the coca growers' rights to a fair price from the narcotraffickers. Sendero has now become so entrenched in the area that many towns and villages have delegates appointed by Sendero who speak for the population and make decisions on the approval or rejection of public works and government sponsored programs in their communities.

Both Sendero and a new (to the UHV) subversive group, the Tupac Amaru Revolutionary Movement (MRTA), continue to consolidate their presence in the area and carry out bold actions to demonstrate it. Since the overall anti-narcotics program began in the UHV, a total of 34 eradication workers and 6 development workers have been killed. Heavy equipment has been destroyed, vehicles commandeered, and buildings (the Tulumayo Research Station) heavily damaged. A more serious consequences even than these actions, is the degree to which Sendero has infiltrated the local communities, thus forcing GOP basic service institutions, such as PEAH and traditional line ministries, to justify their actions and seek Sendero/community approval, in some instances, or withdraw their personnel from the area.

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E. Other Agency Programs

1. USG Anti-Narcotics Program

The AID-supported Upper Huallaga Project is one element of a combined USG program of coca interdiction, eradication, and agricultural development, centered in the Upper Huallaga area. The Bureau of International Narcotics Matters of the State Department (INM) and the Drug Enforcement Administration (DEA), under separate agreements with the GOP Ministry of Interior (MOI), are providing funds in a cooperative effort to control and eliminate the production and distribution of illicit coca in the Upper Huallaga and other areas of the country. The goals of the Agreements are as follows:

a. Interdiction. To control illegal trafficking and distribution of coca with coordinated actions by: (i) UMOPAR, a special rural police unit under the Civil Guard police, (ii) DIPOD, a special anti-drug unit under the Civil Guard, (iii) PIP, the Peruvian Investigative Police, and (iv) PC, Peruvian Customs Service. A special "CONDOR VI" interdiction operation was initiated in July 1987 by a 1,200 man Civil Guard police contingent, with USG-financed equipment and advisory support. The operation is still underway. Three USG donated helicopters are available for ferrying troops and supplies, while drug processing laboratories have been seized and destroyed. In October 1987, increased subversive activity was noted in and around the Upper Huallaga. In response the area was declared an emergency zone and placed under the control of the local military authorities.

b. Eradication. To reduce coca production, an eradication program is being implemented by CORAH, a Special Project Office under the Ministry of the Interior. A base of operations for housing a 500 person eradication brigade has been established in the Uchiza - Tocache area (Santa Lucia). CORAH has targetted a 1,300 hectare area as the initial operational priority and the brigade began eradication in November 1987. To date, it is reported that approximately 400 hectares of coca have been destroyed. In addition, US scientists, with Peruvian advisory support, are conducting tests to determine the effectiveness and environmental consequences of the use of herbicides to destroy coca plants.

c. Drug Awareness. In late 1985, AID funded a \$4 million Project in the Drug Awareness field (Project No. 527-0288). Under the Project, AID is providing technical assistance and has stimulated the formation of the Peruvian Center for Information and Education on the Prevention of Drug Abuse (CEDRO). The Center has completed country wide opinion surveys to determine Peruvians knowledge and concern about the narcotics problem. From its own and worldwide research information CEDRO prepares and disseminates to community leaders, the press, radio and television information on the wide field of substance abuse. CEDRO also has developed an extensive community outreach program that mobilized volunteers, trains and educates mid-level managers and supervisors on the drug problem.

d. Public Information. The United States Information Agency (USIA) is active in disseminating the Peruvians through public and private information sources articles and data on the U.S. and worldwide narcotic problem. The United States Information Service (USIS) in Peru uses local organizations, such as CEDRO, and goes directly to community leaders and opinion makers to have its views and information presented.

2. United Nations Fund for Drug Abuse Control (UNFDAC)

UNFDAC, the drug control agency of the UN, is working in two principal coca producing regions of Peru. In the area around Cusco, they are providing \$1.5 million through ENACO, the GOP institution for marketing and control of legitimate coca production, for a coca inventory using ground verification sample techniques and an agricultural and community development Project. A follow-on Project of \$3 million for 3 years is scheduled to begin implementation in 1989. In the UHV, UNFDAC financed the construction of a cacao processing plant for a local cooperative and is now implementing a \$3 million program to boost the cooperative's cacao production and improve its management. It is also financing a \$1.5 million program of small-scale, community development Projects, including agricultural diversification.

III. Rationale for the Project Amendment

The rationale for the original Project design was to finance a development effort in the UHV as representative of the Peruvian high jungle. The reasoning was that zone-specific (high jungle, sierra, coast) agricultural technologies would lead to increased food production and that the high jungle represented a largely untapped resource. At the same time, the UHV had been identified as the primary producing region for illicit coca and the appropriate first target for a coca eradication effort. As stated in the PP,

"Given the social dislocation, the reduction in regional income, and the political problems which a program of this nature will produce, it was suggested that AID mount a large-scale development effort in this jungle region as part of its overall high jungle development strategy, in order to minimize negative social impacts of an eradication program."

While the original rationale remains valid, it needs to be refocused and restated to identify clearly the relationship of development in the UHV with the anti-narcotics effort, of which the Project is a part. Clearly, the initial sectoral justification - i.e., the testing of "sustainable agricultural production technologies suitable not only for the Project area but for other high jungle areas of Peru as well," - can no longer be considered of vital importance. The spiralling coca production and violence have reduced communications from the UHV with the rest of Peru and have seriously disrupted plans for long-term programs to test research and extension methodologies which would be valid in other high jungle areas. The Project must be justified by its ability to, first and foremost, reinforce and sustain the other parts of the overall anti-narcotics program. Therefore, the

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rationale for the revised Project design is that of support for legitimate agricultural production, specifically:

1. To assure that adequate and timely resources are provided to existing legitimate farmers who are vulnerable to the blandishments of the narcotics traffickers promoting coca cultivation, and
2. To assure that adequate and timely resources are provided to ex-coca growers who have had their coca plots eradicated, so that they may decide to stay on their land and enter legitimate agricultural production.

To the extent that the Project is able to save potential coca producers from entering the trade and to the extent that the Project permanently extracts ex-coca growers from the drug trade, AID-financed development contributes to a long-term reduction in the illicit production of coca in Peru. However, unless increased eradication and interdiction efforts can substantially alter the dominant marketing and price position of coca in the local economy, the Project's impact will be limited.

#### IV. Strategy for Project Amendment

The intensive review process, culminating in the original Project design, stressed agricultural research and extension within a framework of integrated rural development in the UHV. In the short-term, agricultural extension was to be given special emphasis as the most effective means to quickly expand the farmers' knowledge base and thus increase agricultural production. At the same time, intensive agricultural research would identify and test alternative crops and agricultural technologies which, over the longer term, would guarantee a stable and productive agricultural sector in the high jungle region. These services---plus complementary training, agroindustry, information collection, credit, road maintenance and health activities---were to be delivered by the appropriate GOP line ministry or agency working in the Project area, the overall program being coordinated by a Project-specific agency, PEAH.

While retaining the overall strategy concept, a comprehensive program of agricultural support services delivery in the UHV, the revised Project design refines this strategy and adapts it to the existing conditions. In 1980, at the time of the initial intensive Project review, the constraints to development involved the inefficient use of resources in the agriculture sector. Illicit coca production was viewed as a temporary phenomenon subject to correction (i.e., elimination) within a short time.

Unfortunately, the coca production problem has worsened violence from the political and social challenges to the central government by leftist subversive organizations are spreading throughout the local society, eroding its economic, social, and political stability. The ability of the central

government to deliver basic services in the UHV has actually declined during the 1980s due to the reduced operational capacity of some GOP line ministries. The revised design recognizes that within this implementation environment, the Project must choose its targets carefully to maximize the potential for progress in meeting reasonable development objectives. With this in mind the Project will incorporate the following strategic elements:

1. reduction in the total Project area by approximately one-third, eliminating the northern end of the UHV, including Campanilla,
2. integration of the information gathering and analysis programs into a common data base Geographic Information System (GIS) to be used for selecting target communities and identifying their development needs,
3. within the reduced Project area, identify target communities where the full package of Project financed development support will be promoted,
4. use of the extension agents and social promoters as active facilitators of basic agricultural services such as seed, credit and other inputs, trainers of farmers for their efficient utilization, and agents for optimizing farm income through effective product marketing,
5. increasing the participation of the local National University for the High Jungle (UNAS) in the analysis of actual levels of technology employed by local farmers in the Project area and designing practical training of agricultural technicians, extension agents, and social promoters, and,
6. seek out the commitment of the GOP to allocate non-Project resources for a strengthening of line ministry programs in the UHV and, as such the transfer to them of certain activities now performed by PEAH, for example, road maintenance to the Ministry of Transport and Communications and the Departmental Development Corporations (CORDES), as appropriate.

The Project will thus reduce its geographic responsibilities and administrative burden with a consequent reduction in staff and equipment maintenance and support expenses. At the same time, the agricultural and complementary community development services will focus on providing practical and feasible solutions to existing agricultural production problems on the farm, while monitoring and, if necessary, intervening directly to ensure adequate input supply and marketing opportunities. The threat of violence and the effect of coca production on specific Project decisions will impact on the selection of target sites and kinds of services to be incorporated into the decision making process.

#### V. Revised Project Design Issues

Can PEAH both field and supervise adequate staff to implement all Project elements?

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Will GOP Project resources continue to be budgeted and provided at levels that delay Project implementation?

Can line ministries obtain the budget resources and assign adequate staff to reestablish a viable presence in the UHV?

VI. Project Description

A. Goal and Purpose

The amended goal and purpose statements for the Project remain as stated in Project documentation.

1. Goal: "to increase and diversify agricultural production in the Peruvian high jungle." This Project goal statement should be understood in the overall anti-narcotics program goal of eliminating the illicit production of coca. Project implementation, by supporting the development of self sustaining legitimate agriculture in the UHV, and in the entire Peruvian high jungle which is threatened by the incursion of narcotics traffickers and the cultivation of coca, will help to achieve the program goal. The Project represents the only viable means of assuring that, once the interdiction and eradication programs are successful in eliminating coca production, there is the possibility of a permanent restructuring of the regional economy away from its coca base.

2. Purpose: "to support GOP development and narcotics control activities in the UHV by strengthening public sector agricultural support services and expanding rural and community development activities." It is assumed that the increased agricultural production will be achieved by strengthening the capacity of the relevant agricultural support institutions to provide the vital inputs---credit, seed, other inputs, and market access---which will result in the replanting of ex-coca land in legitimate crops and halt the destruction of legitimate crop land for coca cultivation.

B. Geographic Area

As defined in the amended Project design, the UHV contains somewhat over 1.8 million hectares (about 7,000 square miles). This total area is bordered on the east by the Cordillera Oriental and on the west by the Cordillera Central, with its most upstream point the town of Cayumba, some 20 km. upriver (south) from Tingo María, and its most downstream point some 15 km. downriver (north) from Campanilla. As so defined, the UHV follows the Huallaga River and tributaries for some 300 kilometers.

Since considerable portions of the Valley's upper watersheds are virtually inaccessible and uninhabited, the original Project design limited the Project area to elevations of 1,000 meters on the east and 2,000 meters on the west. Furthermore, the original PP did not include the northern third or so of the UHV, from Puerto Pizana to Campanilla and beyond. The Project area,

77°00'

76°30'

76°00'

**SÍMBOLOS CONVENCIONALES**

- Capital de Provincia    ● TINGO MARIA
- Capital de Distrito    ● Uchiza
- Poblados - Caseríos    ● EL VITA
- Límite de Estudio    - - - - -
- Límite de Estrato    - - - - -

**MAP No. 4  
LAND USE  
CAPABILITY**

**MAPA DE  
CAPACIDAD DE USO  
MAYOR DE TIERRAS  
ZONA: ALTO HUALLAGA**

Escala: 1:800,000

FUENTE: Muestreo Departamental de Muestreo San Martín  
Elaborado por I. S. M. - Mapa de Brindley - Brindley de Ing.  
Los datos por G. N. E. A. S.  
DISEÑO Y DISTRIBUCIÓN: Corografía - Corografía Militar de Arica  
1987

**SUBCLASES O FACTORES LIMITANTES**

SÍMBOLO	DESCRIPCIÓN
s	SUELO
e	EROSIÓN
c	CLIMA

**CLASES DE CALIDAD AGROLOGICA**

SÍMBOLO	DESCRIPCIÓN
1	CALIDAD AGROLOGICA ALTA
2	CALIDAD AGROLOGICA MEDIA
3	CALIDAD AGROLOGICA BAJA

**GRUPOS DE CAPACIDAD DE USO MAYOR**

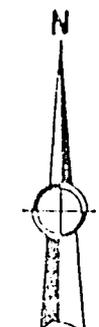
SÍMBOLO	DESCRIPCIÓN
A	TIERRAS APTAS PARA CULTIVOS DE ALTA PRODUCTIVIDAD (ARROZ)
C	TIERRAS APTAS PARA CULTIVOS PERMANENTES
P	TIERRAS APTAS PARA PASTOS
F	TIERRAS APTAS PARA PRODUCCIÓN DE MADERA
X	TIERRAS DE PROTECCIÓN

**ASOCIACIONES DE CAPACIDAD DE USO MAYOR**

SÍMBOLO	CLAVES	SUPERFICIE (ha)	%	PROTECCIÓN ESTIMADA
	A2sc-C2es	13,632	0.69	60-40
	A2sc-P2s-C2es	246,464	12.54	50-50-20
	P2s-C2es	26,160	1.62	60-40
	P2s-F1e	7,936	0.40	80-20
	F2e-X	54,320	2.62	80-20
	F3c-F2e-X	96,960	4.95	40-40-20
	X-F3e	707,570	40.15	50-50
	X	737,984	37.61	100

SUPERFICIE TOTAL: 1'962,042 Ha

**MAPA DE UBICACION**



**EXPLICACION DEL SÍMBOLO**

- TIERRAS APTAS PARA PASTOS
- P2s LIMITACION POR SUELO
- CALIDAD AGROLOGICA MEDIA

77°00'

76°30'

76°00'

7° 30'

8° 00'

8° 30'

9° 00'

9° 30'

77°00'

76°30'

76°00'

SÍMBOLOS CONVENCIONALES

- Capital de Provincia ○ TINGO MARIA
- Capital de Distrito ● Uchiza
- Población Caseríos • El Valle
- Límite de Estudio - - - - -
- Curva de Nivel, Cota ~~~~~

MAP No. 5

ALTITUDES-UPPER  
HUALLAGA

MAPA  
ALTITUDINAL  
ZONA: ALTO HUALLAGA

Escala: 1:800,000

FUENTE: Mapas Demográficos de Huancayo y San Martín  
elaborados por I.B.N.

DISEÑO Y DIBUJO: Carlos María Ordoñez Montoya de Abiley  
1987

7°

30'

8°

30'

9°

30'

8°

30'

9°

30'

8°

30'

9°

30'

8°

30'

9°

30'

8°

30'

9°

30'

8°

30'

MAPA DE UBICACION



LEYENDA

SÍMBOLO	DESCRIPCION
	4000 - +
	2000 - 4000
	2000 - 3000
	1000 - 2000
	500 - 1000

77°00'

76°30'

76°00'

as defined by the PP, thus contained and estimated 876,650 hectares. This area was subsequently expanded to link with the border of the earlier Central Huallaga Project whose southern border ended just north of Campanilla.

Campanilla's distance from the Aucayacu PEAH headquarters, and the ever present security risk, its relatively small amount of agricultural production, its economic and social linkage with Juanjui which is outside the Project area, and the current lack of interdiction and eradication program presence in the area, the Project area will be reduced to the original dimensions, eliminating the area from Puerto Pizana to Campanilla.

The reduction will allow Project resources to be concentrated and thus used more efficiently. Within this area the Project will identify target communities which meet defined criteria, involving current eradication sites, freedom from subversive harassment and other security threats, economic potential, and existing or potential community organization. Project resources will assist ex-coca growers who request help in rehabilitating their land to support legitimate agricultural activities; these farmers will come from the pool of those affected by the 1,500 to 2,000 hectares of land, owned by an approximately equal number of farmers, to be eradicated manually each year. These lands are located in the valley floor, close to roads, with easy access from urban centers. It is expected that police protection will be strengthened for both eradication and development activities in these areas. Currently the eradication program is active around Santa Lucía, just north of Uchiza, and it is expected that the manual eradication campaign will continue along the Marginal Highway between Uchiza and Tocache.

The Project will also concentrate in several specific zones largely between Cayumba and Aucayacu. Where farmers are not now planting coca but are considered vulnerable to do so if they do not receive assistance. Potential target areas are farm communities located between Cayumba and Tingo María who have never planted coca, and farmers between Tingo María and Aucayacu whose coca was previously eradicated. If the security situation allows, groups of farmers in the La Divisoria, La Morada, Monzón, and Tocache areas who have never planted coca could also be included.

### C. Beneficiaries

There are two basic categories of coca farmers in the UHV: those who have come to the UHV for the expressed purpose of planting coca and who are likely to move on when their lands are eradicated, and those who have come as permanent colonists and have made a commitment to the land on which they live and work by investing in permanent crops, housing, and similar indicators. The first group is generally located on more marginal land that will have little agricultural worth outside of coca. The second group generally is located on the better lands of the valley floor, more accessible to roads and waterways, and will be subject to manual eradication. Ex-coca growers in the second group are the principle potential beneficiaries of the restructured Project.

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The UHV is estimated to have a population of 185,000. No reliable data is available on the coca-only group described above, since it is a shifting subpopulation, often consisting of single men or couples who leave their children elsewhere, rather than the traditional family group. It is also not easy to get useful data on urban vs rural populations, since in even the largest urban areas there are substantial numbers of farmers who live in the urban areas but work on or possess nearby lands, whereas some rural communities have recently boomed and have large numbers of people involved in commerce and other urban oriented pursuits. The original PP identified some 5,713 legitimate farms in the reduced Project area (excluding large tea and palm oil cooperatives), with some 57,220 ha. in crops and pasture. The survey producing these estimates basically restricted itself to the more permanently colonized lands on the valley floor. On the other hand, a Ministry of Agriculture census at the same time identified some 18,500 separate farm units in the same Project area, undoubtedly including some exclusively in coca production. It is probably safe to say that with the possibility of multiple farm unit management by one family and some exclusively coca plots even in the valley floor, there are at least 9,250 families in the UHV with ties to the land who are either not in coca production or are not exclusively in coca production. These families, representing over 50,000 individuals, are the Project's potential target group.

The Project will concentrate on approximately 2,200 of these families, with two basic target groups. First of all, assuming that an average of 1,200 families will be assisted following eradication of their coca and they will be the primary beneficiaries. In many cases, farmers plant only one or two hectares of coca out of approximately 10 hectares of arable land they possess. Some of these families have continued to work their remaining lands with legitimate crops, thus requiring assistance only in replanting their eradicated lands with licit crops. Other families, however, have abandoned or greatly reduced the maintenance of their remaining lands, thus requiring assistance to replant and rehabilitate both the eradicated lands and their abandoned lands. Therefore, over the approximately three years of continued Project implementation, an estimated 3,600 hectares will be replanted/rehabilitated. The second target group consists of approximately 1,000 families who currently have their lands in legitimate production but are considered at risk to switch to coca production if they do not receive assistance. These families farm some 10,000 hectares, although at any given time only some 50 to 60 percent is in production, the remainder lying fallow.

The Project is thus designed to assist some 2,200 families over the three year extension period. Close to 10,000 hectares of land will be replanted or have its production improved. Some of the beneficiary families are currently receiving assistance under the Project, and much of the human and physical infrastructure to assist them is in place. Furthermore, most of the remaining population in the UHV will receive indirect benefits from road maintenance, construction of potable water systems, and other Project interventions, although these will be phased out as direct Project-funded activities during the extension period.

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D. Components and Outputs

The Project during the 1989-91 period will consist of two basic types of activities to be carried out among the two group of beneficiaries: (1) an agricultural support delivery system, and, (2) community infrastructure activities. The agricultural support delivery system is composed of two types of activities, those which directly assist the target farmer (agricultural extension, provision of seeds and seedlings, other inputs, credit, marketing assistance, machinery, and land titling assistance) and those which are necessary for the functioning of the system but do not directly assist the farmer (agricultural research, a Center for Training and Technology Transfer, and establishment of a Geographic Information System). The community infrastructure activities are likewise composed of two categories, those of small scale which can readily and rapidly be carried out at the community level (production/marketing infrastructure such as crop storage facilities and crop drying platforms, social infrastructure such as school rooms, and larger infrastructure activities which require greater technical input (road maintenance, water and sewerage systems). Table 1 below presents these components of the Project. (One additional aspect of the Project, community organization, will be separately discussed below.)

Table 1

Project Components - 1989-91

1. Agricultural Support Delivery System
  - a. Components directly impacting target farmers
    - (1) Agricultural extension
    - (2) Provision of seed and seedlings
    - (3) Provision of other inputs
    - (4) Provision of credit
    - (5) Marketing assistance
    - (6) Provision of agricultural machinery
    - (7) Land titling assistance
  - b. Complementary components necessary for the system's functioning
    - (1) Agricultural research
    - (2) Center for Training and Technology Transfer
    - (3) Geographic Information System
2. Community Infrastructure
  - a. Small scale, community level works
    - (1) Production/Marketing infrastructure
    - (2) Social infrastructure
  - b. Larger scale infrastructure
    - (1) Road Maintenance
    - (2) Water and sewage systems

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1. The Agricultural Support Delivery System (ASDS)

To be financed under the Project is an integrated system, requiring the majority of its components to function properly if it is to help the Project achieve its objectives. The components which will have a direct impact on the farmer are described below:

a. Components directly impact target farmers.

(1) Agricultural Extension. There are currently four Project-funded entities with extension systems operating in the UHV. PEAH supervises two of these systems. One of these---the Special Program for Integrated Production Systems (PESIP)---was created by the Project's counterpart agency (PEAH) specifically to operate in eradicated areas. PESIP operates utilizing a demonstration plot methodology, whereby it supplies seeds, inputs, and regular advisory support to a farmer willing to replant all or part of his/her eradicated land with the recommended crops. Neighboring farmers are brought in to observe the progress of the crops. PESIP has been quite successful to date, and its experience shows that in the subsequent agricultural cycle some four times as much of the demonstrated crops are planted, by the same or by neighboring farmers, when the farmers have access to the required inputs.

PEAH's major extension program is under its Directorate of Agricultural Development and Promotion (DIDEPA) and includes a network of zonal offices (currently four). The DIDEPA program is oriented toward increasing productivity in general, rather than testing and promoting what will grow on eradicated lands. Demonstration plots are the principal extension vehicle, but other agricultural assistance tools are used, such as formal training events for farmers, agricultural machinery rental, publications, school gardens, youth clubs, irrigation canal construction, and construction of storage facilities. DIDEPA provides assistance in food and cash crops, including cacao, achiote, rice, beans, corn, cassava, coffee, bananas, tea, and small animal production. Some 25 extension agents work under this program.

Under the ASDS, Project element, an effort will be made to focus the existing extension programs into one consolidated one. For example, using the outreach techniques and the improved extension planning and supervision of PESIP, with the human and physical resources of DIDEPA. The extension agents will establish demonstration plots, from which to provide technical advice, and will assist farmers to secure access to the other components of the ASDS. Other activities mentioned above (school gardens, publications) will be continued only on a limited basis, where specifically warranted to fulfill the objectives of the ASDS. The concept that all activities be aimed at assuring the success of the ASDS, and that the measure of success will be the demonstrated increases in production resulting from improved technologies, is a new one within the Project. Currently, program targets focus on an arbitrary list of activities, the completion of which, if not adequately implemented, may have no positive impact on the beneficiary. The targets became ends unto themselves with no linkage to achieving Project objectives.

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The extension component under the ASDS will include both high value cash crops (e.g., cardamom, achiote), to reduce the loss in income caused by coca eradication, and traditional food crops (e.g., corn, beans, bananas, cassava), to make the family less reliant on outside income and to serve as a form of protection against risk. Small animal production will form part of the services as part of an integrated farm approach to raising income and improving security from legitimate crop production.

PESIP's demonstration plots originally were about one fourth hectare in extent and more recently have averaged one half hectare. PESIP began with each extension agent assisting some 10 farmers and now expects that each agent will assist some 30. PESIP provides all inputs to help the farmer replant eradicated lands, including dolomite (to reduce acidity), seeds, and fertilizer. PESIP also assists with machinery and labor. The general approach on eradicated lands is, after treatment with dolomite, to plant beans, which helps restore nitrogen to the soil and, within three months, provides a source of income, prior to planting one of the other higher value crops.

Under the ASDS, approximately 20 extension agents will be assigned to assist farmers whose lands have been eradicated, assuming the manual eradication targets are met. Starting with 20 client farmers each, they will initiate demonstration plots of approximately one half hectare each of cash crops on either eradicated or abandoned lands (on eradicated lands, after an initial crop of beans have helped revitalize the soil) and/or plots of one hectare each or larger of traditional food crops on abandoned lands.

In many cases these demonstration plots will be of more than one crop, as mixed agriculture has advantages to the small farmer. The second year the extension agents will continue to attend to their original clients, especially those who desire to expand their plantings, and will take on 20 new clients. Some of these may be neighbors of the first group, while others will be newly eradicated farmers in other areas. By the third year, the 20 agents (with the help of assistants) are expected to be attending to 60 clients each, each of whom is planting an average of six hectares.

Another 20 extension agents will be assigned to assist farmers who have not planted coca, but can be considered vulnerable to outside pressure. These farmers will be clustered, and by the end of the third year each agent (also, with an assistant, if necessary) is expected to be helping 50 farmers. These farmers are expected to possess an average of 10 hectares each, an average of six actually under cultivation. Methodology will also involve the use of demonstration plots, so as to introduce cash crops or new varieties of traditional crops, with some farmers requiring only technical advice and assistance in accessing inputs.

These 40 extension agents and their 20 assistants will be directed by five supervisors and one Chief. The Project will provide funding support to the zonal office and repair and upkeep of 16 vehicles and 40 motorcycles. Twelve vehicles and 20 motorcycles will be purchased as replacements.

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(2) Seeds and Seedlings. Seeds and seedlings for demonstration plots are currently produced under DIDEPA, PESIP, and the other Project-financed extension and research programs. Under the ASDS, provision of seeds will be an important component, since only high yield cash and traditional food crops can hope to come close to competing with coca. Seeds and seedlings will be provided free of charge to farmers with demonstration plots for the first planting. (On eradicated lands, these will be free through the stage of planting higher value crops.) For subsequent plantings, or for farmers who are receiving assistance but not through demonstration plots, PEAH will provide seeds and seedlings at fair market prices until they become available in sufficient quantity on the open market. PEAH will not require payment until harvest time. If appropriate seeds are available on the open market (most often through ENCI, the National Input Marketing Company), PEAH will assist farmers to access them at fair market prices, which may include helping with transportation.

The extension agent will be the key to assuring that his clients have adequate seeds at the appropriate time. As in all aspects of the ASDS, the extension agent will be expected to serve as a facilitator, working for his clients' best interests. Likewise, the extension agent will be responsible for projecting future seed requirements, so that PEAH can assure an adequate supply, whether from self-production or from other sources.

PEAH will have to maintain a higher degree of flexibility than at present in planning future seed production requirements. The current system, typical of all GOP operations, is to establish well defined objectives, and actions required to reach them, midway during a year prior to the next calendar year. In the UHV, there is a diversity of growing conditions, based on soils, altitude, and climatic factors, requiring different crops or varieties in different locales. Since the ASDS will be tied in with eradication, the locations of which may well change from one month to the next, PEAH will have to be willing to increase seed production at one facility and reduce it at another to meet actual demand. Furthermore, the success of the demonstrations of a particular crop, the plans of neighboring farmers to adopt a demonstrated crop, the availability of seeds on the open market, and exogenous factors such as terrorism, will all affect the demand for seeds of a particular type in a particular location.

PEAH's initial production will depend on detailed plans being worked out for the growing season beginning in late 1988, taking into account production capacity at the existing facilities which will be integrated into the ASDS. The following is an illustrative listing of the seeds and seedlings needed to produce 400 hectares of plantings. (Improved seeds for traditional crops - corn, rice, beans, and cassava - are available on the open market and will be purchased by PEAH for its demonstration plots of those crops.)

<u>Crop</u>	<u>Hectares</u>		<u>Plants Needed</u>
Coffee	60		72,000
Cacao	60		39,000
Achiote	60		51,000
Cardamom	60		39,000
Citrus	30		12,000
Papaya	30		50,000
Pineapple	8		96,000
Bananas	24		24,000
Tea	6		96,000
Cashew	10		6,500
Avocado	10		1,000
Coconut	20		2,000
Other fruits and nuts	12	approx.	1,200
Forest varieties	10		1,000

(3) Other Inputs. Various fertilizers and pesticides are available in this area from ENCI and from private suppliers, with varying degrees of regularity. PEAH produces and processes its own dolomite. Except for dolomite, the ASDS will not supply such inputs itself but will help the farmer have access to them. It will do this by maintaining a data bank of suppliers and monitoring supply and price. Extension agents will advise farmers on how to obtain appropriate inputs and will assist, if necessary, with local transportation arrangements. On the regional level, PEAH will coordinate with ENCI and other suppliers to assure that sufficient inputs are available to meet demand.

The Project will fund 36 workers, new materials, transportation and other operating cost, and, seed and dolomite for demonstration plots.

(4) Credit. Farmers traditionally require credit to purchase seeds and other inputs, to pay hired labor or maintain their own family until harvest, and to make capital investments in land improvements, machinery, and facilities. In the UHV there is a great diversity of credit needs reflecting the wide variety of microregions. Some farmers have done relatively well during the coca boom and have sufficient savings to finance their agricultural operating costs. They should utilize these funds, rather than draw on the scarce credit resources available from the Project. Other farmers, of modest means to begin with, will find themselves in dire straits after losing their coca crop to eradication and will have to rely heavily on credit. Most of the farmers who have never planted coca are also of modest means and will require credit to improve their production.

There will be three sources of credit under the ASDS. First of all, as mentioned above, PEAH will make seeds and seedlings available under certain circumstances, requiring payment only at harvest time. This will constitute a form of credit for eligible farmers for this input.

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Secondly, the ASDS will rely on the traditional source of formal credit in Peru, the Peruvian Agrarian Bank (BAP). The Project to date has disbursed some \$2.7 million to the BAP for relending to small farmers in the UHV, for both operating credits and capital investment credits. The BAP is by no means an ideal mechanism. It is bureaucratic, requiring land possession certificates, certificates that farmers are coca-free, and other paperwork before a loan can be processed. Farmers must make multiple visits to obtain a loan. It is also inefficient, often not having funds available when it says it will, thus requiring the farmer to make even more trips to town and sometimes causing farmers to miss a planting opportunity. Furthermore, though it relends the Project funds at the highest rate allowed by law, this is now far below the recent high inflation and devaluation rates, causing the real value of the AID utilized funds to shrink considerably each year. In spite of these problems, which are not exclusive to the UHV, some 2,000 farmers have obtained Project funded credit from the BAP. Some other farmers could readily be made eligible for this credit by legalizing their land tenure or getting certain other papers in order. Since this is Peru's formal credit system, which is expected to outlast the Project, there are no new Project funds in the BAP, and the BAP is expected to get substantial injections of new GOP funds each year in the future, all farmers who are eligible for BAP credit or could readily be made eligible should be encouraged to utilize this source. The ASDS will assist such farmers in accessing the credit. However, no further AID funds will be channelled to provide BAP with additional credit funds. Counterpart funds will be made available to BAP at the level of approximately \$1,050 per farmer.

For farmers who for one reason or another cannot readily access BAP credit, the Project will make available a third source of credit, based on the rotating fund concept. This system will work through organized community groups---which will take care of distribution and collection---and will provide indexing to maintain real value. During Intensive Review two programs were explored, both successfully operating elsewhere in Peru and with all legal approvals in order, and establishment of an agreement with one of them (or with another acceptable alternative) will be a condition to disbursement for 1989. One program---called FINCA---operates successfully in Ayacucho (another area of heavy terrorist presence) and other countries. It is operated through a Peruvian PVO (SDR) and requires community organization and forced savings. The other program, the Peru-Canada Credit Fund, established within INADE with funds generated from the sale of Canadian agricultural commodities, has a number of similar characteristics and would be operated directly by PEAH. PEAH has already drawn on this fund on ten occasions when groups of client farmers could not access BAP credit. This approach will be directed at 750 borrowers and \$600 per Loan, plus operating costs.

As with other aspects of the ASDS, the extension agent will be key in helping his client farmers access the appropriate sources of credit. He will help the farmers develop credit use plans and will have the responsibility of controlling the utilization and repayment of the credit. While some BAP credits are in kind (with ENCI-supplied inputs), most of the credit will be in cash, putting considerable responsibility on both the farmer and the extension agent for its proper utilization. As in the past,

most of the credit will be for production, but in selected cases longer-term investment credits may be approved for investment in land preparation, machinery, and equipment or farm structures..

(5) Marketing Assistance. Produce marketing in the UHV is a major disincentive to legitimate agriculture. Coca is readily marketable for cash, at harvest, and sometimes before. Most corn and rice production, on the other hand, must be marketed through state marketing boards, which often do not have the capacity to absorb all the harvest or have the cash on hand to pay the farmer promptly. For other crops, the farmer must rely on the free market, but because of the remoteness of the UHV and the terrorist activities there (which include the blowing up of roads and bridges and the "liberating" of privately owned trucks), the free market operates poorly in the UHV. Farmers often must accept unprofitable low prices for their crops or occasionally will lose a perishable crop because a purchaser cannot be found. PEAH is finding it increasingly hard to convince farmers to plant licit crops, especially crops not previously produced in the UHV, because of their fears of not having a market for their production.

Marketing assistance has not been a formal Project component to date, except in connection with certain agroindustrial investments, such as grain mills. During the Project extension period, such assistance will be incorporated, with emphasis on making the free market operate better. The National Agrarian University of the Jungle (UNAS) will undertake this responsibility with technical assistance provided by the Project, researching market opportunities, keeping track of daily prices and selling opportunities, and helping groups negotiate future contracts. It will disseminate information both through the extension agents and through daily radio broadcasts.

(6) Machinery. PEAH currently has six tractors, 13 self-propelled planting and harvesting machines of various types, and a large array of accessories, which are made available, with operators, to farmers for land preparation and harvesting. This is in addition to machinery PEAH has at its various research and seed producing facilities. This Project extension will fund four replacement tractors plus accessories and parts. AID funds will also cover 15 operators and mechanic and operating costs.

Ideally, the private sector should supply such services. At the same time, there is a GOP agency responsible for agricultural machinery rentals - SENAMA. During Intensive Review, the efficacy of passing the responsibility of such services from PEAH to SENAMA or to the private sector was explored. However, there are several reasons for these services to remain with PEAH. In the UHV there is little utilization of draft animals, and hired labor is expensive. There is a tradition among farmers to use tractors to prepare their land. SENAMA has not shown itself to be reliable, and the few private machinery rental services are difficult for the small farmer to access because of cost. Since proper land preparation is important to optimal yields, PEAH will continue to supply this service in conjunction the community focused development concept. Older equipment will be replaced. As with all other aspects of the ASDS, the extension agent will

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be responsible for assuring that the client farmer receives the service on a timely basis. Farmers will receive land preparation free for demonstration plots, and for a fee to cover operating costs for their remaining lands.

(7) Land Titling. Land titling assistance has been part of the Project since its inception, principally oriented toward making farmers eligible for BAP credit. A limited land titling program will be continued, principally to encourage farmers to participate in the Project. Land tenancy is of concern to many farmers in the UHV, and a farmer is much more apt to have a commitment to long-term legitimate crop production if he/she has title to his/her land. Furthermore, farmers in the land titling process must remain coca free to obtain their titles. To cover the anticipated costs of surveying, personnel and other costs, AID is budgeting an average cost of \$400 per title.

Land titling is a long and laborious process, and the process sometimes cannot be easily taken beyond an intermediate step of certificates of possession, rather than obtaining full title. There are often numerous issues dealing with legal status of the land prior to the farmer's colonizing it. PEAH works closely with the General Office of Rural Cadastre (OGCR), with the Directorate of Agrarian Reform (DGRA), and with local municipalities, and has its own group of divisions which deal with the matter under the Project extension period this group will be consolidated and reduced in size. In addition to completing the current titling processes underway, PEAH will assist some 450 of the target farmers to obtain title during the three year extension period.

In addition to the above seven components which impact directly on the target farmer, there are three additional components of the ASDS which, while not of direct impact, are essential for the System's effective functioning.

b. These complementary components necessary for the system's functioning.

(1) Agricultural Research. This has been one of the principal activities of the Project since its inception. A considerable number of crops and varieties have been tested for adaptability to the region and to various of its subregions, and much information exists. The technological packages PEAH now offers (improved seeds combined with technical advice on appropriate agricultural practices) are in large part a direct result of this research.

A continuing research capability is required, especially in regard to recuperating eradicated lands and in the ability to combat new diseases which may appear in the UHV. Currently, the Project finances several research efforts, some combined with extension and/or training. These will be consolidated and, over the course of a year's transition period, transferred and consolidated at Tulumayo Research Extension Station. The National Agricultural and Agro-Industrial Research Institute (INIAA), is by law charged with carrying out all public sector agricultural research. PEAH will contract with INIAA for research on 20 crops. PEAH will revise the agreement with INIAA in order to play a stronger role in the selection of research Projects and the utilization of the resultant data to improve technology.

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(2) Center for Training and Technology Transfer (CTTT). The link between research and extension is often made by having the same entity responsible for both. To some degree this now takes place in the UHV, with both PEAH and UNAS carrying out integrated research/extension programs. INIAA should take the lead role in research, while PEAH provides extension services.

The organization best qualified to bridge the gap is UNAS. UNAS' current research/extension/training program, called the Coordinating Office for University Extension and Outreach (OCEPU), is expected to be expanded during the extension period into a Center for Training and Technology Transfer (CTTT). The CTTT's primary function will be to help train extension agents in appropriate and applicable agricultural technologies. Based on research carried out by INIAA and UNAS, access to trained technicians, national and international research publications and, supplemented by surveys and other statistical data area agriculture UNAS faculty members (many of whom have received advanced degrees financed by the Project) it is envisioned will be tasked to carry out short practical training courses and provide individual consultation services for PEAH's extension agents under a formal agreement between PEAH and UNAS. The planned objective is to have the extension agents thoroughly familiar with the 20 or so crops that will be targetted for introduction and promotion. Likewise, if the idea of a center is approved by PEAH and UNAS, CTTT will use extension agents' experiences with various technologies to evaluate the progress of research and extension programs.

It is expected that the CTTT will also help provide training to the extension agents on such aspects of their work as community organization, communications techniques, and the cultural characteristics of the target group. The CTTT will conceivably provide similar training to PEAH's community infrastructure promoters and to other individuals performing social services outreach functions in the UHV (e.g., health promoters, teachers). As currently is done under the Project, such community workers will continue to receive training in such topics as family planning and drug awareness.

(3) Geographic Information System (GIS). Development of a GIS is already underway. The GIS data base will record a wide range of useful data for improving the efficiency and effectiveness of public service programs in the area. All public service entities in the UHV will have access to the information which will permit analysis of coca/eradication baseline data, to provide ownership information for the land titling process, and help PEAH plan various aspects of the ASDS, including extension services, input supplies, credit needs, and marketing assistance. The GIS will contain data on soil conditions, cadastral measures, ownership, land use, agricultural production, and social and economic measures, all in a format under which PEAH and other participating institutions can access and analyze them. The GIS is being developed in conjunction with the Ministry of Agriculture's Sectoral Statistics Office (OSE). The Project will fund 8 staff members and PEAH will sign formal agreements with participating agencies.

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## 2. Community Infrastructure

The other main aspect of the Project is the financing of community infrastructure. This will complement the ASDS in selected target communities but structurally it is being managed separately. There are two major categories of community infrastructure: small-scale low technology public works at the community level, and larger scale works which require more technical sophistication and will service large population groups.

a. Small-scale, community level works. The first category can in turn be broken into the two categories described below:

(1) Production/Marketing Infrastructure. Most of the community infrastructure funded to date under the Project has been social in orientation (e.g., health posts, schools). While these have been beneficial to the communities, greater impact can be obtained if Project-financed infrastructure is linked more closely with agricultural production and the ASDS. Therefore, one criteria for selection of target communities will be the opportunity for integrating the delivery of agricultural packages provided under the ASDS. These may include small irrigation canals, structures in which to store fertilizers and other inputs, concrete drying platforms, and small grain storage structures.

In each of the various geographic areas where the ASDS is operating or expected to operate, a promoter with both technical construction knowledge and community organization skills will be assigned. The promoters will be backstopped by a small staff consisting of an engineer, a drafter, budget and purchasing personnel, and other specialized technical and administrative personnel. The Project extension funds 116 promoters and 12 staff members. Working with a community, the promoter will help community members identify and prioritize the community's needs which will then be formalized in an agreement between PEAH and the community assigns responsibilities, specific actions to be taken, funds assigned, and the implementation calendar. The promoter will see to it that the selected works are designed and budgets developed. Normally PEAH will donate all materials required from outside the UHV and provide the supervision, with the community donating labor and local materials. This PP Supplement is budgeting \$4,000 per work and is planning to finish off existing financial commitments.

(2) Social Infrastructure. Using the promoters and methodology described above, PEAH will continue to finance larger social infrastructure, but on a more limited scale. The promoters will be asked to encourage production/marketing infrastructure, but if a community insists that it needs a school, health center, community center, public clothes washing facility, or the like, it will be accommodated. Schools, health posts, and other facilities requiring recurrent costs will not be constructed unless written agreements are received from the appropriate ministries that will have to provide the required personnel and funds.

b. Larger scale infrastructure. For larger-scale infrastructure, the objective during the extension period will be to phase the

Project out of such activities and transfer responsibility to the organizations legally responsible for carrying them out. Again, there are two categories of such infrastructure:

(1) Road Construction and Maintenance. This has been a major part of the Project since its inception, requiring a substantial portion of the Project's funds and attention. It is also of fundamental importance, since licit agricultural production cannot occur without the farmer having ready access to inputs, markets, and other services. This aspect of the Project has suffered more than any other at the hands of the terrorists, and the road system in the UHV is not in any better condition today than it was when the Project was initiated in 1981, primarily due to the destruction of several bridges along the Marginal Highway. The Project, without becoming a highway Project, has neither the trained personnel nor equipment, and lacks the funding to address this problem in a substantive way. However, because of its importance to long-term development in the area, PEAH will seek out augmented GOP funding commitments to address the problem.

The Marginal Highway of 324 km is the only north-south communication link. Of its total length, 92 km is paved (Tingo María to Pucayacu), 140 km is unpaved but improved (from Pucayacu to Tocache), and 92 km. is unimproved (Tocache to Campanilla). The Project has concentrated on maintaining the 140 km stretch from Pucayacu to Tocache, which is heavily traveled, plus some 300 km of agricultural feeder roads, some of which are also heavily traveled, such as the roads branching off the Marginal Highway to Uchiza and Monzón. Given terrorist activity, it is becoming increasingly difficult to maintain any of these stretches, especially the agricultural feeder roads.

The Ministry of Transportation and Communications (MTC) is charged with maintaining principal roads, including in this case is Marginal Highway. The Departmental Development Corporations (CORDES) are charged with maintaining secondary roads. The common practice is for MTC and the CORDES to arrange common usage of each institution's equipment as a unit for all roads, thus avoiding duplication of machinery in the same geographic area.

PEAH currently has 34 pieces of heavy equipment (including dump trucks), and more are on the way. During the next six months, PEAH will attempt to negotiate agreements with the MTC and/or one or both of the two CORDES which have jurisdiction over the UHV (the UHV falls within the boundaries of two different departments, Huánuco and San Martín). Under the agreements, the Project will continue to finance road maintenance only through 1989. During that year, the equipment and the personnel involved in its operation will pass to the MTC and/or to the CORDE(s) provided they will continue to be used for the Project purposes, which will be responsible for the maintenance thereafter. Given the deteriorating security situation, it will take more than PEAH and INADE to command the line ministries presence. However, PEAH and INADE will endeavor to see that sufficient GOP funds are added to the budgets of the involved entities, with the 1990 budget, to assure continuance of the maintenance from then on.

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(2) Potable Water and Sewerage. The Project has financed potable water and sanitation systems throughout the UHV. These have ranged from small works serving a handful of families to potable water systems serving towns of 5,000 or more. While these works have no doubt had a positive impact on the health and well-being of the populace, the cost and technical requirements are such that it is difficult to justify continuing to finance this kind of infrastructure in a Project principally engaged in an increasingly difficult and costly effort to directly support legitimate agriculture. The Project will complete those works already underway but will encourage the entities charged with the responsibility for constructing water and sanitation systems (SENAPA for larger systems and DISABAR for rural towns) to fulfill this responsibility in the future. These entities, or local municipalities, will also be expected to assume responsibility for operating and maintaining the systems already constructed.

#### E. Community Organization

Some aspects of Project implementation (e.g., construction of community infrastructure) by their nature require the organization of community groups, and others (e.g., extension) are more effective when carried out in this way. In spite of its importance, community organization is not being considered a specific Project component during the extension period. There are two reasons for this. First of all, community organization has been a specific component of the Project in the past, and each extension agent has had an objective of a certain number of community groups to form. Community organization thus never extended beyond the formal act of signing an act of formation. When difficulties arose in carrying out programs through these groups, extension agents and social promoters became frustrated and felt themselves failures, jeopardizing the usefulness and even continued existence, of a vehicle for delivering Project sponsored services. Secondly, community organization is a complex and difficult task in the UHV. There is a diversity of cultural groups in the UHV, only some of whom (usually those from the Sierra) understand and use the concept of community organization, while others resist it. In the main, large community groups or farmers associations such as cooperatives have failed to take root in the area. There is also the threat of terrorists, who are successfully infiltrating the local populations and establishing their own community structures. Campesinos are sometimes afraid to become members of PEAH-organized long-term formal groups, for fear that the terrorists will perceive the groups to be a threat. Campesinos are usually more willing to participate in informal groups (e.g., a field day organized by an extension agent) or formal groups organized for one specific objective (e.g., to construct a school).

Extension personnel will be trained in community organization (at the CTTT if it is created and staffed) and will be encouraged to utilize this methodology whenever feasible. If a formal organization already exists (e.g., cooperative, producers' group, etc.) and if security conditions and coca legislative limitations permit, the Project will work through these organizations. The priority will always be to adopt a formal structure, either long-term or short-term, as the means of communicating with the local population. In other cases, the extension agent may begin with individual

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farmers, promoting meetings or group activities and using the concept of common problems being resolved by the residents in an effort to construct a more formal organization in the future.

F. End of Project Status

One weakness of the Project has been that each year an elaborate plan has been drawn up, with quantified objectives for each activity, only to then have exogenous circumstances cause actual implementation to vary greatly from the plan. An element to be added to the Project is a more dynamic, continuous planning capability, to allow actions to be redesigned as circumstances require. Thus, there is a certain danger in setting out a three year list of outputs. While such a list follows, it must be realized that this is an illustrative set of outputs - the best estimate at the current time, but subject to change as necessary.

<u>Component</u>	<u>Measure</u>	<u>Output Targets</u>		
		<u>(Cumulative)</u>		
		<u>89</u>	<u>90</u>	<u>91</u>
Extension	Eradicated lands -farmers assisted	400	800	1,200
	- demonstration plots (has.)	300	300	300
	- total has. replanted	600	2,100	3,600
	- of those, has. formerly w/coca	200	600	1,200
	Vulnerable areas -farmers assisted	400	700	1,000
	- demonstration plots (has.)	300	300	300
	- total has. assisted	2,400	4,200	6,000
Seeds	Has. planted with PEAH produced seed	400	600	800
	Has. planted with other seed obtained with PEAH assistance	2,600	4,800	7,000
Other Inputs	Farmers assisted	800	1,500	2,200
Credit	Farmers receiving PEAH seed credits	100	300	600
	BAP borrowers	400	600	800
	Revolving Fund borrowers	250	500	750
Marketing	Farmers receiving assistance	800	1,500	2,200
Land Titling	Farmers receiving titles	100	150	200
Machinery	Farmers receiving services	400	600	600
Research	Crops subject to ongoing research	18	20	20
CTTT	Extension agents trained	40	50	50
	Other community workers trained	20	60	100
GIS	Percent operational	60	90	100
Community				
Infrastructure	No. Prod./Mkt. activities completed	6	10	10
	No. Social Infr. activities completed	3	4	2
	Farmers benefiting from above	180	280	240
Road				
Maintenance	Km. maintained	240	*	*
Water &				
Sewerage	Projects completed	4	*	*

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In an effort to ensure that these targets are well conceived and properly used to make well informed management decisions, PEAH will be encouraged to establish annual operational targets which focus first on measurements of impact at the farm level. From there the activities and budget will be formulated on the basis of what resources delivered (number of extension agent, number of vehicles?) in what way (extension agent visits? how many?) will be most appropriate to achieve the targets.

G. Project Administration and Advisory Support

In addition to those components described above, the Project will finance an administrative support structure in PEAH and INADE, as well as monitoring and advisory support for the Project.

1. GOP Administrative Support. The Project currently funds PEAH's operations, which include an administrative and management central staff numbering about 75 persons (not including management and support personnel of the various line divisions). These individuals range from professionals (lawyers, accountants, engineers) to clerks, guards, and messengers. The staff is involved in planning, budgeting, data management, accounting, other aspects of financial management, personnel management, auditing, legal affairs, public relations, and overall direction and policy formulation. Vehicles and drivers are assigned to separate line divisions and do not form part of the centralized administrative structure. The Project will continue to support PEAH's administrative and management operations, although it is expected that staff will be reduced to no more than 50 people. In addition to personnel costs, the modest upkeep costs of PEAH's headquarters will continue to be Project financed.

The Project also finances a small office and staff in Lima. This office will be strengthened through consolidation with INADE operations. Rather than serving largely as a point for distribution of PEAH correspondence to Lima offices and the control point for local procurement, the newly restructured office will be expected to interact directly with INADE, promoting improved backstopping from them and monitoring the programs of GOP line ministries in the UHV and lobbying for additional GOP resources allocations in the area.

2. Project Monitoring and TA. USAID's staff will be strengthened and augmented, and advisory support will be restructured to meet the changing focus and field security situation of the Project. Since the proposed positions are designed to assist in providing both advisory support and monitoring at an isolated field site, the two categories are discussed together here. During the extension period, the Project will fund the following:

a. The USAID Project Manager, who will be in charge of AID's responsibilities under the Agreement and contact with management of PEAH, INADE and the line ministries, will be the USDH Special Projects Division Chief.

b. Assistant Project Manager will be a FSN staff member who will perform day-to-day monitoring of the Project and TA field staff in the UHV.

c. Buyins to the USAID umbrella contracts with local consulting auditing firms, to provide advisory support to PEAH for administration and financial reorganization, in the implementation of a more dynamic planning/monitoring system, and in other aspects of management improvement including computerization of records.

d. Advisory and Management Support Staff composed of the following positions:

(1) An FSN Financial Analyst, to provide advisory support to PEAH in the proper procedures for preparing and submitting financial documents to USAID and in the proper management of AID funds and to participate in the annual operational budget planning, execution, and evaluation process to ensure that Project funds are used efficiently.

(2) An FSN Community Development Specialist, to provide both advisory support and monitoring to the community organization and community infrastructure aspects of the Project.

(3) An FSN Agricultural Extension Specialist, to provide both advisory support and monitoring to the ASDS.

(4) A fixed price contract with a Peruvian firm or individual to complete the development and strategy of the GIS.

d. Approximately 10 p/m of short-term assistance to assist in the resolution of specific technical problems as they arise and the services requested by the GOP.

## VII. Financial Plan

### A. Sources and Uses of Funds

Table 2 presents the uses by component and subcomponent of the Project funds expected to be available during the extension period of almost three years. The expected sources of the funds are as follows:

- \$4,500,000 in additional AID grant funds.
- \$2,042,000 in additional counterpart funds.
- \$1,715,000 in already obligated AID funds expected to be unspent as of 12/31/88 (\$350,000 loan, \$1,365,000 grant).
- \$ 250,000 in unexpended counterpart funds as of 12/31/88.
- \$8,507,000 Total

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This will give a total ten year life of Project amount of \$41 million, broken into:

- \$15,000,000 AID Loan.
- \$12,900,000 AID Grant.
- \$13,100,000 Counterpart.

Table 3 presents expenditures by source for each principal component during the extension period. Table 4 presents the same for the life of Project, but utilizes the component breakdown previously utilized in Project documentation. Table 5 breaks the AID expenditures during the extension period down by foreign exchange and local currency, while Table 6 gives AID expenditures by FY.

Table 2

Uses of Funds by Component During Project Extension Period  
(Years are CYs; Funds are in thousands of US\$ and represent all sources)

<u>Component</u>	<u>89</u>	<u>90</u>	<u>91</u>	<u>Total</u>
<b>Extension</b>				
- Personnel	332	359	387	1,078
- Other operating costs	80	86	93	259
- Vehicles and motorcycles	242	--	--	242
Total Costs				<u>1,579</u>
<b>Seeds and Seedlings</b>				
- Production; Personnel	108	117	126	351
- Production; Other costs	30	35	40	105
- Purchase; net costs	30	40	50	120
- Total Costs				<u>576</u>
<b>Other Inputs</b>				
Total Costs	20	20	20	60
<b>Credit</b>				
- BAP	100	250	350	700
- Revolving Fund	158	165	172	495
Total Costs				<u>1,195</u>
<b>Marketing Assistance</b>				
- Agreement with UNAS	120	130	141	391
<b>Land Titling</b>				
Total Costs	50	60	70	180
<b>Machinery</b>				
- Total net operating costs	65	70	75	210
- Purchase of new equipment	100	--	--	100
Total Costs				<u>310</u>

Research				
- Total operating costs	120	125	135	380
CTTT				
- Agreement with UNAS	120	130	140	390
GIS				
- Operating costs	70	75	80	225
Community Infrastructure				
- Personnel	54	58	63	175
- Infrastructure materials	36	56	48	140
- Road maintenance	548	--	--	548
- Water systems	60	--	--	60
Total Costs				<u>923</u>
GOP Administrative Support				
- PEAH Personnel	196	212	228	636
- INADE Personnel	40	43	46	129
- Vehicles	140	--	--	140
- Operating costs	30	25	25	80
Total Costs				<u>985</u>
Project Technical Assistance				
- Four individual contracts	98	106	114	318
- Management audit contract	105	35	10	150
- GIS contract	40	20	10	70
- Short-term TA	40	40	40	120
Total Costs				<u>658</u>
Project Evaluation				
Total Costs	50	--	100	150
Inflation and Contingencies				
	<u>198</u>	<u>152</u>	<u>155</u>	<u>505</u>
TOTAL	3,380	2,409	2,718	8,507

Explanatory Notes to Table 2

Extension:

- 40 agents, 20 assistants, five supervisors, one chief
- Operating costs of zonal offices, 16 vehicles, 40 motorcycles
- replacement of 12 vehicles and 20 motorcycles

Seeds and Seedlings:

- 36 workers in various production sites
- Raw materials, other operating costs
- Purchase of seeds for demonstration plots, transportation

Other Inputs:

- Dolomite production, purchase of inputs for demonstration plots

Credit:

- BAP: Infusions of counterpart funds by the GOP to assure that 800 farmers can be served with \$1,050 each
- Revolving fund: 750 borrowers at \$600, plus 5% annual operating costs

Marketing:

- To UNAS for research, surveys, radio program, personnel

Land Titling:

- Surveying, personnel, other costs (average cost of \$400 per title)

Machinery:

- 15 operators and mechanics, operating costs
- Purchase of four tractors plus accessories and parts

Research:

- Agreement with INIAA to conduct research on 20 crops

CTTT:

- Agreement with UNAS to operate training Center and branches

GIS:

- 8 staff, agreements with other GOP entities providing data

Community Infrastructure:

- 12 staff
- \$4,000 per Project estimated
- Staff of 116, operating costs of machinery
- Finish existing commitments to on-going community Projects

GOP Administrative Support:

- PEAH: 49 staff
- INADE: 8 staff
- Purchase of 7 vehicles and spare parts
- Upkeep of buildings and vehicles, office expenses

Project Technical Assistance:

- Four local professionals (average \$17,000 ea.), one secretary (\$5,000)
- Consulting/audit firm, including two full-time professionals
- GIS fixed price contract
- 10 months of short-term TA at \$12,000/month
- Two contracts at \$25,000 each with local CPA firm

Project Evaluation (interim and final)

Approximately 6% is being added to cover inflation and contingencies.

Table 3

Expenditures by Component and Source during Extension Period  
(Funds are in Thousands of US\$)

Component	Loan	Grant	GOP	Total
Extension	350	1,028	201	1,579
Seeds and Seedlings	--	536	40	576
Other Inputs	--	30	30	60
Credit	--	--	1,195	1,195
Marketing Assistance	--	391	--	391
Land Titling	--	110	70	180
Machinery	--	280	30	310
Research	--	340	40	380
CTTT	--	350	40	390
GIS	--	225	--	225
Infrastructure	--	375	548	923
GOP Administration	--	887	98	985
Project TA	--	658	--	658
Evaluations	--	150	--	150
Inflation and Contingencies	--	505	--	505
TOTAL	350	5,865	2,292	8,507

Table 4

Expenditures by Component and Source during Project Life  
(Funds are in Thousands of US\$)

Component	Loan	Grant	GOP	Total
Research	1,426	1,727	1,664	4,817
Extension (Note 1)	2,576	3,017	2,775	8,368
Training (Note 2)	915	1,126	705	2,746
Agricultural Credit	3,012	163	1,195	4,370
Production Services (Note 3)	759	840	218	1,817
Resource Information (Note 4)	300	514	484	1,298
Road Maintenance	3,574	1,547	3,884	9,005
Community Development	682	1,366	743	2,791
Project Office (Note 5)	1,756	1,945	565	4,266
Evaluation	--	150	--	150
Inflation and Contingencies	--	505	867	1,372
TOTAL	15,000	12,900	13,100	41,000

Notes:

1. Includes Seeds and Seedlings, and Other Inputs
2. Includes CTTT
3. Includes Marketing Assistance, and Provision of Machinery
4. Includes Land Titling, and the GIS
5. Includes both GOP and T.A., except Evaluation

Table 5

AID Expenditures during Extension Period by Foreign Exchange  
and Local Currency  
(Funds are in Thousands of US\$)

Component	FX	LC	Total
Extension	242	1,136	1,378
Seeds and Seedlings	-	536	536
Other Inputs	-	30	30
Credit	-	--	--
Marketing Assistance	-	391	391
Land Titling	-	110	110
Machinery	100	180	280
Research	-	340	340
CTTT	40	310	350
GIS	20	205	225
Infrastructure	-	375	375
GOP Administration	140	747	887
Project TA	301	357	658
Evaluations	120	30	150
Inflation and Contingencies	37	468	505
TOTAL	1,000	5,215	6,215

TABLE 6

AID Expenditures during Extension Period by FY  
(Funds are in Thousands of US\$)

Component	89	90	91	Total
Extension	505	371	502	1,378
Seeds and Seedlings	117	173	246	536
Other Inputs	8	10	12	30
Credit	--	--	--	--
Marketing Assistance	90	127	174	391
Land Titling	23	36	51	110
Machinery	142	59	79	280
Research	81	112	147	340
CTTT	81	115	154	350
GIS	53	73	99	225
Infrastructure	127	108	140	375
GOP Administration	316	245	326	887
Project TA	168	371	119	658
Evaluation	50	--	100	150
Inflation and Contingencies	156	159	190	505
TOTAL	1,917	1,959	2,339	6,215

B. Recurrent Costs

There currently are approximately \$550,000 in annual costs for road maintenance in the UHV. One of the objectives of the Project during its extension period is to put responsibility for this activity into the hands of the MTC and/or one or both of the area's CORDES, including the financing of recurrent costs. During 1989 PEAH will work with INADE to obtain an increased presence of these entities in the UHV, with the understanding they may receive equipment and personnel in exchange for assuring adequate funding for continuing the activity. INADE will provide the necessary coordination at the Lima level to assure that adequate funds are placed in the 1990 budgets of the GOP for those agencies.

Other annual recurrent costs expected by the end of the Project are as follows (in thousands of U.S. Dollars):

PEAH	- Extension system	716
	- Land Titling	70
	- Provision of machinery	75
	- GIS	80
	- Infrastructure	111
	- Administration	299
UNAS	- Marketing	141
	- CITT	140
INIAA	- Research	135
TOTAL		<u>1,767</u>

This assumes an extension system actively serving 2,200 farmers (including provision of seeds and seedlings), a farm machinery pool serving 600 farmers, a titling office able to help obtain 200 land titles a year, a system for financing and supervising 12 to 14 infrastructure works a year, a research capability involving 20 crops, and full scale marketing and training programs underway. Any reduction or increase in these activities would lower or raise the costs accordingly. Likewise, the above costs assume a continuation of PEAH's administrative structure and INADE's active involvement. Should the activities listed above cease to be part of a special Project and instead be incorporated into the program(s) of another agency (e.g., the Ministry of Agriculture, a regional government), there would be a substantial reduction in annual administrative costs.

There is some cause for optimism that the recurrent costs will be covered once the Project ends. The GOP is currently actively involved in a regionalization process, under which regional governments with some autonomy in decision making and in obtaining resources are being formed. While the UHV is only a small part of Peru, it will be a more important portion of a region, and it may well reflect central government priority and be able to command sufficient resources from the regional government for continuation of Project activities. Furthermore, the CORDES, which currently are limited to

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constructing and maintaining infrastructure, are expected, under the regionalization process to be transformed into regional governments, which will be charged with a wider range of development responsibilities. So, while the Project currently would be inappropriate for the CORDES to take over, by 1991 it may well be that the Project activities could be readily absorbed into the new regional government of the area.

In addition to the possibility just described, there are two other possible structures under which Project activities could be continued. One is under the Ministry of Agriculture, which currently is restructuring itself and trying to rebuild an effective extension system. If sufficient progress is made by 1991, it may be possible for the Project activities to be absorbed into such a system. The second possibility would be to have the Project continue as a special Project, with GOP financing (perhaps after an additional period of outside financing). It remains to be seen what importance the next Peruvian Government will place on separate development Projects in priority areas. The Project evaluation, scheduled for late 1990, after the new Peruvian Government is in place, is expected to make specific recommendations on how Project activities can best be continued and financed after the PACD.

#### C. Other Financial Considerations

Counterpart will be financed from the GOP's own resources, as well as wholly or in large part financed from local currency generations from the sale of PL 480, Title I food commodities. As at present, the counterpart process will require annual negotiations with the Ministry of Economy and Finance, will require that adequate amounts be entered into the GOP annual budget law, and will require a series of steps to effect disbursements. PEAH, INADE, and USAID are experienced in carrying out their respective roles in this process.

USAID's financial monitoring of the Project is currently made difficult by the remoteness of the area and by security problems. Contracting a financial analyst is expected to improve the quality of financial documents USAID receives from PEAH as well as improve the frequency of site visits and end-use checks. Furthermore, funds are being budgetted to enable a public accounting firm to be contracted to carry out special financial audits when required.

Standard AID disbursement and liquidation procedures will continue to be utilized during the Project extension period. As with all projects USAID/Peru has with the GOP public sector, PEAH will operate from AID advances. Given Peru's accelerating inflation, this will require increasingly careful financial management, another reason for having a Project-financed financial analyst.

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### VIII. Implementation, Monitoring, and Evaluation

#### A. GOP

The Upper Huallaga Special Project Office (PEAH) will continue to manage the implementation of the Project for the GOP. PEAH has its headquarters at Aucayacu in the Project area, with a small branch office located in Lima. During the Project extension period, PEAH will work towards a closer and more productive relationship with its parent organization, the National Development Institute (INADE), to assure that there is a Lima-based capability to coordinate closely with the Ministry of Economy and Finance, the Ministry of the Interior, CORAH, MTC, SENAPA, DISABAR, INIAA, BAP, ENCI, and other agencies having a role in the Project. At the local level, PEAH will coordinate with UNAS and with the local offices of INIAA, ENCI, BAP, OGCR, DGRA, municipalities, CORDES, and other public sector institutions participating in the Project or involved in complementary activities.

PEAH has gained project management experience and demonstrated a capacity to implement the activities under its responsibility. It will require advisory support in streamlining its management structure in light of the changing role of PEAH within the Project. A particularly troublesome problem which continues to plague the Project is the relatively weak management system of PEAH. A local consulting firm will be contracted to work with PEAH to improve this important element of project implementation. Likewise, PEAH will require advisory support to improve its management of AID funds and in the preparation of AID financial documentation, which will be provided through a contracted financial analyst. PEAH will also receive advisory support in designing and implementing the CTTT (with UNAS) and extension system, in carrying out its community organization/infrastructure activities, and in establishing the GIS.

UNAS, INIAA, ENCI, and BAP will carry out important Project activities, under specific agreements with PEAH. Likewise, PEAH will enter into agreements with MTC and/or the CORDE(s) to take over the responsibility for road maintenance. It will seek out SENAPA and DISABAR commitments to take over the responsibility for constructing and maintaining water and sewage systems in the UHV. PEAH will enter into discussions with a Peruvian PVO, the Peru-Canada credit fund or some similar credit program manager to establish a rotating fund in the UHV to provide credit to farmers who do not have ready access to the BAP. PEAH will have specific personnel assigned to oversee these agreements and coordinate with the respective entities. When necessary, INADE will take higher level coordinating actions at the Lima level.

PEAH currently presents USAID with an annual operating plan and with detailed semi-annual reports of progress by activity and budget category. One of these semi-annual reports is considered PEAH's annual report and provides additional narrative and statistics on each activity. During the extension period, USAID will continue to require semi-annual reports but will strive to improve their usefulness by tying them to PEAH's improved planning/monitoring system.

Disbursement Procedures

Method of Implementation and Financing

<u>Method of Implementation</u>	<u>Method of Financing</u>	<u>Approximate Amount US\$(00^)</u>
HC Implementing Agency, Direct Implementation Local cost	Direct HC Reimbursement	4,100
<u>Technical Assistance</u>		
AID PSC	Direct Payment	120
HC PSC	Direct HC Reimbursement	388
<u>Commodities</u>		
AID Purchase Order Procurement	Direct Payment	482
HC Procurement	Direct HC Reimbursement	320
<u>Other Costs</u>		
Project Evaluation	Direct Payment	150
Financial Management Review	Direct Payment	150
	Inflation and Contingencies	505
	AID Total Budget	6,215
		=====

B. USAID

USAID monitors the Project through its Special Projects Division, in the Office of Development Resources. This Division will be strengthened by the addition of a Deputy Project Manager. The current staff is Division Chief, Secretary and Community Development Specialist. The existing technical assistance contract with Ronco Corp., under which four specialists currently serve, will terminate at the end of CY 88. It is planned new contracts will be signed with a local consulting firm to provide management improvement services, and with a local individual or firm to complete the development of the GIS and provide a financial analyst and agriculture extension specialist. Additional funding is budgeted for short-term contracts for specialized knowledge or experience on an as needed basis. This restructuring of the Division will assure improved USAID monitoring and advisory support within the constraints of tight security.

USAID monitors principally through joint reviews in Lima with PEAH staff, review of PEAH-produced reports and statistics, contract staff reports, and field visits. Currently the only persons who travel frequently to the Project area are the Community Development Specialist and the Ronco specialists. The latter, however, see themselves in a technical assistance,

not monitoring, role. The Chief of Party position was eliminated due to security conditions in the UHV. In order to improve the coordination of advisory support and progress monitoring, during the extension period, three staff members - the Financial Analyst, the Agricultural Extension Specialist, and the Community Development Specialist - will travel regularly to the Project area, when conditions permit. The difficult security situation in the UHV makes travel there uncertain. Based on a security assessment, visits must be kept brief, with travel by air, but are often cancelled at the last moment and are restricted to certain limited areas within the UHV. With personal safety first priority, USAID will have to continue to carry out its monitoring with due concern to the security conditions which prevail in the area.

Currently, joint reviews are carried out in Lima on an as needed basis. During the extension period, these will be augmented by periodic meetings (preferably quarterly) - with INADE's presence - to review PEAH's semi-annual reports and annual operating plan, the progress being made to achieve the plan's objectives, and complete the adjustments in planned activities required for the up coming quarter. If the implementation environment has experienced significant changes, they will be assessed and substantive changes to the annual operational plan considered. These reviews will be supplemented by periodic computer generated progress reports. USAID's Special Projects Division has the capability of receiving information via diskette from PEAH, entering it into the Division's personal computer, and utilizing the information for monitoring and analysis. This system will be put into operation during the extension period, with PEAH's data verified by the monitoring on USAID field visits. The system will be operated by the T.A. contractor developing the GIS.

### C. Procurement

1. The Division Chief will prepare scopes of work and PIO/Ts, and the additional staff will be recruited and selected utilizing standard USAID procedures. The management audit and GIS contracts will also be handled locally with experienced local firms invited to submit proposals. USAID currently has an IQC for financial support to projects which the Project will buy into. The Project evaluation will be carried out under the IQC mechanism from among the U.S. consulting firms with such capabilities. Future short-term consultants will be contracted from Peru or the U.S. utilizing standard AID procedures.

USAID will procure all goods and equipment purchased outside of Peru. These are expected to include 19 vehicles, 20 motorcycles, selected vehicle parts, four small tractors with accessories, and a small amount of computer hardware and software to augment existing capabilities.

All of these procurements are expected to be made with Project grant funds, both because virtually all AID funds available during the extension period will be from this source, and because GOP procedures make it far easier to obtain customs clearances when items are grant funded than when they are loan funded. Source and origin of items procured with grant funds is

normally limited to the U.S. and the host country. In the case of the tractors and computer equipment, this restriction poses no problem, as all will be of U.S. source and origin. In the case of the motorcycles (125 c.c.), procurement from a Code 935 country is authorized under a blanket AID waiver for motorcycle procurement, given that no small motorcycles are produced in the United States.

D. Implementation Plan

In order to effect the Project changes enumerated in this PP Supplement, a number of actions must be taken over the next year. These include:

<u>ACTION</u>	<u>DATE</u>	<u>AGENCY</u>
Liaison unit formed by PEAH/INADE	03/31/89	INADE
Extension Specialist and Financial Analyst contracted	12/15/88	USAID
Firm or individual contracted to complete GIS	12/31/89	USAID
Arrangements worked out and agreement(s) signed to operate rotating fund	12/31/89	PEAH, USAID
Management firm contracted	03/31/89	USAID
PEAH 1989 operating plan prepared	11/15/88	PEAH
PEAH/INADE/USAID meeting to review operating plan	12/01/88	INADE, USAID
Agreement with MTC (and CORDES, if appropriate) on road maintenance	12/31/89	INADE
Agreement with INIAA on agricultural research	12/15/88	PEAH, INADE
Agreement with UNAS on marketing and CTTT	03/31/89	PEAH, INADE
Deputy Project Manager hired	01/01/89	USAID
INADE/PEAH office staffed	06/30/89	INADE
PIO/Cs prepared for procurements of all goods	02/15/89	USAID
Joint meetings to review progress and needed changes	03/20/89 06/20/89	PEAH, INADE, USAID
PEAH reorganization and staffing plan prepared	06/01/89	PEAH
PEAH 1990 budget prepared	07/15/89	PEAH
MTC's 1990 budget incorporates UHV needs	07/15/89	INADE

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E. Evaluation

A major formal evaluation of the Project will be carried out in October-November, 1990 by a U.S. consulting firm with USAID, PEAH, and INADE participation. The evaluation will examine three interrelated aspects of the Project:

1. Achievements during the Project period, especially during the almost two years of the extension period which will have elapsed by then. Progress toward achieving Project objectives, as measured by indicators from the PPs and ProAgs, will be examined and analyzed.

2. Lessons learned from the Project which can be applied to similar projects in Peru and elsewhere. Assumptions will be analyzed, to determine the answers to such questions as what motivates farmers to participate or not in a crop substitution project, what crops and technologies are the most successful, and what are the effects of terrorism and narcotics trafficking in the Project area.

3. The future of the Project. Recommendations will be made as to how Project activities no longer USAID funded will best be continued after the PACD - in what form and with what financing in light of eradication results, violence and subversion, legitimate agricultural production, USAID-financed development activities after 1991 will be based on these recommendations.

F. Conditions and Covenants

The following will be established as Conditions Precedent or Covenants to the Grant fund obligated in the ProAg Amendment.

1. Unless AID otherwise agrees in writing, INADE and PEAH will sign agreements with the Ministry of Transport and Communications, the Departmental Development Corporations of Huanuco and San Martin, DISBAR, SENAPA, and INIAA no later than December 31, 1989, which will have as their objective the acceptance by these GOP institutions of an operational responsibility within the UHV to carry out their nationally mandated responsibilities. The agreements should contain the following terms and conditions:

a. A description of the program of services to be delivered, including how, where, and when the program is to be executed.

b. A description of the personnel, equipment, and budget resources required to deliver the program of service, including the source of funds.

c. A commitment by PEAH to provide on a loan basis, relevant equipment in the Project inventory and transfer the employment contracts of trained personnel.

d. A commitment by the GOP institution to carry out the program as described with adequate non-project financial resources budgeted in the public treasury.

e. A mechanism for monitoring the transfer of goods and personnel and the progress of operations and resolving problems in meeting the objectives of the agreements.

2. Unless AID otherwise agrees in writing, that a plan will be developed no later than March 31, 1988, to periodically collect baseline data, including, but not limited to, the characteristics of agricultural and agroindustrial production, input supply, produce marketing and processing, and population demographics in the UHV and to periodically collect and evaluate a preestablished set of baseline data which will measure the delivery of project services, the farm level impact of these services, and their effect on the regional economy.

3. Unless AID otherwise agrees in writing, that INADE will assist in the creation and staffing a liaison office in Lima no later than March 31, 1989, which will provide technical and administrative backstop to PEAH operations in the UHV, will coordinate project-related activities with other GOP institutions and will seek out increased GOP commitment and support for the overall development of the UHV.

4. Unless AID otherwise agrees in writing, that PEAH will develop a plan no later than June 31, 1989, for management reorganization and staff reductions which will be completed by the end of calendar year 1990.

## IX. Amended Environmental Assessment

### A. Introduction

#### 1. Project Background

The Upper Huallaga Area Development (UHAD) Project (no. 527-0244) in the Upper Huallaga Valley (UHV), Peru, was designed as an integrated rural development program to develop, test, and deliver a broad range of agricultural and community development services for high-jungle development and, within a regional development context, to meet the demand for these services from UHV farmers forced out of coca production by eradication.

The objective of the 1986 revised Project design was to provide the GOP with the means to strengthen ties to local communities and, thereby, to reduce the influence of narcotrafficking and political subversion.

#### 2. Project Extension

The proposed Project extension will permit the implementation of a revised Project by providing basic agricultural support services to

eligible farmers (i.e., coca-free), with priority to ex-coca growers, in a consolidated Project area, while transferring responsibility for financing and managing routine public services back to the nationally responsible GOP institutions. At the same time, the Project will seek improved interinstitutional communications and closer planning and coordination of operations with the United Nations Fund For Drug Abuse and Control (UNFDAC) and the GOP line ministries and regional development corporations. The revised Project strategy is presented in the text of this PP supplement.

The UHAD Project currently has a 7.3 year LOP with total AID authorized and GOP counterpart funding of \$34.458 million. AID funding is \$23.4 million (loan, \$15 million, grant, \$8.4 million), GOP counterpart funding is \$11.058 million. USAID/Peru proposes to amend the subject Project authorization as follows: (1) a PACD extension of 32.5 months, from 31 December 1988 to 15 September 1991, and, (2) amend the Project authorization, increasing grant funding by \$4.5 million over the new 10-year LOP. (GOP counterpart will increase by approximately \$2.042 million.). Thus, total AID authorized and GOP counterpart funding will increase from \$34.458 million to \$41 million.

The GOP national anti-narcotics plan stresses the importance of economic development as a complement to anti-narcotics enforcement and eradication efforts. The GOP commitment is eradication with crop substitution. The Project is thus considered a vital element in the overall anti-narcotics program in Peru, promoting legitimate agricultural production in what could ultimately be a viable, coca free, regional economy. The Project complements, but is not involved in funding or implementation of, the enforcement and eradication efforts being carried out in the UHV by the GOP with the assistance of the U.S. Drug Enforcement Agency (DEA) and State Department Office of International Narcotics Matters (INM). Also complementary is the AID-financed Drug Education and Public Awareness Project with the GOP Ministries of Health and Education and an non-governmental organization formed by private Peruvians to educate the public to the broad topic of drugs.

## B. Environmental Assessment

### 1. Environmental Assessment Background

A detailed Environmental Assessment (EA)<sup>1</sup> was conducted in 1981 for the original Project Paper (PP), which identified specific design criteria to be met before Project activities could be implemented. In 1985, a further environmental examination<sup>2</sup> was made of the activities to be implemented under the September 1986 - 1988 extension period, recording the continuing deterioration of environmental components of the UHV watershed due to the uncontrolled cultivation of coca (Erythroxylon coca L.) and production of cocaine paste. USAID does not believe that any of the Project activities being proposed for the present extension are different in substance from those approved already, even though there are modifications, primarily reductions,

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in such aspects as geographic scope and institutional arrangements. The major Project elements - land titling and information, agricultural input supply, farm assistance and technology transfer, and community development - are all continuations of ongoing activities. Indeed, some of the current aspects of the Project which might be expected to have negative environmental impacts - road construction and maintenance, construction of agroindustrial marketing infrastructure, and agricultural research - are being reduced or phased out during the proposed extension period. Research and extension activities will continue to be carried out in the Project area, with increased emphasis on improvement of existing agricultural systems rather than production for outside markets as was envisioned in the original Project.

2. Amended Environmental Assessment Recommendation

USAID/Peru recommends clearance and approval, by the LAC Bureau Environmental Officer, of this Amended Environmental Assessment for the further extension of the Project according to the design described in this PP Amendment.

C. Discussions and Recommendations

1. Coca Eradication by Application of Herbicides

It must be recognized that the basis and presumption of the Project extension is effective eradication of coca plants, and it appears that effective eradication will depend on the utilization of a herbicide, both for manual and possibly, the eventual airborne application. However, in a press conference given to American Press on August 3, 1988, in the Upper Huallaga Valley, by Peru's President - Alan Garcia, he stated at different times in the interview:

"Throughout the world there is a lot of resistance to pesticides and herbicides. I think that this is an idea that cannot be rejected but it must be studied. And I would suggest that at some point the countries of Latin America which have the problem of the crop, and the U.S., should address ourselves to the United Nations, about whose impartiality and scientific capability we can have no doubt, so that an international scientific team could finally determine and state beyond any doubt whether it is harmful to the ecology or not."

"I understand the U.S.'s sense of urgency with regard to herbicides, but we also have the right to say that people who are not pressured by that sense of urgency will be able to give us a safe and scientific answer."

"I think that up to now laboratory experiments have been performed with "spike" but in a very limited area. What we believe, since it could affect the ecology, is that there should be a much more serious international study, whose results would have a different weight than the urgency and the need to do something immediately. I think that as long as we

don't have that, it would not be rational, it would not be fair to Peru, to use something which would mean performing an experiment."\*

Field testing of these and other herbicides began in late 1987 on selected plots in the UHV, under direction of the INM Office. While the testing program has not yet been completed, analysis of the data obtained to date has led INM personnel to the tentative selection of tebuthiuron as an appropriate herbicide. The capacity to eradicate existing coca will be increased enormously if there is ever the introduction of an airborne herbicide-application program. In the mean time, the eradication brigade will continue to eliminate coca production by manual removal of the plant. The manual eradication program personnel will work closely with PEAH to select target areas which have potential for legitimate agricultural production. Any future airborne application program will select areas of operation which will maximize the rate of eradication, in general, this means that the preferred targets will be larger, contiguous parcels of coca in isolated areas far from urban populations and with no nearby legitimate agricultural production. It is speculated that any airborne use would drop the herbicide in pellet form from airplanes overflying the target area.

The revised Project design proposed herein assumes that manual eradication will eliminate 1,500 - 2,000 hectares of coca production annually in those areas identified as suitable for legitimate agricultural development.

It is USAID's understanding that INM is testing the herbicide in accordance with applicable USG and GOP environmental procedures, and that the herbicide will not be utilized in the field until appropriate approvals are received. No AID funds will be expended for the procurement or application of herbicides for coca eradication.

## 2. Herbicide Residues

While USAID has no direct involvement in the GOP-Ministry of Interior and USG-INM herbicide application program, any possible residual herbicides remaining in the soil (in farms where the UHAD Project will give advisory support and extension advice) must be measured and this constraint used for the preparation of agricultural extension advice. As the three herbicides discussed for use in coca eradication are all specific for woody plants, any persistence will necessarily affect what can be planted in the area; this is particularly relevant because the UHAD Project has concentrated on perennial, woody crops such as coffee, cacao, tea, etc., due to the environmental constraints to annual cropping in the Valley (see the original EA<sup>1</sup>). Non-woody crops, particularly grasses such as rice or corn, can likely be grown even with residual woody-plant herbicides, but this will require careful study of available information on species-specificity of the herbicides and possibly experimental plantings of non-woody crops in soils of various concentrations of persistent herbicides.

\* Unofficial translation from Spanish.

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Prior to agricultural assistance or extension in areas which have received herbicide applications for coca control, soils will be analyzed, by or for the Project, for pesticide residues and this information will be used to guide recommendations/selections of suitable crops. Where woody-plant herbicide residues are present, it will be necessary to recommend only non-woody annual crops which may not be affected by these residues. It is anticipated that some information on residues in soils may be available from INM/DEA as required follow-ups to their herbicide application programs.

### 3 Agricultural Pesticides

No AID funds will be expended for the procurement or application of herbicides or other pesticides for use in agriculture, but Project personnel will monitor their distribution and use at the farm level, as an element of legitimate crop production technology. In addition, the Project will incorporate pesticide choice and application in the CTTT curriculum.

The use of pesticides in yet-to-be identified agricultural and forestry activities supported by this Project requires, by specific mandate of the Environmental sections of the FAA and Regulations of AID, careful monitoring and approval for all planned activities. When project-related activities involving the purchase, use or recommendation of pesticides are identified, an amended EA will be prepared to address all pest management practices being proposed, based on a program of Integrated Pest Management.

## X. Project Analyses

### A. Technical Analysis

#### 1. Scope of Analysis

This Technical Analysis Section describes the analytical work which USAID carried out to determine the most effective technical arrangements for achieving the Project objectives. The section is organized by major component---agricultural research, extension, credit, and community infrastructure. In each case, a summary of the analysis in the original PP will be given, followed by the current situation and the rationale for selecting the arrangements embodied in the revised Project design.

The analyses for agricultural research, extension, and credit are based on the likely configuration of farm production. In the more remote, heavily sloped portions of the UHV, coca has become virtually a monoculture. Land owners subdivide and rent out plots of one to two hectares to farmers who intend to plant only coca. In the more accessible, more gently rolling lands of the valley floor, farmers tend to keep their farms - averaging 10 hectares in size - intact, planting approximately one hectare in coca and leaving two to five hectares in other crops, but with little care and low yields. Based on actual surveys, typical farms of this type in four areas of the UHV are as follows, by number of hectares planted:

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<u>Crop</u>	<u>Tocache</u>	<u>Aucayacu</u>	<u>La Divisoria</u>	<u>Tingo María</u>
Coca	1	1	1	1
Corn	1	1	1	2
Bananas	1	1	-	1
Beans	1	1	-	1
Citrus	-	-	1	1
Fallow	6	6	7	4

The Project intends to encourage these farmers, once their coca is eradicated, to plant a mix of high value cash and traditional food crops, both on the land from which coca was eradicated and on the land which was abandoned or semi-abandoned as the farmers concentrated on tending their coca. Obviously, the eradicated lands will require a different technology from other lands. Research in the UHV has shown that lands where coca has grown should be treated with dolomite (2.5 metric tons per hectare) and then planted with beans before planting other crops. Furthermore, if the eradication is through application of chemicals, perennial crops may not be appropriate for planting until chemical residues have sufficiently diminished from the soil. Nonetheless, taking into account the entire landholding, the Project intends to encourage farmers to plant a mix of crops resembling the following (by hectares planted):

<u>Crop</u>	<u>Tocache</u>	<u>Aucayacu</u>	<u>La Divisoria</u>	<u>Tingo María</u>
Rice	2	1.5	-	-
Corn	1	.5	1	-
Citrus	-	-	-	1
Banana	1	-	1	1
Cacao	-	1	-	1
Coffee	-	-	1	-
Achiote	1	1	-	1
Macadamia	-	1	-	-
Tea	-	-	1	-
Beans	1	1	1	2
Cardamom	-	-	1	-
Fallow	4	4	4	4

Likewise, farmers who have never planted coca will be encouraged to plant configurations of crops resembling the above.

## 2. Agricultural Research

Agricultural research was one of the major components of the original Project design and was the first to be discussed in the Technical Analysis section of the original PP. The idea was to establish an Amazon Research Network in Peru, with seven research stations in the Peruvian jungle, each coordinating with and complementing the others, and with the Network

coordinating with counterpart networks in Bolivia, Brazil, Colombia, Ecuador, and Venezuela. Each of the seven stations in Peru was to have a specific focus, although all would test technologies developed at the others. The station in Pucallpa, for example, was to focus on pastures and animal management, while the station in Yurimaguas would focus on annual and perennial crops and soil management. The station in the UHV, at Tulumayo, would focus on agro-forestry crop management.

This concept was the result of several factors. First of all, agricultural research in Peru was virtually inoperative from 1970 to 1979. When the Project was being designed in 1981, INIPA had only recently been formed to reinitiate research activities, and there was an excellent opportunity at hand to build a broad new system from scratch. Secondly, interest was increasing throughout the world on the problems of environmental degradation in tropical areas, especially in the Amazon basin. Various international agencies were interested in helping develop a shared research capability among the six countries of the region. Finally, the concept fit in well with the original design of the Project, which saw the Project essentially as a regional development effort, with wider implications throughout the Peruvian high jungle.

Tulumayo indeed was established as a full research facility, with considerable Project funding. It has carried out a substantial amount of useful research, on such crops as corn, cacao, bananas, coffee, rice, cardamom, achiote, cassava, papaya, and various varieties of beans. It has developed a number of varieties of improved seeds and agricultural practices. Indeed, it has shown that yields can be increased significantly in the UHV if proper seeds and practices are utilized:

rice: from 800 to 5,000 kilos/ha.  
corn: from 800 to 3,000 kilos/ha.  
bananas: from 4,000 to 14,000 kilos/ha.  
cacao: from 100 to 600 kilos/ha.  
cassava: from 4,000 to 14,000 kilos/ha.

Simultaneously with the development of Tulumayo, PEAH developed its own research program, in combination with its extension programs. There were several reasons for this. First of all, the scope of the Project shifted from a wide regional development effort to a narrow focus tied to the development problems associated with coca eradication. While INIAA (inipa minus the extension capacity) continued on with crop experimentation at Tulumayo, PEAH began research on the specific requirements for the recuperation of soils where coca had been planted. Secondly, but related to the first, PEAH grew disillusioned with what it felt was too academic an approach to research. Instead of exploring with INIAA a mutually acceptable solution, PEAH began to depend increasingly on results from its own demonstration plots for information useful in planning and carrying out extension work and in improving nursery production, which used the information to carry out experiments in their nurseries. Soon, PEAH had its own applied research system in operation. Finally, Tulumayo was seriously damaged by a

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terrorist attack two years ago and is just beginning to get back in operation, and only on a modest scale. During this two year period, PEAH has had the only research capability in the UHV.

It is unrealistic for a variety of reasons, including the security situation and the availability of funds, to continue to think in terms of an Amazon Research Network. There are, however, reasons for continuing a research capability in the UHV. First, the UHV is an area of fragile soils, with conditions (such as altitude and rainfall) different from other jungle areas in Peru where research is being carried out. If licit agriculture is to exist profitably in the UHV, continued research is required for improved seeds and agricultural practices. Improved soil conservation practices and mixed agro-silviculture production systems are required if the area is to avoid serious soil loss. Secondly, further research is required on the specific problems of rehabilitating eradicated lands. While much has been learned, further study will be required to arrive at the optimum application of dolomite and the optimum crop rotations to be employed thereafter. Finally, as in any area of intensive agriculture, a research capability needs to exist to combat local plant diseases.

The above factors leads to the conclusion that the Project should continue financing a limited research capability within the following guidelines:

a. Limited scale, concentrating on recuperation of eradicated lands and on improved crops already identified as appropriate for the UHV.

b. Primary responsibility will lay with INIAA, which has more research capability than PEAH, but under a rewritten PEAH/INADE operational agreement.

c. Practical in scope, utilizing results from the applied applications of agricultural extensionists, and translating what is field learned into improved seeds, varieties and applied technology.

d. Dispersed with research taking place at a number of locations in the field and at Tulumayo.

### 3. Agricultural Extension

The original PP proposed an extension system operated by INIPA, with UNAS personnel participating as advisors. The system would be closely tied to the research system and to other extension systems throughout the jungle region of Peru. It would operate through four zonal offices, each of which would have field agronomists, higher level specialist supervisors, and even higher level UNAS professors as advisors. Training, including advanced degree training, would be provided to all three types of personnel. The objective of the system was to increase average crop yields in the UHV by 30% in five years.

The system was established as planned. Over the years it has been completely transformed, however, due to several factors. First, INIPA stopped providing extension services throughout the country, transferring these to the regional line offices of the Ministry of Agriculture (the "Agrarian Regions"). The Ministry, however, did not wish to operate in the UHV, and PEAH ended up taking over the system. It expanded the zonal offices to seven (since reduced back to four) and established its own operating structure under a Directorate of Agricultural Development and Promotion (DIDEPA). Secondly, the extension system, as established, did not address the unique needs of farmers whose lands had been eradicated, so PEAH set up an alternative extension system to serve that group (PESIP). It also set up an alternative training and extension center in Tocache, a zone of intense conflict and heavy coca production (CECAEXTO). Furthermore, UNAS has continued to maintain its own research/extension/training program in the area (COEPU), through six pilot centers. Consequently, four extension systems are operating simultaneously, three of them begun by PEAH.

Experience under these systems has been mixed. The premise that highly skilled extension agents and supervisors would be required has not been borne out. Most of the farmers in the UHV are from other areas, many from the Sierra, and they have minimal knowledge of agricultural techniques appropriate for the area. Consequently yields are quite low. It does not require an extension agent with a high level of technical expertise to show farmers how to raise yields by 30%. On the contrary, a highly educated and technically oriented extension agent may well be too sophisticated to communicate with farmers. What is required is a technician with adequate training and experience in a few simple techniques, with the ability to relate to and communicate effectively with the client farmer, and with technical backstopping to handle problems he cannot address alone. The existing extension systems have moved somewhat in this direction, but there appears to still be too heavy a reliance on university educated extension agents at the field level.

Of the four extension systems, PESIP has achieved perhaps the most significant success, through its heavy utilization of demonstration plots, especially on eradicated lands. PESIP provides a full array of services to the client farmer, including application of dolomite, provision of seeds and other inputs, and preparation of the land. The farmer promises to serve as a spokesperson for the technologies being shown, demonstrating the results to nearby farmers on both a formal and informal basis.

Experience has shown that perhaps the most important element in doing extension work in the UHV is assuring timely provision of the inputs and services promised. When PESIP extension agents have been able to comply with their promised assistance, farmers continue with the program, and the multiplier effect among neighbors is at least a factor of four. When they have not complied, sometimes through no fault of their own, acceptance has been low, as farmers talk to each other of PESIP's unreliability. Unfortunately, PEAH has developed into a top heavy bureaucracy with over 20 separate divisions, which hinders the planning and functioning of an active and responsive field agency.

These successes and failures aside, the two overriding factors affecting the expansion of services in the UHV have been terrorism and the increase in coca production. In the last seven years, the number of hectares planted in coca has at least quadrupled. There are intense economic and social pressures on farmers to plant coca. Traffickers often provide seeds, technical assistance, advances of funds, and payment in cash for the harvested crop. Since a single family can take care of only one to two hectares of coca without additional hired labor, which is scarce and unreliable in the UHV, there is a tendency for the family to disregard or completely abandon its remaining production of legitimate crops. Except among some farmers whose coca plantings have been eradicated, there has been little demand for the GOP extensionists' services.

Terrorism in the UHV has been varied, both in intensity and in areas affected, causing considerable disruption to extension services which must be provided regularly and over an extended period. Agents often cannot continue working in an area where they have initiated activities. At this writing, virtually all extension activities are paralyzed, due to the recent murder of three PEAH employees and narcotraffickers/terrorists initiated general strikes.

Added to terrorism and coca production is a third factor, that of extremely low salaries for PEAH personnel. While low salaries are a problem throughout the Peruvian public sector, they are an especially critical problem in an area of high cost of living and high personal risk. At this writing, most extension agents are earning less than \$100 per month, well below what most could earn in other positions. (Likewise, PEAH laborers in the field are receiving some 75 cents a day, compared with about \$2 which coca growers in the UHV pay unskilled workers.) The fact that PEAH has managed to maintain some 40 extension agents evidences the dedication of some, and, unfortunately, an indication of the poor quality of others.

The above factors all call for a restructured extension system with the following characteristics:

- a. One consolidated system, with one set of objectives.
- b. Targetted approach aimed at the specific problems of eligible farmers, i.e. those who have had coca plantings eradicated and those who have not yet planted coca.
- c. Concentration in designated areas or communities where there is a high probability of long-term stability and/or where adequate protection can be provided for continuous extension work.
- d. A system revolving around the demonstration plot concept but involving a complete package of services (including provision of seeds and other inputs, credit, provision of machinery, and marketing assistance).
- e. A system in which the extension agent serves as a facilitator and is seen as personally responsible for the client obtaining all promised services on a timely basis.

f. A system in which university-trained extension agents are assisted by less formally trained assistants.

g. Inclusion of a training component, involving training extension personnel not only in the technical aspects of the proposed agricultural packages but also in the techniques of effectively communicating the technologies to client farmers.

h. Adequate pay provided to all extension and support personnel.

i. A reduced and more responsive bureaucratic structure within PEAH to support the extension personnel.

The details of the various components of the ASDS are found in the Project Description and Financial Plan Sections of this PP Supplement. Costs and amounts of each input required are based on experience in the Project to date. As discussed in more detail in the Institutional Analysis Section, implementation of most of the components of the ASDS is either being retained by PEAH, or will be closely coordinated by PEAH.

#### 4. Agricultural Credit

Although this component is part of the ASDS, its complexity and importance calls for separate treatment here. Currently only some 20% of farmers in the UHV use credit for their licit crop production. There apparently are two reasons for this. First of all, with farmers concentrating on coca, there is a tendency to abandon their production of licit crops. In a 1986 survey of 1,020 farms, only 19.0% used fertilizer, 36.2% pesticides, and 11.4% improved seeds. Yields, of course, are correspondingly low. The second reason is that these farmers have regular cash income from the sale of their coca production, in sufficient quantity to finance the few inputs they need for their licit crops cultivations. Thus, current demand for credit is low.

Under the Project, demand for credit is expected to be significantly higher. The Project will concentrate on farmers whose coca plantings have been eradicated and on farmers who have never planted coca, and, with the Project introducing technology packages which will require a cash outlay of around \$1,000, demand for credit should rise dramatically. It is estimated that 1,550 of the 2,200 farm families which will be served under the Project (70%) will require a source of credit to meet their cash needs. This estimate is based on experience in eradicated zones.

To estimate credit requirements, a look must be made at production costs. In the following chart are first year per hectare costs of producing each of the proposed crops, including labor which might be provided by either the farmer or hired help. At the time this analysis is being written, there is a variety of exchange rates in effect in Peru. Using as reference the USG accommodation rate of 1/.162 per dollar, production costs range from approximately \$967 to 1,071, averaging \$1,019.

Crop	Cost/Ha.	Tocache/Aucayacu		La Divisoria/Tingo María	
		Has.	Cost	Has.	Cost
Corn	19,450	1.0	19,450	0.5	9,725
Banana	38,600	1.5	57,900	1.0	38,600
Citrus	22,000	-	-	1.0	22,000
Mix-crops	32,600	0.5	16,300	1.0	32,600
Coffee	11,800	-	-	0.5	5,900
Achiote	23,800	1.0	23,800	1.0	23,800
Cardamom	24,000	-	-	1.0	24,000
Rice	31,600	1.0	31,600	1.0	-
Cacao	26,000	0.5	13,000	-	-
Macademia	22,800	0.5	11,400	-	-
Total		6.0	173,450	6.0	156,625

The Project is providing for average credits of \$832, with farmers receiving BAP credits (usually the larger farmers) expected to average around \$1,050 and the farmers receiving rotating fund credits expected to average around \$600.

As discussed in the Project Description Section, the BAP is the usual source of agricultural credit in Peru and will continue to be utilized whenever possible. Many farmers, however, do not have easy access to the BAP. Also, BAP is overly bureaucratic for rural farmers and loan money arrives in amounts and at timings irrelevant to the borrowers cultivation. PEAH has realized this and has utilized the Peru-Canada Credit Fund on several occasions. This Fund, however, has insufficient resources to serve the number of farmers contemplated and with the size loans contemplated. It also is continually decapitalizing itself because it charges interest rates even lower than those of the BAP. Nonetheless, it has an existing administrative structure and operates as a legal lending agency. If appropriate arrangements can be worked out, the preferred entity to operate the rotating credit fund, initially on a plot basis, to test its applicability, would be a Peruvian PVO (SDR), which operates a successful rotating credit fund in Ayacucho based on the FINCA model. This model indexes credits to real commodity values, uses community groups to distribute and collect the loans, and has low operating costs. If arrangements cannot be worked out with SDR, the Project will see whether, by adding counterpart funds to the Peru-Canada Credit Fund, it can negotiate lending terms more in line with the needs of the Project (e.g., credits around \$600 each, with real interest rates).

The original PP provided for medium term credits for machinery purchases, in addition to production credits. The machinery loans were expected to range from \$4,000 to \$18,000. While lack of sufficient machinery is still a constraint in the UHV, at this point in the Project it is unrealistic to think in terms of providing such credits, especially given the critical shortage in Peru of foreign exchange to buy spare parts. PEAH will fill the gap to some degree by augmenting its capacity to provide farm machinery services. Credits will thus basically be limited to production loans, with some modest exceptions to permit farmers to purchase tools, fencing material, and other low cost capital improvement items.

## 5. Infrastructure

The Technical Analysis Section of the original PP described four types of infrastructure to be financed under the Project: grain storage and handling, agricultural lime, road maintenance, and water systems. As to the first, there continues to be a shortage of grain processing facilities, particularly rice mills. In the Project area there is one state-run mill which operates regularly, and some eight private mills which operate sporadically. Total effective capacity does not meet even current production levels. The Project has purchased two mills for ENCI, which to date have not been assembled. Once installed, these mills should provide sufficient operating capacity to handle expected rice production levels.

In the Project area there are six state-owned and some four private grain storage facilities, plus a limited number of small silos. Grain storage will become even more important in the UHV as UNAS helps farmers focus more on crop marketing. The Project will not finance large facilities but will provide funds for small structures under the community infrastructure component.

Dolomite has been found to be an effective form of agricultural lime, and there is a large supply available in the UHV. PEAH has installed a Project-purchased rock crusher at the quarry, able to mine 20 metric tons an hour. An hour of production a day will be adequate to meet Project needs.

The technical analysis of the road maintenance system remains valid. The maintenance center has been established, and the Project has a considerable array of operational heavy equipment. There will be no technical issues with this component of the Project during the extension period if the transfer of equipment and of the responsibility for road maintenance is properly carried out. PEAH, with the assistance of INADE and USAID, must carefully negotiate and follow-up on agreements with MTC and/or the CORDES. The principal issue in these negotiations will be the mechanism to be employed to assure that the equipment and trained personnel to be transferred will continue to work in the project area and not be diverted to other locations. The details of the technical analysis of potable water systems remain essentially valid. However, since this activity will not be continued beyond the completion of work in progress, no updating is needed.

There are no technical issues with the type of small infrastructure expected to be financed during the Project extension period. These are of simple design, and PEAH has ample experience in overseeing and coordinating their construction. Problems that have occurred in the past have generally been administrative rather than technical.

## 6. Overall Workability

The Financial/Economic Analysis Section indicates that the internal rate of return (IRR) from coca crops can be as high as 173% as compared to the highest returns to alternative crops which reached 26%. Even

with this seemingly large incentive for coca production a close enough relationship to some farmers whose coca plantings are eradicated will determine that what might be called the cost of illegality is higher and, therefore, decide to switch to licit crops. As the coca interdiction and eradication campaign and security, improves in the area these cost will increase. The analysis, however, assumes the type of yields that would come only as the result of an effective assistance program.

The question thus is, will the ASDS work? Technically the program proposed in the PP Supplement is responsive both to needs and to appropriate methodologies. The knowledge that already exists about crops and practices will permit the types of yields required for a successful Project. Furthermore, experience in PESIP shows that eradicated lands can be effectively rehabilitated. The ASDS does not incorporate any significantly new elements (with the exception of marketing assistance), and indeed it should simplify PEAH's scope of operations.

The zone is one with agricultural potential and, since colonization began some 40 years ago, an agricultural tradition. In spite of all the problems in the area, some 50,000 hectares in the UHV remain in licit crop production. The level of technology, however, is low, providing plenty of potential for improvement. PEAH's experiences show significant gains when extension services are provided. In short, the proposed agricultural support delivery system is soundly based and should enable the Project to fulfill its objectives. The determining factors of success will likely not be technical as much as human and political - the security situation in the UHV, the salary levels of PEAH personnel, the amount of support the Project receives from INADE and other agencies of the GOP, and the willingness of PEAH personnel to make the changes required to put the ASDS into effect.

## B. Institutional Analysis

### 1. Summary of Analysis

Project implementation will continue to be managed by the Upper Huallaga special Project Office (PEAH). During the extended implementation period (1989-1991), its responsibilities and functions will be reduced. Geographically, the Project will retire from the northern one third of the original Project area, and, within the reduced area the Project will target designated communities or farmer groups for Project services. Functionally, this Project will, by 1991, return road maintenance activities to MTC and/or one or both CORDES (Huanuco and San Martin) return all research activities to INIAA and/or UNAS, and cease financing water and sewerage systems after on-going works are completed. PEAH will continue to provide agricultural extension, seeds and seedlings, land titling and information services, machinery services, and community infrastructure services, but in a consolidated, more focussed manner. Credit will be provided in part by BAP and in part by a new rotating fund. UNAS will provide marketing assistance services and will operate a Center for Training and Technology Transfer (CTTT). Advisory services will be provided to PEAH in organization and management and extension and community development.

Both USAID and INADE will be restructured to adapt to the unique monitoring and support demands of this Project. PEAH will receive increased support and stature in Lima. The existing PEAH office in Lima will concentrate on being a coordinating mechanism with the other GOP agencies having a role in the Project. USAID will utilize Peruvian contractors to carry out much of the advisory actions required. It will also contract with local firms to provide the management technical assistance to PEAH and to complete the development of the Geographic Information System (GIS). With the above changes, all entities are considered capable of carrying out their respective activities during the Project extension period. An unpredictable factor, however, is to what degree the security situation in the UHV will allow the entities to operate there as planned, although the Project has been designed to function under the adverse security conditions now affecting the UHV.

## 2. PEAH - Current Situation

The original PP proposed the creation of an Upper Huallaga Special Project Office (PEAH), which would "coordinate the activities of all other implementing institutions participating in Project execution, including INIPA, ONERN, UNAS, the Ministries of Agriculture, Transportation, and Health, and other public sector agencies." Establishment of PEAH was made a condition to initial disbursement.

Over the last several years, several important implementing agencies have abandoned the UHV or greatly reduced the scope of their work there, leaving PEAH to fill the void. This has been most notable in agricultural research and extension, road maintenance, and potable water supply. PEAH thus has become more of an implementing and less of a coordinating institution. The reason for abandonment or reduction of programs is apparently a combination of risk aversion on the part of the implementing institutions and a perception that they could cede responsibility for their functions in the UHV to PEAH and reprogram their resources to more secure areas.

PEAH currently has 400 employees, grouped into some 22 separate offices or divisions. It has not coped well with its rapid growth, particularly in sectors where specialized technical expertise is a requirement for effective performance, such as agricultural research and road maintenance. While PEAH acquired some of the technical personnel left when implementing agencies reduced their programs, many went with their agencies to other areas, leaving PEAH with the difficult task of recruiting skilled workers from elsewhere into one of Peru's most remote, dangerous, and high living cost areas.

PEAH also has found it difficult to administer such a large program. It has shown itself to be weak in planning, project management, and evaluation. Its top personnel, chosen by the GOP more for their knowledge of

the UHV than their management capabilities, are not experienced or skilled as executives.

Finally, PEAH does not have adequate support or standing within the GOP to permit it to coordinate effectively with other entities. PEAH is one of a score of projects under the National Development Institute (INADE), which in turn is part of the Ministry of the Presidency. The UHAD Project requires both a strong management presence in the project area and effective backstop support in Lima, the latter to assure coordination with other entities having complementary roles.

PEAH has its headquarters in Aucayacu, in the project area. However, terrorist threats have limited the time periods its top personnel spend there, thus leaving the day-to-day operations to run themselves with little direction. As to backstop support, INADE's status has declined in general under the current GOP administration, and the Ministry of the Presidency has been one of the weakest ministries. Furthermore, INADE has a number of other projects in its portfolio which are considered more politically or economically important. In short, backstop support has been minimal. An example is PEAH's relations with CORAH and other entities involved in drug eradication and interdiction. In order for PEAH to assist farmers whose lands have been eradicated, it must know in general where eradication is about to take place, is taking place, or has just taken place and, within a reasonable period, be able to identify the exact location of each eradicated plot. In spite of numerous attempts to establish an exchange of information, PEAH, to date, has not received this information, which has hindered its ability to deliver services to ex-coca growers.

### 3. Reducing PEAH Operational Scope

To resolve the problem of PEAH's being over burdened both operationally and thus administratively, and being assigned responsibilities for activities requiring a level of technical expertise beyond its capability, PEAH must limit its functions to those which it has the resources and skills to handle. First priority must be to remove road maintenance functions, which employ close to 100 persons, require the upkeep of some 34 pieces of heavy equipment, and account for a significant share of both its budget and its headaches. In general in Peru, the Ministry of Transport and Communications (MTC) maintains the primary road system, which in the Project area consists of 324 km. of the Marginal Highway, while the Departmental Development Corporations (CORDES) or local municipalities maintain the secondary road system. It would be unrealistic to transfer such responsibilities away from PEAH without adequate arrangements, but it would be realistic for PEAH to phase out of this activity over a transition period, involving (1) negotiating agreements with the MTC and/or the CORDES, (2) legally transferring title to equipment and facilities and transferring personnel but continuing to finance operations and provide oversight for a period of time, (3) assuring that the MTC and CORDES' budgets for the following year and provide sufficient funds to continue operations, and (4) finally withdrawing from this activity.

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A second area PEAH might phase out of is agricultural research. While continuing to conduct research in the UHV is desirable, it should be in the hands of the entity best able to carry it out, an entity expected to outlast the Project - the National Agricultural and Agro-Industrial Research Institute (INIAA). Actually, the UHAD Project is financing several research activities. Under an agreement with INIAA, it is financing the Tulumayo Experimental Station, including its operating expenses and considerable capital investment. Secondly, in the Santa Lucía area, PEAH is carrying out a combined research/extension activity, involving soil analysis, demonstration plots, and other applied research. Finally, in PEAH's extension activities (described below), there is significant applied research being conducted. As with road maintenance, PEAH should divest itself of as many of these activities as possible over a transition period, with INIAA eventually taking them over fully. PEAH, however, will continue to provide financing during the Project period.

A third area PEAH should consider phasing out of is construction of water systems. While the original rationale for PEAH's financing the construction of small community social infrastructure is valid - permitting an entree into communities - PEAH has gone beyond that as it has taken on the construction of water systems in towns of 5,000 or more population, such as Aucayacu and Uchiza. In Peru, the National Water and Sewerage Service (SENAPA) of the Ministry of Housing is charged with constructing and operating water systems for large communities, while the Directorate of Basic Rural Sanitation (DISABAR) of the Ministry of Health constructs smaller systems. During the Project extension period, PEAH will phase out of the construction of water systems and leave further work to those entities.

As to extension, there are four PEAH implemented or financed programs operating simultaneously. One is PEAH's Directorate of Agricultural Development and Promotion (DIDEPA), incorporating four zonal offices (in Tingo María, Aucayacu, Tocache, and Campanilla). Each zonal office has a group of extensionists and other professional personnel, which work directly with farmers on demonstration plots, training in cultivation techniques, and assistance in obtaining inputs. DIDEPA's headquarters staff includes supervisors and more highly skilled support personnel. In all, this program employs 60 people, of whom some 25 are field extensionists or promoters.

A second program operates under the Coordinating Office for University Extension and Outreach (OCEPU). This program, carried out by the National Agrarian University of the Jungle (UNAS), is called a training program but actually is an integrated research/extension/training effort, operating out of six pilot centers. Specific activities include field demonstrations, farm-level technical talks, field trials, and school gardens. Some 25 project-funded persons operate this program, and UNAS is considered probably the most effective implementing entity in the UHV.

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A third program is the Tocache Training and Extension Center (CECAEXTO), established by PEAH in a zone of intense conflict and heavy coca production to provide community organization, appropriate farm-level agricultural extension services, and vocational training. The program has a staff of 10.

The fourth program is the Integrated Program of Agricultural Development in Areas of Eradicated Coca Cultivation (PESIP), established by PEAH to operate specifically in eradicated areas. Operating in a zone of 83,000 ha., where most of the eradication has occurred, PESIP provides quick response to farmers with technological packages, improved seeds and seedlings, and other assistance. Some 60 persons work under this program, of whom only about 15 are involved in extension, the remainder working in the seed banks and nurseries.

Clearly the Ministry of Agriculture should manage the extension service for the UHV. However, at this time, the Ministry does not have an effective extension system in place anywhere in Peru, so any divestiture of this responsibility on PEAH's part could only occur in the distant future. It is, however, realistic to consider consolidating PEAH's four existing programs. PESIP most closely corresponds to the objectives of the Project over the next three years. It was established separately from the principal extension program (DIDEPA) since the latter did not appear capable of the quick response and provision of seedlings required in eradicated zones. DIDEPA, however, has considerably more trained personnel and infrastructure in place (especially the zonal offices). If the Project is to achieve its objectives during the next three years, it must establish a PESIP-like consolidated program, using the resources of both DIDEPA and PESIP.

As to CECAEXTO, while there is some justification for a special effort in a particular region, the effort should ideally be carried out as part of PEAH's line program. Indeed, DIDEPA has a zonal office (its largest) in Tocache. There is no reason why CECAEXTO could not be integrated into a consolidated program. As the relationship between the CTTT (UNAS) program and PEAH's extension function, CECAEXTO will be increasingly used as the northern branch of the UNAS-managed extension social promoter training program. UNAS participation in the Project is a valuable asset, as UNAS has a high level of technical expertise and competency, as well as the ability to circulate freely in the UHV. However, OCEPU basically duplicates functions of the other three programs. Where UNAS could play a more critical role is in linking research and extension. In spite of all the valuable research information that has been obtained to date and continues to be generated, many extension agents are not sufficiently familiar with it. Furthermore, a common observation is that PEAH's extension agents are insufficiently trained in how to provide effective extension services to individual farmers or groups of farmers. OCEPU could be more effective if it were transformed into a Center for Training and Technology Transfer (CTTT), concentrating on training extension agents. UNAS would also be the ideal institution to provide marketing assistance to farmers, given the level of expertise and sophistication of UNAS' personnel.

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As to land classification, titling, and information, these now form five separate divisions within PEAH: Land Registration, Land Titling, Soil Classification, Cadastre and Cartography, and Information and Statistics, with a total of 40 employees. These divisions work with various GOP entities: the Sectoral Statistics Office (OSE), the General Office of Rural Cadastre (OGCR), and the Directorate of Agrarian Reform (DGRA). There are several arguments for consolidating these functions. First of all, these are all means to two common ends and not ends unto themselves - the ends being legalization of land tenancy so farmers can obtain credit, and generation of information and maps so as to target agricultural development and services delivery, to identify potential eradication zones areas and set up development plans for them and to plan for the recuperation of specific eradicated plots with legitimate crops. Secondly, these are interrelated activities which will be more formally integrated as the Geographic Information System (GIS) begins operation. Having separate divisions will impede these processes. It is appropriate that PEAH retain control of these functions, but with the recognition that they are service functions - helping farmers get title, helping CORAH target eradication areas, and helping extensionists plan appropriate technology packages for eradicated areas, and that they should be coordinated under centralized management.

As to other project elements, credit will be carried out during the extension period under three separate institutional arrangements. First, PEAH will provide seeds and seedlings directly to farmers on a credit basis, payable at the first harvest. Second, for farmers who already have access to Peruvian Agricultural Bank (BAP) credit, or for other farmers who can readily obtain such credit, existing BAP credit lines will continue to be used to finance inputs other than PEAH-supplied seeds and seedlings. Third, a rotating fund system will be established on a pilot basis for farmers without ready access to the BAP. Such credit (both for production and investments) will be made available on a community basis, most likely utilizing a methodology based on the FINCA model which has operated successfully in Bolivia and elsewhere in Peru. It is expected that a Peruvian PVO - SDR - will be contracted to carry out this credit program. An alternative would be the Peru-Canada Credit Fund, which also operates a successful community level rotating fund, which PEAH has utilized in the past. If SDR is contracted, its methodology involves a heavy dose of community organization; the experience gained by PEAH in working with this methodology will reinforce the value of community participation for extension service and community infrastructure delivery.

PEAH provides limited agricultural machinery services to farmers. In theory this activity is best left to the private sector or to the GOP agency charged with providing the service - SENAMA. However, because SENAMA is not reliable and the private sector has little equipment available for rental nor adequate incentive to increase its investment in this activity, it is deemed advisable to leave this service in PEAH's hands during the Project extension period while examining conditions for encouraging private sector initiative.

PEAH will also continue to promote the construction of small community infrastructure, with community participation. PEAH currently has a reasonably efficient institutional system for implementing these small public works projects.

Table 7 lists the Project activities during the amended Project period and the agencies responsible for their implementation. As can be seen, PEAH will have direct responsibility for significantly fewer activities than at present. This will permit PEAH to reorganize itself in a more streamlined fashion and to reduce staff. While the reorganization and reduction will take place over a year's time, as responsibilities are transferred to other agencies, and while the details are yet to be worked out, a demonstrative organization chart, with numbers of employees, is presented in Chart 1. Budget estimates in the Financial Plan section of this PP Supplement are based on these employee numbers.

As discussed above, a key element in restructuring the UHAD Project is returning certain functions to the national or regional level organizations normally responsible for their implementation. It is beyond the scope of this Institutional Analysis to do a detailed study of the MTC, INIAA, SENAPA, DISABAR, and the CORDES. USAID, however, is familiar with all of these entities from other projects and sees no serious problem that would preclude their returning to the area. Given that the UHV consists of less than 1% of Peru's territory and of its population, it would not be unrealistic to expect those entities to increase their budgets to operate there, given that the Project will fund their UHV operations either during the transition year (1989) or during the entire Project extension period, and given that they will be receiving inputs of heavy equipment, facilities, and personnel.

The other entities which will be participating (UNAS, ENCI, BAP) are not being asked to carry out a greater level of operations than they now do in the area, although there will be some changes in the scope of the activities. All arrangements will be formalized in agreements between PEAH and the entities. In short, USAID sees no institutional constraints to the implementation of the redesigned Project.

There is, however, one unknown which could affect the operations of any of the entities and the success of the Project itself - the factor of terrorism. PEAH has suffered a number of terrorist attacks, including destruction of heavy equipment and the recent murder of three employees. It is probable that even the ministries signature of agreements to commit budget, personnel, and equipment resources in the zone, will not determine whether they will actually be able to carry out their commitments. The Project will insist on a close working relationship with the MOI to provide protection to the ministries and will coordinate with the MOI to the degree possible, but all parties to the Project will have to maintain flexibility and be prepared to rearrange responsibilities according to the realities of the moment in the area.

#### 4. Improving PEAH's Management

It is not realistic in the Peruvian context to expect that PEAH's current management could easily be replaced by more experience and skilled managers, selected for their technical qualifications. Pressures for political selection are strong under the current GOP, and the positions are not attractive enough to entice experienced managers. Therefore, management improvement must work from the existing base. The most effective approach appears to be to contract with a Peruvian consulting firm to provide technical assistance to PEAH's management. The firm would assign two individuals with appropriate academic qualifications (MBA) and management experience to provide technical assistance over a one year period, concentrating on PEAH's reorganization, planning procedures, financial controls, supervision of on-going activities, and evaluation capabilities. Accepting the existing environment of the zone as given, the individuals would make periodic visits to PEAH's headquarters and zonal offices, interspersed with periods of planning, analysis, and report writing in Lima. The firm would then provide a reduced level of services over the following two years, with sporadic follow-up visits.

#### 5. Enhancing Central Government Support for PEAH and UHV Development

Improving PEAH's standing within the GOP, and achieving more effective backstop support, is a more difficult issue. One alternative examined during Intensive Review was to transfer PEAH from INADE to the Ministry of the Interior (MOI). The Ministry is much more aware of anti-narcotics matters and the realities of the UHV than is INADE. Other entities operating in the same sectoral and geographic areas report to or deal through the Ministry, including CORAH, DEA, and UNFDAC. Transferring PEAH to the MOI would enable closer PEAH-CORAH coordination to take place, permitting better eradication and extension programming. It also would likely enhance the protection provided to PEAH personnel and property by the police. There are, however, two strong arguments against placing PEAH in the MOI. One is that the MOI does not have a development orientation. The few development-oriented activities which in the past have been under the aegis of the Ministry, such as Civil Defense, have received little attention or guidance. In fact, it is likely that PEAH would receive less Lima-level support under the MOI than it currently does under INADE. UNFDAC has been able to avoid this problem by implementing its own program. Secondly, what success PEAH has had to date in the UHV is in large part due to its being considered acceptable by all parties. Calling itself a development agency,

Table 7

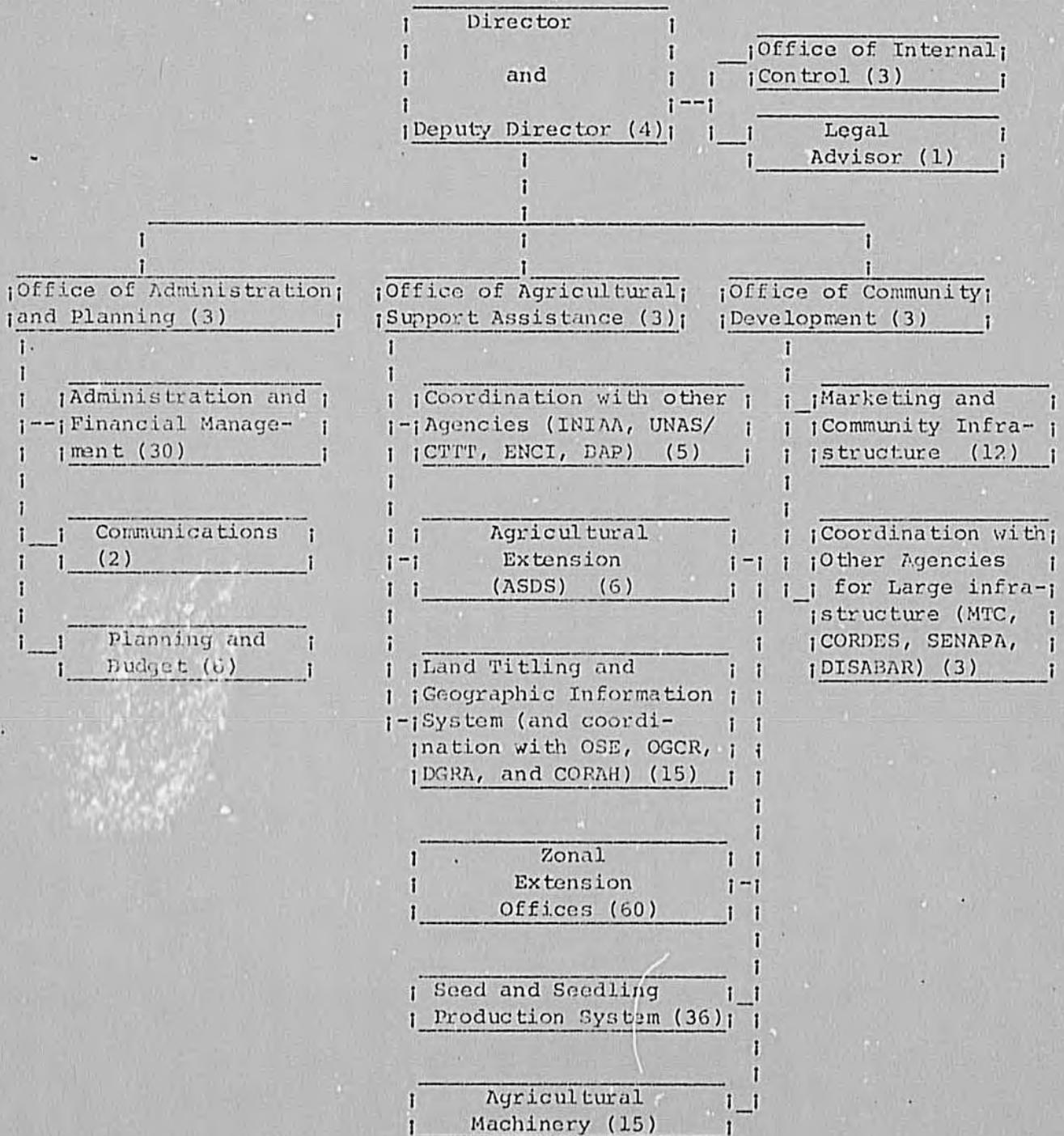
Activities During the Extended Project Period

<u>Activity</u>	<u>Agency</u>	<u>Methodology</u>
Ag. Extension	PEAH	DIDEPA, zonal offices, PESIP, and CECAEXTO combined into a single PESIP-like system (ASDS).
Provision of Seeds and Seedlings	PEAH	Through ASDS, plus contracts with local growers/suppliers.
Provision of Other Inputs	PEAH, ENCI, suppliers	Coordinated by PEAH (ASDS).
Ag. Credit	PEAH for seeds, BAP and rotating fund for other inputs	ASDS via direct seed credits. BAP and SDR under agreements with PEAH, coordinated through ASDS, with ENCI participation.
Marketing Assistance	UNAS	Under agreement with PEAH.
Provision of Machinery	PEAH	Coordinated through ASDS.
Land Titling	PEAH, DGRA municipalities	Coordinated by PEAH.
Ag. Research	INIAA	Under agreement with PEAH, with Project funding.
Training of Extension Personnel	UNAS	Under agreement with PEAH, involving transforming OCEPU into CTTT.
Land Survey, and Information (GIS)	PEAH	In conjunction with OSE, OGCR, DGRA, and CORAH.
Community Infrastructure	PEAH	Under agreements with communities.
Road Maintenance	MTC, CORDES	Under agreements with PEAH, with decreasing Project funding.
Water Systems	SENAPA, DISABAR	After Project completes existing commitments.

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CHART 1

Demonstrative PEAH Organization Chart for 1990



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independent from the anti-narcotics efforts and the police operations of the Ministry of the Interior, PEAH has been able to operate throughout the zone, with relatively few attacks against it by terrorists and drug traffickers. If PEAH were associated with the MOI, perception of its role would change within the UHV, and its effectiveness would likely suffer.

A better solution appears to be to maintain PEAH as independent from the MOI, enhance its Lima-based backstop support, and work out a better coordinating mechanism with the MOI. Keeping PEAH within the Ministry of the Presidency makes sense, as that Ministry is more development oriented than any other in which PEAH would conceivably fit. Furthermore, a cabinet shuffle during the period of Intensive Review brought a stronger minister to head the Ministry, a man who was also named Prime Minister, which will clearly enhance the Ministry's prestige and effectiveness.

Two of the alternatives examined during Intensive Review involve keeping PEAH within the Ministry - (1) maintaining PEAH within INADE, but strengthening its support, or (2) making it a separate entity within the Ministry of the Presidency, reporting directly to the Vice Minister. The latter has some attractive features, including elevating PEAH's status, visibility, and accountability. A deeper look into the situation, however, leads to the conclusion that the key element is not where PEAH is in the hierarchy but who is providing the backstop support. While reporting directly to the Vice Minister may enhance PEAH's prestige, the Vice Minister has so many separate entities under his command that, realistically speaking, it is doubtful that he would be able to give significant personal attention to PEAH. And making PEAH a separate entity would mean losing the support of INADE's administrative structure, which does an acceptable job in such functions as making budget submissions, obtaining counterpart disbursements, and liberating equipment from customs. An autonomous PEAH would thus have to establish its own sizeable bureaucracy. In short, PEAH should best remain in INADE, but with a stronger support office, located at an appropriate level within INADE, and headed by a qualified individual jointly agreed to by INADE and USAID.

PEAH currently is one of some eight "special projects" managed by INADE, under the direction of a Manager for Special Projects. At the same level as the Manager are other managers (for Hydraulics Projects, for Sierra Projects), each with a portfolio of projects. PEAH thus is one of some 20 projects competing for attention, many of which are larger, are in more visible areas, or are otherwise considered more politically important. One way to enhance PEAH's status would be to take it out of the Manager for Special Projects' portfolio and insist that a separate Manager position be created to backstop just PEAH and that a qualified, dynamic individual be selected, with USAID having a voice in the selection. Another alternative would be to transfer PEAH from the Special Projects Office to what is now the Sierra Projects Office, which currently backstops only three projects, has a dynamic Manager, and receives a significant share of top management attention. Having an INADE Manager, a significant part of whose job would be to oversee and provide support to PEAH would have several advantages,

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including obtaining more attention of INADE's top management and demonstrating a GOP commitment to coca substitution, rather than having it as one of several miscellaneous "special" projects. Furthermore, either alternative would bring a more highly qualified individual to the support position - an individual with the willingness and wherewithal to coordinate closely with CORAH, MTC, SENAPA, BAP, and the multitude of other involved entities.

#### 6. AID Monitoring

The UHAD Project is managed by USAID's Special Projects Division, which also manages the Drug Education and Public Awareness (DEPA) Project. The Division consists of a Division Chief, a secretary, one FSN PSC (an educational specialist with community development experience) working primarily on the UHAD Project. Both projects have long-term institutional contracts with U.S. consulting firms to provide specialized technical assistance. In the case of the UHAD Project, RONCO Corporation is under contract and is providing four specialists: a Peruvian tropical crops expert who is now giving broad agricultural assistance to the Project's research and extension activities, a Peruvian civil engineer who is providing assistance to the infrastructure construction activities, an U.S. citizen equipment maintenance and repair expert who is helping PEAH maintain its heavy equipment, and a U.S. citizen information systems expert who is helping establish the GIS. The RONCO contract is scheduled to terminate December 31, 1988.

Given the restructuring of the Project, technical assistance needs will be different, as will AID's monitoring requirements. Adequate monitoring will require active participation on USAID's part in the coordination process INADE will be spearheading with the MOI, MTC, and other entities. Also, USAID needs to be more actively involved in PEAH's planning process as well as in day-to-day oversight of PEAH's operations. The Division Chief is currently spread too thin, and the FSN does not have the broad background and experience to monitor the full range of PEAH's administration and operations. In addition, terrorism hinders regular visits to the area on the part of USAID staff and the current technical assistance team.

An analysis of USAID's monitoring needs and the Project's technical assistance needs during the three year Project extension period has led to the following list of required staff positions:

a. A development professional of considerable experience and stature. Because of the difficulty of recruiting for U.S. personnel under the conditions existing in the UHV, the selected contractor will probably be a Peruvian. This person will work primarily in Lima, coordinating daily with his/her INADE and PEAH counterparts and, as needed, with technical and middle management personnel of DEA, NAU, CORAH, the MOI, and the other GOP participating entities. The individual will review PEAH progress reports, vouchers, requests for funds, and other documents, to assure that adequate progress is being made toward the achievement of Project objectives.

b. Peruvian with considerable knowledge of the zone and with community development experience to travel as much as is necessary, and as safety would allow, to monitor Project activities in the area and to provide advisory services to PEAH in community organization and development. If possible, the current FSN should be retained, as he has extensive experience in the zone and with the Project. Since it is doubtful that the individual will be able to travel more than one week per month, he should dedicate his time in Lima to report writing and correspondence preparation, long-term Project planning, and assisting the Project Manager monitor and coordinate the Project.

c. Peruvian financial analyst, to backstop the financial aspects of the Project. This individual would not substitute for tasks that the Controller's Office carries out but would provide complementary services required by the Project. Specifically, he/she would provide advisory services to PEAH in the proper presentation of financial documents to AID and in the proper management of AID funds. He would also be a first level of review before documents are sent to the Controller's Office. Equally important, he would monitor and advise of the proper integration of budget and activity planning, expenditure control, and orderly reprogramming as necessary.

d. Peruvian agricultural expert, with experience in extension and marketing. This individual would travel to the area with as much frequency as safety would allow to provide advisory services to PEAH and assist USAID in monitoring PEAH's agricultural support activities in coordination with community development.

e. An additional secretary to provide clerical support to the Project. (Having just one secretary for an increased technical professional staff.)

f. As discussed above, a contract with a Peruvian consulting firm to provide management TA to PEAH.

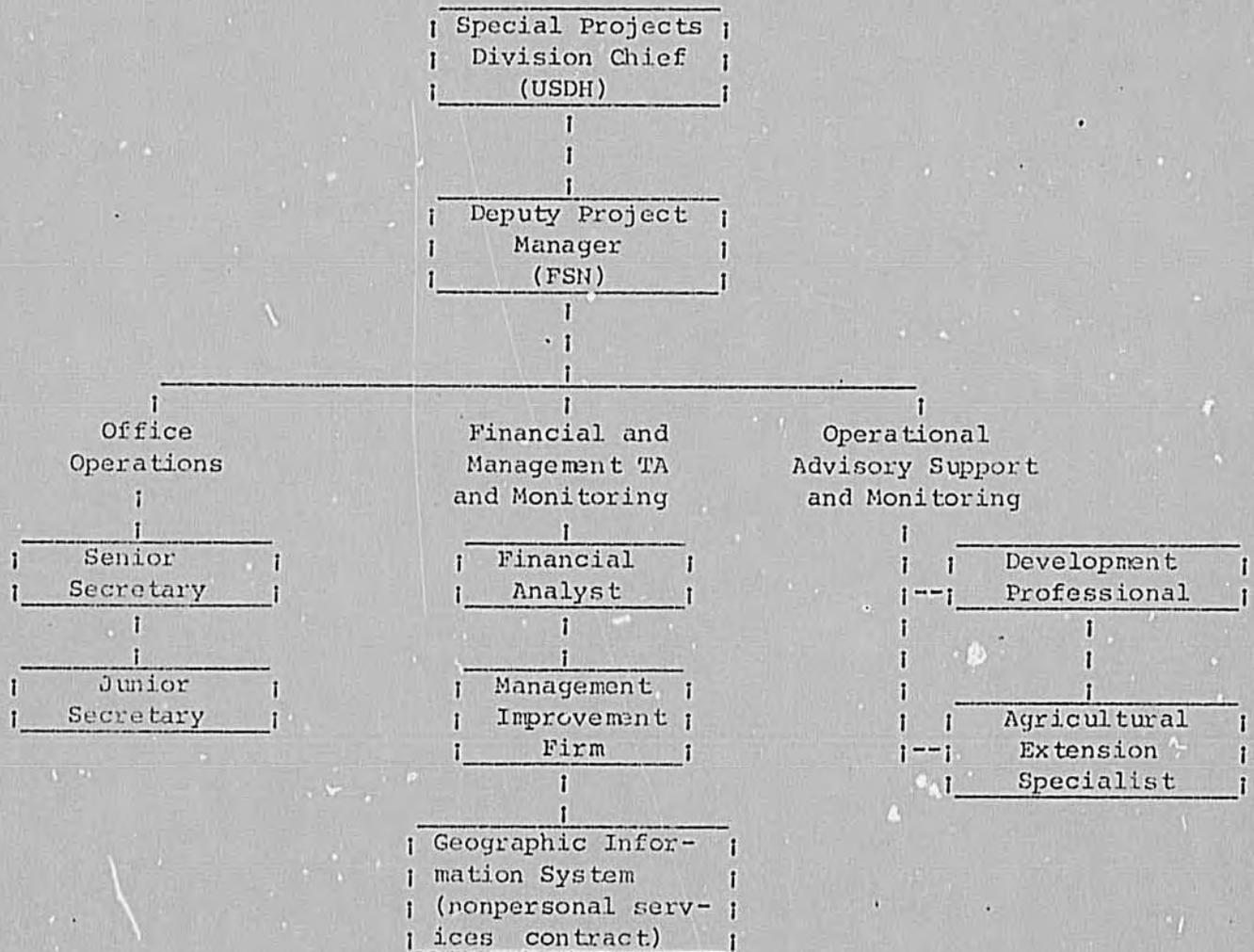
g. A contract to conclude the development of the GIS. This should ideally be with an individual or a Peruvian firm on a nonpersonal services (i.e., fixed price) basis.

This staffing patterns more closely meets the needs of the restructured Project. It allows for more intensive monitoring of the Project, especially in the coordination function, and would integrate this with a more focused advisory service in three priority areas - agricultural extension, community development, and management improvement. The first five individuals will be contracted through a Peruvian consulting firm by USAID, utilizing Project funds. Management TA and the GIS technical assistance support will be contracted to local specialty firms (or the latter to a local individual).

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CHART 2

USAID Project Office Organization Chart



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C. Social Soundness Analysis

1. Pre-Project Implementation

The original PP social analysis explored the nature of farming in the UHV, the probable consequences of the eradication of coca, and the benefits of project implementation could provide in that context. The analysis concluded that approximately one-third of the small and medium size legitimate crop farmers in the area also produced small quantities of coca. Assuming that the average coca plot at that time measured 2 hectares the total number of multiple crop or traditional farmer coca growers totalled approximately 2,000 producing 4,000 hectares of coca. The estimated production of mono-crop coca farmers was approximately 6,000 hectares, no data was available to measure the number of farmers but a conservative estimate of double the land area cultivated per farmer gives a total of 1,500 mono-crop coca growers. The original analysis estimated that only 15% of this land was suitable for legitimate agricultural production while 80% of the coca cultivation on multicrop farmers was suitable for legitimate agricultural production. If all the multicrop farmers are considered potential project beneficiaries and 15% of the mono-crop farmers then the total potential pool of project beneficiaries in 1980-1981, the period of intensive review, was approximately 2,200 producing coca on approximately 4,100 hectares of arable land.

2. Project Progress

Since project implementation began in late 1982, the Project has been waging an uphill struggle to overcome the focus working against successful progress toward the project objectives. The original social analysis recognized the potential for what it called "negative farmer attitude once eradication has been carried out." The intensive review was not in a position to be able to measure the consequences of the resentment and the form in which it would be expressed. While no direct causal relationship can be proved undoubtedly, the existence of police program of repression and eradication of coca has facilitated the entry of subversive political elements, such as Sendero Luminoso and MRTA, in the UHV.

In addition, the original social analysis assumed that the agricultural development of the UHV was largely a technical problem. The transfer of coca production to legitimate agricultural production on multicrop farms "can occur fairly rapidly, ... so no major displacement is likely to occur." That is to say that the overwhelming majority of ex-coca farmers with this pattern of production would elect to remain on their land. However, the mono-crop coca producers were judged to have little or no incentive to remain on their land and following eradication would migrate to other areas. Of course, at that time there was no information available on what form this migration would take, where they would relocate and what economic activity they would undertake and the analysis does not go further than concluding that out migration is likely.

In fact the center of coca production has moved north of Tingo Maria to the Uchiza/Tocache area and has increased enormously, the current estimate being a total area cultivated from 50,000 to 75,000 hectares. The explosive growth of coca production around the town of Santa Lucia, where the GOP has targetted an eradication effort, can be seen in figures 1 and 2. Figure 1 shows the area in 1981, approximately 1,300 hectares of land on which a total of 0 hectares of coca was planted, the remainder being virgin forest. Figure 2 shows the dramatic change over six years to 1987, an estimated 402 hectares of coca is being produced in the area and the forest has been largely destroyed. In other words the initial out-migration noted in the intensive review has resulted in nothing more than a shift of coca production to new areas, supplemented by a massive in-migration of new mono-crop producers.

	<u>Hectares</u>	
	<u>Figure 1</u>	<u>Figure 2</u>
Annual Crops (CL)	143.50	16.12
Fallow Land (PU)	308.85	309.20
Pasture (PC)	3.31	185.78
Forest (BC)	815.66	340.23
Coca Crops (CC)	0	402.39
Urban (UNA)	-	17.60
Total	1,271.32	1,271.32

At the same time, political subversion and violence has found a new area of exploitation in the UHV. The appearance of subversives in 1983-84 and the destruction of public sector infrastructure and the murder of public figures, including the mayors of local towns. In response the GOP declared the UHV a military emergency zone in 1985, permitting the military to take control of the area from civilian administration. At the same time, they prohibited the Civil Guard Police from leaving their barracks, thus forcing a cessation of eradication. With the lifting of the emergency declaration in early 1986, eradication recommenced but has not been able to reach previous levels of effectiveness. During the past 2 years, security in the UHV has continued to deteriorate in spite of a new emergency declaration in October 1987 and increased military and police presence in the area.

The consequences have been dramatic: the murder of 34 eradication workers and 6 development workers (with Project-financed salaries), the destruction of the Marginal Highway and connecting bridges, periodic road blockages shutting off the flow of traffic, the damage of infrastructure (the Tulumayo Experimental Station) and the destruction of heavy equipment and vehicles, and, most importantly, the virtual political and social control of large positions of the UHV by "Sendero Luminoso."

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### 3. Project Extension Response

Within this unfavorable implementation environment the Project must select carefully its priorities and operation strategies. The prevailing characteristics of the economic and social structure of the UHV have changed dramatically between 1981 and 1987 (latest data).

a. The Coca Economy. The estimated land under coca cultivation has increased approximately six fold from 1980 to 1987, i.e., from 10,000 hectares to 60,000 hectares. The estimated number of coca producing farmers in 1980 was approximately 2,200 of which two thirds were multi-crop farmers with small plots of coca. Current police (UMOPAR) estimates are that 80% of current production comes from mono-crop farmers an estimate can be made by taking the increase in total land under cultivation for legitimate agriculture (1981: 82,100 hectares and 1987: 116,000 hectares) which has increased by 41% and applying that percentage to the number of farms (5,713) existing in 1981 to obtain a new total of farms currently in operation in the UHV. If the number of multi-crop farms now producing some coca has increased from one-third to one-half this means that some traditional farmers are producing coca. Applying the estimate of 80% mono-crop farmers to this number a total of 20,000 coca growers is obtained. If 50,000 hectares is an accurate total of coca production for the UHV then each farmer on average cultivates 2.5 hectares of coca. Using cadastral figures of average coca plot size (2 hectares) obtained in a survey of Uchiza conducted in 1984 the total number of coca farmers in 25,000,

It should be noted that CGCR the GOP cadastral office estimates a lower total coca production of approximately 35,000 hectares. If this figure is accurate the total number of coca farmers using the 2 hectares average is approximately 17,500. Therefore there are an estimated 17,500 and 25,000 coca growers in the UHV.

Using these figures of total potential beneficiaries for a post-eradication development effort what is a realistic estimate of the numbers of these new ex-coca growers willing and able to accept project services. First, if it is assumed that the increased new mono cultivation has been on land not suitable for agriculture, that is occupation of previously forested lands on slopes above 1,000 meters, then the original figure of a total 700 hectares, or some 300 to 350 farmers, remains accurate. This land will not be serviced by the Project. The ex-coca growers will migrate to other areas either to their area of origin or further away to clear land and plant again. To the extent that this new eradication methodologies disrupt the coca market and lowers the farm gate price fewer ex-coca growers of this type will opt to continue coca production. Again the land itself will be left to recover naturally. To this must be added the multicrop farmers who will be eradicated manually, approximately 5,400 farmers. Again, following eradication how many of these will decide to remain on their land and enter legitimate production. While no data is available to answer this question an informal survey of extension agents and PESIP employees put this figure at no more than 20% to 25%, or no more than 1,200 farmers. Therefore, given the

continued high price of coca the probable market for Project services is no more than a total of 1,200 ex-coca growers and a possible pool of 4,000 non-coca, traditional farmers.

b. Political Subversion and Violence

The increasing presence of Sendero Luminoso and the MRTA has disrupted the political and social structure of the UHV. Because of the fairly recent settlement of the UHV there are no commonly accepted, traditional social patterns or cultural mores to defend the population from the threat to their society posed by the drug trade. In this environment, the narcotics traffickers can more easily strip away inhibitions, relying on the economic incentive to pull the population into participation into illicit coca production.

The side effects are numerous but all reflect a deterioration in respect for and observance of rules or laws regarding acceptable modes of behavior. Compounding this problem is a belief that the central government is either incapable or unwilling to respond to the needs of the populations for basic services. In fact, the GOP is seen to have taken to a policy of repression against the rural population. At the same time the GOP line ministries are withdrawing resources from the area, reducing their programs, and, for those activities which continue to take place, ineffectively carrying out their responsibilities. As the other agencies of the GOP withdrawn more and more pressure is placed on PEAH to take up the burden, for which its administrative and operational resources are insufficient. However, the general public is aware only that the services are insufficient and PEAH, being the most visible central government entity, is incapable of meeting the demand.

The subversives have been steadily pressing their case to the local farmers that neither the GOP nor the narcotics traffickers are concerned with their well-being, that both are in fact exploiters of the rural peasant. The message has been so successful that large portions of the UHV are under de facto and de jure control of Sendero Luminoso. Political assassinations have largely stopped because the local authorities have recognized the dominance of Sendero and have reached agreement on the limits of their authority and decision value power. Committees have been organized through a system of delegates who pass judgement on how the community will interact with the outside world.

4. Project Direction

The implementation strategy of the project will be adapted to meet these changing conditions:

a. Implementation will be focussed on carefully selected communities which will be offered a full package of agricultural and community support needs.

b. Priority will be given to communities where manual eradication is underway.

(1) the eradication agency CORAH will maintain a data bank to identify the location of eradicated plots.

(2) each plot will be surveyed during eradication to determine, ownership, dimensions, cropping pattern, the level of infrastructure investments, and bank land titling data to initiate the process.

(3) each plot will be evaluated by PEAH with the survey and GIS data to determine its potential for legitimate production with the present owner.

(4) a development zone will be defined and agricultural and community support service needs analyzed and estimated.

(5) the support services seeds supply, small productive infrastructure construction, other input and credit availability, market development will be managed by PEAH extension agents and social promoters.

c. In areas where the focus is not eradicated coca plots and integrated farm rehabilitation, the focus of implementation will still be community-based.

d. Target communities will be selected using such criteria as lack of subversive presence, absence of coca production, legitimate agricultural production potential, existing community or organization structures, etc.

e. Formal agreements will be reached with the communities to undertake a program of responsibilities and services to be delivered in exchange for community participation and support.

f. Development resources will be delivered in conformance with plans largely on an annual basis and progress will be continuously monitored and evaluated.

#### D. Economic Analysis

##### 1. Introduction

The proposed project has four separate but interrelated components: (1) Land Titling and Information; (2) Agricultural Input Supply; (3) Farm Assistance/Technology Transfer; and, (4) Community Development. The ultimate objective of these project activities is to provide farmers - whose plots have been eradicated of illegal coca cultivation - with a financially attractive alternative to returning to the illegal crop. Instead of analyzing the economic feasibility, or the cost-effectiveness, of each project component, this analysis will focus on the overall impact of project activities on the potential financial profitability of farmers.

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This analytical approach was adopted because the ultimate success of the project will depend on the willingness of eradicated farmers to participate in project activities. This willingness in turn will be primarily a function of the perceived differences between the financial profitabilities associated with a set of choices after the coca has been eradicated. The basic choices facing the farmer can be summarized as follows: a) to replant coca in the same plot, or elsewhere in the valley; b) to plant only legal crops in the same plot, without project assistance; and, c) to plant only legal crops in the valley, with project assistance. Clearly, there are other options open to the farmer, such as migrating to the urban areas, or to a different agricultural region of the country, but these have not proven to be prominent in the behavior of farmers that were eradicated in the past. Thus, for the purposes of this analysis, other options will be ignored.

This analysis will not attempt using the traditional economic methodology for agricultural projects. The reason is simple: that approach would have to estimate and evaluate the net benefit stream generated by the project which, in this case, would be negative. This would result from subtracting the net stream of benefits generated by the coca farmer from a lower net stream of benefits generated by the eradicated farmer who participates in the project. This result is based on the high value which the market places on the coca leaf. This problem may be addressed by imputing the "true" value which society places on coca which, by virtue of the laws against coca consumption, can be assumed to be negative. This kind of exercise, however, would be highly theoretical and would not shed much light on the willingness of farmers to participate in the project.

## 2. Methodology

The comparison of profitabilities associated with farmer choices requires the use of an "average" plot that enables the comparison of different cropping patterns. For the UHV, the average plot was estimated to be 10 hectares. This estimate is based on recent statistical data which shows that 59% of existing plots vary from 5 to 20 hectares, while 95% vary from 1 to 50 hectares. The adopted average plot size is also supported by casual observation. The area cultivated for the average plot is estimated to be 6 hectares. The estimate is an extrapolation of statistical data which shows that of areas worked, 55% is planted and 45% is fallow.

The UHV has a variety of ecological floors that make difficult the designation, in terms of agronomic conditions, of one average plot as representative of the entire valley. The valley's elevation, which ranges from 500 to 2,500 meters above sea level, carry varying implications on cropping patterns and productivities. In order to accommodate these differences, two types of plots representing geographical areas will be used: Tingo Maria/La Divisoria and Tocache/Aucayacu. The Tingo Maria/La Divisoria plot is representative of the agronomic conditions prevalent in the upper end of altitude scale in the valley. The Tocache/Aucayacu plot is representative of the conditions prevalent in the lower end of the altitude scale of the valley.

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For each of these two plots, three farm budgets will be developed. The first farm budget will represent the return of the farmer to coca cultivation - the coca farmer. This includes the cultivation of non-coca crops such as rice, corn, bananas, other minor crops (beans, yuca, etc.) and livestock. The second farm budget represents the use of the land by a farmer who decides to keep only his legal crops and receives project assistance - the participant farmer. The third farm budget represents the use of the land by a farmer who decides to keep only his legal crops without receiving assistance from the project - the eligible but non-participant farmer. In order to simplify the analysis, this farm budget is the same one as the first one without the coca crop. The analysis is performed using 1988 Inti prices. This approach will be used because of Peru's current price problems, inflation in 1988 is projected to reach 400 percent. Thus, price variations projected for farm inputs and outputs reflect changes in relative prices among them. For each of the farm budget scenarios, internal rates of return will be estimated. These rates represent the profitability associated with each of the choices.

### 3. Analysis of the Tocache/Aucayacu Region

Tables 1 through 3 present a detailed description of the sources of income, investment and operating costs for the farm budgets for the three decision scenarios. The leftmost block of data in Tables 1 and 2 corresponds to the projected situation of the coca farmer. This same block of data without the coca crop corresponds to the situation of the eligible but non-participant farmer. Table 3 shows the investment costs of the participant farmer.

#### a. Profitability of the Coca Farmer

Detailed revenue and expenditure data for the farmer who returns to coca cultivation is condensed and summarized into three periods (1, 4, and 5 years respectively.) The only significant productivity changes are expected to occur in coca cultivation. Every other crop (maize, bananas, rice, and "other" crops) are projected to achieve their maximum productivity levels during the first year - the levels currently achieved by coca farmers. Coca prices are assumed to remain constant throughout the period. Prices for other crops are expected to increase slightly. Coca productivity and non-coca price changes are represented in step increases for each of the periods that follow the first year. The land distribution of crops is projected to be similar to patterns currently observed for farms in that area.

Table 4 shows the farm budget for this case. As expected, gross revenues increase substantially over the period of analysis. The share of coca revenues moves from about 8% of the total during the first year, to about 67% during the 10th year. Revenues for non-coca crops are projected to increase on account of projected moderate, but steady increases in their farm gate prices over the period. The price trends for these products are based on historical trends and World Bank commodity price projections. Total revenues of coca farmer almost treble over the period.

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Table 1  
Agricultural Income  
Tocache/Hucayacu Plot

Land Utilization (Has.)	Coca Farmer			Project Participant Farmers									
	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Banana	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Rice	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minor Crops	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cacao	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Achiote				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Macadamia				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Living area	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Idle Land	3.9	3.9	3.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>
<b>Productivity (Kg/Has)</b>	<b>1</b>	<b>2-5</b>	<b>5-10</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Coca	35.0	568.0	800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	300.0	900.0	900.0	1500.0	1800.0	2000.0	2200.0	2200.0	2200.0	2200.0	2200.0	2400.0	2500.0
Banana	5000.0	5000.0	5000.0	6000.0	6500.0	7000.0	7000.0	7300.0	7500.0	7500.0	7800.0	8000.0	8500.0
Rice	2000.0	2000.0	2000.0	2200.0	2400.0	2600.0	2600.0	2900.0	3000.0	3500.0	4000.0	4500.0	5000.0
Minor Crops	1500.0	1500.0	1500.0	2000.0	2200.0	2500.0	2600.0	2900.0	3000.0	3500.0	4000.0	4500.0	5000.0
Cacao	0.0	0.0	0.0	0.0	0.0	0.0	2400.0	2500.0	2600.0	2700.0	2800.0	3000.0	3200.0
Achiote	0.0	0.0	0.0	0.0	0.0	0.0	300.0	300.0	350.0	400.0	400.0	400.0	450.0
Macadamia	0.0	500.0	600.0	0.0	500.0	600.0	800.0	950.0	900.0	950.0	1000.0	1200.0	1500.0
<b>Production Kg.</b>	<b>1</b>	<b>2-5</b>	<b>5-10</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Coca	35.0	568.0	800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maiz	1350.0	1350.0	1350.0	1500.0	1800.0	2000.0	2200.0	2200.0	2200.0	2200.0	2200.0	2400.0	2500.0
Banana	7500.0	7500.0	7500.0	9000.0	9750.0	10500.0	10800.0	10950.0	11250.0	11250.0	11700.0	12000.0	12750.0
Rice	2000.0	2000.0	2000.0	2200.0	2400.0	2600.0	2600.0	2900.0	3000.0	3500.0	4000.0	4500.0	5000.0
Minor Crops	1500.0	1500.0	1500.0	1000.0	1100.0	1150.0	1200.0	1250.0	1300.0	1350.0	1400.0	1500.0	1600.0
Cacao	0.0	0.0	0.0	0.0	0.0	0.0	150.0	150.0	175.0	200.0	200.0	200.0	225.0
Achiote	0.0	500.0	600.0	0.0	500.0	600.0	800.0	850.0	900.0	950.0	1000.0	1200.0	1500.0
Macadamia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.0	400.0	500.0	750.0	1250.0	1750.0
<b>Farm gate prices (1988 Intiz/Kg)</b>	<b>1</b>	<b>2-5</b>	<b>5-10</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Coca	300.0	300.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maiz	13.0	12.3	13.3	13.0	12.5	12.0	12.2	12.5	12.7	13.0	13.2	13.5	13.8
Banana	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
Rice	15.4	14.3	15.4	15.4	14.5	14.5	14.9	15.2	15.2	15.2	15.5	15.5	15.5
Minor Crops	20.0	20.5	21.4	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.7	21.9
Cacao	85.0	85.9	85.7	85.0	85.9	85.7	87.6	88.5	89.3	90.2	91.1	92.0	93.0
Achiote	65.0	65.7	66.3	65.0	65.7	66.3	67.0	67.6	68.3	69.0	69.7	70.4	71.1
Macadamia	60.0	60.6	61.2	60.0	60.6	61.2	61.8	62.4	63.1	63.7	64.3	65.0	65.6
<b>Value of Production (1988 Intiz)</b>	<b>1</b>	<b>2-5</b>	<b>5-10</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Coca	10500.0	170400.0	240000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maiz	17550.0	16613.4	17393.1	19500.0	22500.0	24000.0	26928.0	27456.6	28015.9	28576.2	29147.7	32433.5	34460.6
Banana	30000.0	30000.0	33750.0	36000.0	39000.0	42000.0	43200.0	43800.0	50625.0	50625.0	52650.0	54000.0	57375.0
Rice	30300.0	29584.4	30760.0	33830.0	34800.0	37700.0	41818.0	44177.7	45600.0	5200.0	62000.0	69750.0	77500.0
Minor Crops	30000.0	30757.5	32167.2	20000.0	22220.0	23452.3	24727.2	26015.1	27326.3	28661.0	30019.8	32485.7	34997.9
Cacao	0.0	0.0	0.0	0.0	0.0	0.0	360.0	360.0	412.5	450.0	450.0	450.0	525.0
Achiote	0.0	0.0	0.0	0.0	0.0	0.0	450.0	450.0	525.0	600.0	600.0	600.0	675.0
Macadamia	0.0	32625.0	39793.9	0.0	32625.0	39793.9	53575.7	57493.4	61464.1	65548.9	65698.8	84462.8	106634.3
<b>TOTAL</b>	<b>118950.0</b>	<b>277355.3</b>	<b>354570.4</b>	<b>109300.0</b>	<b>151345.0</b>	<b>175617.1</b>	<b>203385.2</b>	<b>227029.5</b>	<b>253909.3</b>	<b>276502.6</b>	<b>309978.7</b>	<b>372754.8</b>	<b>446721.5</b>

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Table 2  
Operating Costs in Average Plot  
Tocache/Rucayacu  
(1988 Intis)

Product and Expenditures	Coca Farmer			Project Participant Farmer										
	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10	
<b>Crops</b>														
<b>Coca</b>														
Labor	40000.0	20000.0	20000.0											
Plants	20000.0	0.0	0.0											
Chemical products	5000.0	6331.4	8571.0											
Other	4000.0	4750.7	5642.4											
<b>Total Coca</b>	<b>69000.0</b>	<b>31132.1</b>	<b>34213.3</b>											
<b>Maize</b>														
Labor	10200.0	10200.0	10200.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0	14600.0
Seeds	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Chemical products	1500.0	2042.0	2742.7	2450.4	2818.0	3240.7	3726.8	4285.8	4714.4	5185.9	5704.5	6274.9	6902.4	7579.9
Other	2000.0	2375.4	2821.2	2000.0	2140.0	2239.8	2450.1	2621.6	2805.1	3001.5	3211.6	3436.4	3676.9	3927.4
<b>Total Maize</b>	<b>14200.0</b>	<b>15017.4</b>	<b>16163.9</b>	<b>19450.4</b>	<b>19958.0</b>	<b>20530.5</b>	<b>21176.9</b>	<b>21907.4</b>	<b>22519.5</b>	<b>23187.3</b>	<b>23916.0</b>	<b>24711.3</b>	<b>25579.3</b>	<b>26477.3</b>
<b>Banana</b>														
Labor	15000.0	15000.0	15000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0	21000.0
Plants	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0
Chemical products	3000.0	3828.8	5142.6	4500.0	4950.0	5445.0	5939.5	6538.5	7247.3	7972.0	8769.2	9646.1	10610.8	11690.4
Other	4500.0	5344.6	6347.7	6250.0	6637.5	7155.6	7656.5	8192.5	8765.9	9379.6	10036.1	10738.7	11490.4	12280.8
<b>Total Banana</b>	<b>22950.0</b>	<b>24623.4</b>	<b>26940.3</b>	<b>32200.0</b>	<b>33037.5</b>	<b>34050.6</b>	<b>35096.0</b>	<b>36230.9</b>	<b>37463.2</b>	<b>38801.6</b>	<b>40255.4</b>	<b>41834.8</b>	<b>43551.1</b>	<b>45411.0</b>
<b>Rice</b>														
Labor	12000.0	12000.0	12000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0	17000.0
Seeds	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0
Chemical products	2400.0	3063.1	4114.1	3400.0	3740.0	4114.0	4525.4	4977.9	5475.7	6023.3	6625.5	7298.2	8017.0	8807.0
Machinery	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0	6600.0
Other	3000.0	3563.1	4231.8	4000.0	4280.0	4579.6	4900.2	5243.2	5610.2	6002.9	6423.1	6872.7	7353.8	7877.0
<b>Total Rice</b>	<b>24600.0</b>	<b>25826.1</b>	<b>27545.8</b>	<b>31600.0</b>	<b>32220.0</b>	<b>32833.6</b>	<b>33625.6</b>	<b>34421.1</b>	<b>35285.9</b>	<b>36226.2</b>	<b>37248.8</b>	<b>38360.9</b>	<b>39570.9</b>	<b>40877.0</b>
<b>Minor Crops</b>														
Labor	4500.0	4500.0	4500.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0
Seeds	400.0	400.0	400.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0
Chemical products	1100.0	1403.9	1885.6	1500.0	1650.0	1815.0	1996.5	2196.2	2415.8	2657.3	2923.1	3215.4	3536.9	3907.0
Other	1750.0	2078.4	2468.5	2000.0	2140.0	2289.8	2450.1	2621.6	2805.1	3001.5	3211.6	3436.4	3676.9	3943.1
<b>Total Minor Crops</b>	<b>7750.0</b>	<b>8382.4</b>	<b>9254.2</b>	<b>16300.0</b>	<b>16590.0</b>	<b>16904.8</b>	<b>17246.6</b>	<b>17617.7</b>	<b>18020.9</b>	<b>18458.8</b>	<b>18934.6</b>	<b>19451.8</b>	<b>20013.0</b>	<b>20620.1</b>
<b>Cacao</b>														
Labor				1400.0	4500.0	5400.0	5400.0	5400.0	5400.0	5400.0	5400.0	5400.0	5400.0	5400.0
Chemical products				2000.0	2200.0	2420.0	2662.0	2920.2	3221.0	3543.1	3897.4	4287.2	4715.9	5190.0
Other				1500.0	1605.0	1717.4	1837.6	1966.2	2103.8	2251.1	2408.7	2577.3	2757.7	2950.0
<b>Total Cacao</b>				<b>4900.0</b>	<b>8305.0</b>	<b>9537.4</b>	<b>9899.6</b>	<b>10294.4</b>	<b>10724.8</b>	<b>11194.2</b>	<b>11706.1</b>	<b>12264.5</b>	<b>12873.6</b>	<b>13540.0</b>
<b>Achiote</b>														
Labor				2400.0	6000.0	7200.0	7200.0	7200.0	7200.0	7200.0	7200.0	7200.0	7200.0	7200.0
Chemical products				3000.0	4400.0	4840.0	5324.0	5856.4	6442.0	7086.2	7794.9	8574.4	9431.6	10378.0
Other				3000.0	3210.0	3434.7	3675.1	3932.4	4207.7	4502.2	4817.3	5154.6	5515.4	5900.0
<b>Total Achiote</b>				<b>8400.0</b>	<b>15610.0</b>	<b>15474.7</b>	<b>16199.1</b>	<b>16988.8</b>	<b>17849.7</b>	<b>18788.4</b>	<b>19812.2</b>	<b>20920.9</b>	<b>22147.2</b>	<b>23578.0</b>
<b>Macadamia</b>														
Labor				1600.0	3000.0	3000.0	3000.0	4000.0	8000.0	12000.0	16000.0	16000.0	16000.0	16000.0
Chemical products				2000.0	3300.0	3630.0	3993.0	4392.3	4831.5	5314.7	5846.2	6430.8	7073.8	7773.0
Other				1000.0	1070.0	1144.9	1225.0	1347.5	1617.1	1940.5	2328.6	2491.6	2666.0	2850.0
<b>Total Macadamia</b>				<b>4600.0</b>	<b>7370.0</b>	<b>7774.9</b>	<b>8218.0</b>	<b>9739.8</b>	<b>14448.6</b>	<b>19255.2</b>	<b>24174.7</b>	<b>24922.3</b>	<b>25739.8</b>	<b>27523.0</b>
<b>Total Operating Expenditure</b>	<b>138500.0</b>	<b>104931.4</b>	<b>114117.5</b>	<b>117450.4</b>	<b>131140.5</b>	<b>137166.5</b>	<b>141461.8</b>	<b>147200.3</b>	<b>156312.7</b>	<b>165911.8</b>	<b>176047.8</b>	<b>182474.5</b>	<b>189475.7</b>	<b>197475.7</b>

a/ Price of labor 200 Intis per day.

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 Table 3  
 Investment in Average Plot  
 Tacache/Aucayacu  
 (1988 Intis)  
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Type of Investment	Year			Total
	1	2	3	
Labor to rehabilitate land				
Banana	6400.0			6400.0
Achiote	15400.0			15400.0
Cacao	14400.0			14400.0
Macadamia	8400.0			8400.0
Plants				
Macadamia	14000.0			
Equipment	10000.0		10000.0	20000.0
Construction		15000.0	15000.0	30000.0
Total	68600.0	15000.0	25000.0	94600.0

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Table 4  
 Farm Budget of Average Plot  
 Tocache/Aucayacu  
 (1988 Intis)

Items	Local Farmer									
	1	2	3	4	5	6	7	8	9	10
<b>Revenues</b>										
Value of Production	118850.0	277355.3	277355.3	277355.3	277355.3	354570.4	354570.4	354570.4	354570.4	354570.4
Other Income a/	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0
Total Revenues	124850.0	283355.2	283355.2	283355.2	283355.25	360570.36	360570.36	354774.36	360570.36	360570.36
<b>Expenditures</b>										
Operating Expenditures	138500.0	104981.4	104981.4	104981.4	104981.4	114117.5	114117.5	114117.5	114117.5	114117.5
Other (family labor adjustment)	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
Total Expenditures	78500.0	44981.4	44981.4	44981.4	44981.4	54117.5	54117.5	54117.5	54117.5	54117.5
Gross Family Income	46350.0	238373.9	238373.9	238373.9	238373.9	306452.9	306452.9	306452.9	306452.9	306452.9
Less: Consumption market basket	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0
Net surplus	-73650.0	115373.9	115373.9	115373.9	115373.9	183452.9	183452.9	183452.9	183452.9	183452.9

IRR of net surplus: 158.67%

a/ Livestock sales.

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The first year of operating expenditures is the highest because it requires large labor outlays to prepare the land and plant the coca trees as well as other crops. Costs fall during the second year, and increase steadily but moderately thereafter. The cost increases are driven by a steady rise in the relative prices of chemical inputs and "other" costs in relation to labor costs which are assumed to remain constant. The yearly increases are estimated to be 10% per year for chemicals and 7% per year for the "other" category. The expense category includes an adjustment that accounts for family labor. Financial expenses are reduced by the cost equivalent of 300 man hours of labor per year.

The difference between total revenues and total expenditures is gross farm income. This figure is further adjusted to account for that portion of which is consumed (food, clothing, medicines, etc.) The figure of I/ 120,000 per year, or double the family wage, was somewhat arbitrarily chosen as representative of the minimum consumption basket required per family in that area. This figure includes the imputed value of farm output consumed by the farmer. In U.S. dollar terms, this is equivalent to about \$1,400 using the parity exchange prevalent at mid-1988. This figure is projected to increase 2.5% per year.

The resulting net flow corresponds to the cash income surplus that attracts the farmer to the crop. During the first year, this net flow is negative, representing the initial financing needs of the farmer. From the second year on, the net flow becomes positive and increases steadily. The internal rate of return associated with this flow over the ten year period is about 159 percent. It is thus clear, why coca cultivation is an attractive source of income. In fact, those returns may be sufficient to cover some of the risks associated with the illegality of coca cultivation.

#### b. Profitability of the Participant Farmer

The profitability of the farmer who participates in the project was estimated with the same methodology used in the previous section. The participant farmer is expected to adopt a new cropping pattern that includes changes in plot sizes and new crops, and to adopt better production technology. For example, the areas planted for maize and "other" crops are expected to fall to accommodate new crops (cacao, achiote, and macadamia nuts.) The productivities of old crops are also expected to increase, reflecting more intensive use of fertilizers and insecticides, and better production techniques. In projecting the productivities of old and new crops, care was taken to use realistic estimates. For new crops, productivities are well below the levels reached in experimental plots, for old crops, productivities are also below the most productive farms in the region.

Table 5 shows the farm budget for this case. Gross revenues in the first year are slightly lower than the corresponding figure for the coca farmer. Subsequently, the gap increases but then decreases until the ninth year, when participant farmer earnings exceed the coca farmer's. Earnings from the sale of livestock are projected to double because the

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Table 5  
Farm budget of Average Plot  
Tocache/Rucayacu  
(1988 Intis)

Item	Project Participant Farmer									
	1	2	3	4	5	6	7	8	9	10
	Income									
Value of Production										
Crops	109380.0	151345.0	175617.1	203385.2	227829.5	253909.3	276502.6	309978.7	372754.8	445721.5
Other income	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0
Total Revenues	121380.0	163345.0	187617.1	215385.2	239829.5	265909.3	288502.6	321978.7	384754.8	458721.5
	Expenses									
Investment										
Operating Expenditures	68600.0	15000.0	25000.0							
Other (Family labor adjustments)	117450.4	131140.5	137165.5	141461.8	147200.3	156312.7	165911.8	176047.8	182474.5	189475.7
Total Expenditures	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
	126050.4	86140.5	102166.5	81461.8	87200.3	96312.7	105911.8	116047.8	122474.5	129475.7
	Net income without financing									
Gross family income	-4670.4	77204.5	85450.6	133923.4	152629.3	169596.5	182590.8	205930.9	262230.3	329245.8
Net surplus after consumption	-124670.4	-45795.5	-37543.4	10923.4	29629.3	46596.5	59590.8	82930.9	139280.3	206245.8
	Financing Flows									
Flows										
Debt Service	125000.0	57000.0	54000.0	11000.0						
Net flow	8333.3	12133.3	15733.3	16466.7	16466.7	16466.7	16466.7	16466.7	16466.7	16466.7
	125000.0	48666.7	41866.7	-4733.3	-16466.7	-16466.7	-16466.7	-16466.7	-16466.7	-16466.7
	Net income after financing flows									
Net Income	329.6	2871.2	4317.2	6190.1	13162.6	30129.9	43124.1	66464.2	122813.7	189779.1
Minimum Consumption	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0
IRR of farmer that participates in project =	16.42									
IRR of farmer that returns to coca =	158.72									

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Table 6  
Farm Budget of Average Plot  
Tocache/Aucayacu  
(1988 Intis)

Items	Eligible Non-Participant Farmer									
	1	2	3	4	5	6	7	8	9	10
<b>Revenues</b>										
Value of Production	108350.0	106955.3	106955.3	106955.3	106955.3	114570.4	114570.4	114570.4	114570.4	114570.4
Other income	8000.0	8000.0	8000.0	8000.0	8000.0	8000.0	8000.0	8000.0	8000.0	8000.0
<b>Expenditures</b>										
Operating Costs	69500.0	73849.3	73849.3	73849.3	73849.3	79904.2	79904.2	79904.2	79904.2	79904.2
Other (family labor adjustment)	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
Total Expenditures	9500.0	13849.3	13849.3	13849.3	13849.3	19904.2	19904.2	19904.2	19904.2	19904.2
Net Income	104850.0	99106.0	99106.0	99106.0	99106.0	100666.2	100666.2	100666.2	100666.2	100666.2
Less: Consumption market basket	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0
Net Income after consumption	-15150.0	-23894.0	-23894.0	-23894.0	-23894.0	-22333.8	-22333.8	-22333.8	-22333.8	-22333.8

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participant farmer is expected to dedicate more time to the farm's livestock. Gross earnings for the participant farmer are projected treble over the period.

The costs of the participant farmer are much higher than the costs of the coca farmer on two counts. Operating costs reflect more intensive utilization of labor, and chemical products. These costs are also adjusted by the same adjustment factors for imported input, and the "other" category used in the previous section. Investment costs - shown in Table 3 - are projected to be higher and more diversified. During the first year alone, participant farmer costs are 60% higher than the corresponding value for the coca farmer. In subsequent years, participant farmer costs are between 90 and 125% higher. As in the case of the coca farmer, labor costs are reduced by the equivalent of 300 labor days of family labor.

The gross family income is also adjusted to reflect the same consumption level imputed to the coca farmer. The resulting net income flow is the comparable surplus estimated for the coca farmer. During the first three years the flow is negative, reflecting the financing needs of the farmer that decides to participate in the project. The internal rate of return of this flow was estimated to be 16.4% for the ten year period. A simple flow exercise shows that the farmer can easily service long term debt acquired at zero interest rates to meet cash needs during the first years. It should be noted that almost all agricultural lending in Peru currently takes place at highly negative real interest rates.

#### c. Profitability of the Eligible but Non-participant Farmer.

The profitability of the eligible but non-participant farmer was estimated using the same data for non-coca crops used to estimate the profitability of the coca farmer. These figures are believed to be a close approximation of the likely outcome for a farmer who leaves coca, but receives no project assistance. Table 6 shows the resulting farm budget.

Gross farm income is positive, but relatively constant over the ten year period. Revenues and expenditures which are constant for two periods (years 2 to 4, and 5 to 10) correspond to averages for the period. Moreover, when this income is adjusted for the minimum consumption basket, the resulting net flow becomes negative throughout the period. Consequently, no internal rate of return can be estimated for the corresponding stream. The implication is that a farmer would have to reduce his/her minimum consumption basket an average 18% per year, when a decision is made to stay out of coca cultivation without receiving project assistance.

#### 4. Analysis of the Tingo Maria/La Divisoria Plot

The higher altitude agronomic conditions of the Tingo Maria/La Divisoria area require different cropping patterns than those prevalent in the lower altitudes of the valley. Permanent crops are more appropriate, particularly citrus and coffee. The only crops shared with the lower altitudes are maize, bananas and "other" crops, however, some of the areas

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planted for these crops differ between regions. Tables 7 through 9 present a detailed description of the sources of income, investment, and operating costs needed to develop the three decision scenarios for the farmer in the Tingo Maria area. The format of the tables is the same one used for the Tocache/Aucayacu example. The left-most block of data in tables 7 and 8 correspond to the coca farmer. This block of data is also used to develop the farm budget for the eligible but non-participant farmer. And the right-most block of data corresponds to the participant farmer.

a. Profitability of the coca farmer

Since the coca farmer in the Tingo Maria/La Divisoria region differs little from the farmer in the Tocache/Aucayacu region, and altitude does not significantly affect the yield of the coca plant, the same overall productivity and price assumptions will be applied in this part of the analysis. On the cost side, the same price trends for inputs will be utilized, as well as the adjustment for family labor.

Table 10 shows the farm budget for the coca farmer. As in the case of the Tocache/Aucayacu area, total farm earnings are substantial, they double the second year, and treble by the end of the 10 year period. Coca earnings move from 9% of total earnings during the first year, to about 69% during the tenth year. On the cost side, the first year carries the highest costs on account of the investment needed to start growing coca, but decreases and stabilizes thereafter.

Gross family income (total revenue minus total expenditures) is also adjusted for minimum consumption basket. The resulting net surplus corresponds to the cash income that attracts the farmer to the crop. The internal rate of return associated with this stream of values is about 174 percent. Bearing in mind that coca productivity and price assumptions are conservative, this profitability rate can be interpreted to represent a "floor" value to the farmer.

b. Profitability of the participant farmer

The participant farmer in the Tingo Maria area is expected to adopt new production techniques for the legal crops that he/she is expected to keep (maize, bananas, citrics, coffee and other minor crops,) and to reduce the area planted for some of them. The farmer is also expected to plant new permanent crops (achiote and cardamom) with project assistance. As in the Tocache/Aucayacu case, crop productivity growth projected for the 10 year period is below yields achieved in test plots and the most productive farms in the region.

Table 11 shows the farm budget of the participant farmer. Gross revenues during the first year are slightly below the corresponding revenues of the coca farmer. During years 2 through 4 revenues increase an average of 32% per year, followed by a period of less robust

Table 7  
Agricultural Income  
Tingo Maria/La Divisoria

Land Utilization (Has.)	Coca Farmer			Project Participant Farmers									
	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Banana	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Citrics	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Other	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Coffee	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Achiote	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cardamom	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Living area	0.1	0.1	0.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Idle Land	3.9	3.9	3.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	10.0	10.0	10.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Productivity (Kg/Has.)	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	35.0	568.0	800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	900.0	900.0	900.0	1500.0	1800.0	2000.0	2200.0	2200.0	2200.0	2200.0	2200.0	2200.0	2200.0
Banana	5000.0	5000.0	5000.0	6000.0	6500.0	7000.0	7200.0	7300.0	7500.0	7500.0	7800.0	7800.0	8000.0
Citrics	4000.0	4000.0	4000.0	5000.0	6000.0	6000.0	7000.0	8000.0	9000.0	10000.0	11000.0	12000.0	13000.0
Other	1500.0	1500.0	1500.0	2000.0	2200.0	2300.0	2400.0	2500.0	2600.0	2700.0	2800.0	2900.0	3000.0
Coffee	200.0	200.0	200.0	200.0	300.0	400.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Achiote	0.0	0.0	0.0	0.0	500.0	600.0	800.0	800.0	850.0	900.0	950.0	1000.0	1100.0
Cardamom	0.0	0.0	0.0	0.0	0.0	100.0	300.0	350.0	400.0	500.0	500.0	500.0	500.0
Production (Kg)	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	35.0	568.0	800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	900.0	900.0	900.0	750.0	900.0	1000.0	1100.0	1100.0	1100.0	1100.0	1100.0	1100.0	1100.0
Banana	5000.0	5000.0	5000.0	6000.0	6500.0	7000.0	7200.0	7300.0	7500.0	7500.0	7800.0	7800.0	8000.0
Citrics	4000.0	4000.0	4000.0	5000.0	6000.0	6000.0	7000.0	8000.0	9000.0	10000.0	11000.0	12000.0	13000.0
Other	2250.0	2250.0	2250.0	2000.0	2200.0	2300.0	2400.0	2500.0	2600.0	2700.0	2800.0	2900.0	3000.0
Coffee	100.0	100.0	100.0	100.0	150.0	200.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
Achiote	0.0	0.0	0.0	0.0	500.0	600.0	800.0	800.0	850.0	900.0	950.0	1000.0	1100.0
Cardamom	0.0	0.0	0.0	0.0	0.0	100.0	300.0	350.0	400.0	500.0	500.0	500.0	500.0
Farm gate prices (1988 Intis/Kg)	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	300.0	300.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	13.0	12.3	13.3	13.0	12.5	12.0	12.2	12.5	12.7	13.0	13.2	13.5	13.8
Banana	4.0	4.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5
Citrics	4.0	4.1	4.3	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.4
Other	20.0	20.5	21.4	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.7	21.9
Coffee	45.0	46.1	48.3	45.0	45.5	45.9	46.4	46.8	47.3	47.8	48.2	48.7	49.2
Achiote	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Cardamom	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Value of Production (1988 Intis)	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10
Coca	10500.0	170400.0	240000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maize	11700.0	11075.6	11928.7	9750.0	11250.0	12000.0	13464.0	13733.3	14007.9	14288.1	14573.9	14855.3	15162.7
Banana	20000.0	20000.0	22500.0	24000.0	25000.0	28000.0	28800.0	29200.0	33750.0	33750.0	35100.0	35100.0	36000.0
Citrics	16000.0	16404.0	17155.9	20000.0	24240.0	24482.4	28848.4	33299.3	37836.4	42460.8	47174.0	51977.1	56871.6
Other	45000.0	46136.3	48250.9	40000.0	44440.0	46924.6	49454.4	52050.2	54652.5	57322.1	60039.6	62805.7	65621.1
Coffee	4500.0	4613.6	4825.1	4500.0	6817.5	9180.9	11530.9	11705.8	11823.9	11942.1	12061.5	12182.1	12304.0
Achiote	0.0	0.0	0.0	0.0	30000.0	36000.0	48000.0	48000.0	48000.0	51000.0	54000.0	60000.0	66000.0
Cardamom	0.0	0.0	0.0	0.0	0.0	20000.0	60000.0	70000.0	80000.0	100000.0	100000.0	100000.0	100000.0
TOTAL	107700.0	268629.5	344660.6	98250.0	142747.5	176587.9	240157.8	257969.6	283070.7	313763.1	325948.9	336930.3	351959.4

Table 8  
Operating Costs in Average Plot  
Tingo Maria/La Divisoria  
(1988 Intis)

Product and Expenditures	Coca Farmer			Project Participant Farmer										
	1	2-5	5-10	1	2	3	4	5	6	7	8	9	10	
<b>Crops</b>														
Coca														
Labor	40000.0	20000.0	20000.0											
Plant	20000.0	0.0	0.0											
Chemical products	5000.0	6381.4	8571.0											
Miscellaneous	4000.0	4750.7	5642.4											
<b>Total Coca</b>	<b>69000.0</b>	<b>31132.1</b>	<b>34213.3</b>											
<b>Maize</b>														
Labor	6800.0	6800.0	6800.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0	7300.0
Seeds	266.7	266.7	266.7	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Chemical Products	1066.7	1361.4	1828.5	816.8	939.3	1090.2	1242.3	1420.6	1571.5	1723.6	1901.5	2091.6	2300.8	2500.0
Miscellaneous	1333.3	1583.6	1880.8	1000.0	1070.0	1144.9	1225.0	1310.0	1402.6	1500.7	1605.8	1718.2	1838.5	1958.5
<b>Total Maize</b>	<b>9466.7</b>	<b>10011.6</b>	<b>10775.9</b>	<b>9316.8</b>	<b>9509.3</b>	<b>9725.1</b>	<b>9967.3</b>	<b>10239.4</b>	<b>10474.0</b>	<b>10729.4</b>	<b>11007.3</b>	<b>11309.8</b>	<b>11639.3</b>	<b>11988.5</b>
<b>Banana</b>														
Labor	10000.0	10000.0	10000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0	14000.0
Plants	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
Chemical Products	2000.0	2552.6	3428.4	3000.0	3300.0	3630.0	3993.0	4392.3	4831.5	5314.7	5846.2	6430.8	7073.8	7773.8
Miscellaneous	3000.0	3563.1	4231.8	4166.7	4458.3	4770.4	5104.3	5461.7	5844.0	6253.0	6690.8	7159.1	7660.2	8193.8
<b>Total Banana</b>	<b>15300.0</b>	<b>16415.6</b>	<b>17960.2</b>	<b>21466.7</b>	<b>22058.3</b>	<b>22700.4</b>	<b>23397.3</b>	<b>24154.0</b>	<b>24975.5</b>	<b>25867.7</b>	<b>26836.9</b>	<b>27899.9</b>	<b>29034.1</b>	<b>30292.0</b>
<b>Citrics</b>														
Labor	9300.0	9800.0	9900.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0
Chemical Products	2000.0	2552.6	3428.4	5000.0	5500.0	6050.0	6655.0	7320.5	8052.6	8857.8	9743.6	10717.9	11789.7	12969.7
Miscellaneous	3000.0	3563.1	4231.8	5000.0	5350.0	5724.5	6125.2	6554.0	7012.6	7503.7	8028.9	8590.9	9192.3	9842.3
<b>Total Citrics</b>	<b>14800.0</b>	<b>15915.6</b>	<b>17460.2</b>	<b>22000.0</b>	<b>22850.0</b>	<b>23774.5</b>	<b>24780.2</b>	<b>25874.5</b>	<b>27065.3</b>	<b>28361.5</b>	<b>29772.5</b>	<b>31308.9</b>	<b>32992.0</b>	<b>34814.0</b>
<b>Other</b>														
Labor	6750.0	6750.0	6750.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0	24000.0
Seeds	600.0	600.0	600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0
Chemical Products	1650.0	2105.9	2823.4	3000.0	3300.0	3630.0	3993.0	4392.3	4831.5	5314.7	5846.2	6430.8	7073.8	7773.8
Miscellaneous	2625.0	3117.7	3702.8	4000.0	4280.0	4579.6	4900.2	5243.2	5610.2	6002.9	6423.1	6872.7	7353.8	7867.8
<b>Total Other</b>	<b>11625.0</b>	<b>12573.5</b>	<b>13881.2</b>	<b>32600.0</b>	<b>33180.0</b>	<b>33809.6</b>	<b>34493.2</b>	<b>35235.5</b>	<b>36041.7</b>	<b>36917.6</b>	<b>37869.3</b>	<b>38903.5</b>	<b>40027.7</b>	<b>41248.4</b>
<b>Coffee</b>														
Labor	1400.0	1400.0	1400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0
Chemical Products	1500.0	1914.4	2571.3	2000.0	2200.0	2420.0	2662.0	2928.2	3221.0	3543.1	3897.4	4287.2	4715.3	5190.0
Miscellaneous	1000.0	1187.7	1410.6	1500.0	1605.0	1717.4	1837.6	1966.2	2103.8	2251.1	2408.7	2577.3	2757.7	2950.0
<b>Total Coffee</b>	<b>3900.0</b>	<b>4502.1</b>	<b>5381.9</b>	<b>5900.0</b>	<b>6205.0</b>	<b>6537.4</b>	<b>6899.6</b>	<b>7294.4</b>	<b>7724.8</b>	<b>8194.2</b>	<b>8706.1</b>	<b>9264.5</b>	<b>9873.6</b>	<b>10530.0</b>
<b>Achiote</b>														
Labor	2400.0	6000.0	7200.0	3000.0	4400.0	4840.0	5324.0	5856.4	6442.0	7036.2	7734.9	8544.4	9471.8	10521.8
Chemical Products	3000.0	3210.0	3434.7	3000.0	3210.0	3434.7	3675.1	3932.4	4207.7	4502.2	4817.3	5154.6	5515.4	5900.0
Miscellaneous	8400.0	13610.0	15474.7	8400.0	13610.0	15474.7	16199.1	16988.8	17849.7	18788.4	19812.2	20928.9	22147.2	23460.0
<b>Total Achiote</b>	<b>8400.0</b>	<b>13610.0</b>	<b>15474.7</b>	<b>8400.0</b>	<b>13610.0</b>	<b>15474.7</b>	<b>16199.1</b>	<b>16988.8</b>	<b>17849.7</b>	<b>18788.4</b>	<b>19812.2</b>	<b>20928.9</b>	<b>22147.2</b>	<b>23460.0</b>
<b>Cardamon</b>														
Labor	14000.0	12000.0	10000.0	14000.0	12000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0
Chemical Products	5000.0	3300.0	3630.0	5000.0	3300.0	3630.0	3993.0	4392.3	4831.5	5314.7	5846.2	6430.8	7073.8	7773.8
Miscellaneous	5000.0	5350.0	5724.5	5000.0	5350.0	5724.5	6125.2	6573.7	7085.2	7670.3	8329.9	9069.9	9899.9	10829.9
<b>Total Cardamon</b>	<b>24000.0</b>	<b>20650.0</b>	<b>19354.5</b>	<b>24000.0</b>	<b>20650.0</b>	<b>19354.5</b>	<b>20118.2</b>	<b>21130.0</b>	<b>22916.8</b>	<b>25017.0</b>	<b>27489.0</b>	<b>29888.6</b>	<b>32403.7</b>	<b>35000.0</b>
<b>Total Operating Expenditures</b>	<b>124091.7</b>	<b>90550.6</b>	<b>99672.7</b>	<b>123693.5</b>	<b>128062.7</b>	<b>131376.2</b>	<b>135855.0</b>	<b>140916.5</b>	<b>147047.9</b>	<b>153155.8</b>	<b>161493.2</b>	<b>168494.0</b>	<b>176107.5</b>	<b>184000.0</b>

\*Price of labor 200 Intis per day.  
14-Jul-88 UHV

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Table 9  
Investment in Average Plot  
Tingo Maria/La Divisoria  
(1988 Intis)

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Type of Investment	Year			Total
	1	2	3	
Labor to rehabilitate land				
Banana	4266.7			4266.7
Achiote	15400.0			15400.0
Equipment	10000.0		10000.0	20000.0
Construction		15000.0	15000.0	30000.0
Total	29666.7	15000.0	25000.0	69666.7

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Table 10  
 Farm Budget of Average Plot  
 Tingo Maria/La Divisoria  
 (1988 Intis)

Items	Local farmer									
	1	2	3	4	5	6	7	8	9	10
<b>Revenue</b>										
Value of Production	197700.0	268629.5	268629.5	268629.5	268629.5	344660.6	344660.6	344660.6	344660.6	344660.6
Other income a/	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0
<b>Total Revenues</b>	<b>113700.0</b>	<b>274629.5</b>	<b>274629.5</b>	<b>274629.5</b>	<b>274629.5</b>	<b>350660.6</b>	<b>350660.6</b>	<b>350660.6</b>	<b>350660.6</b>	<b>350660.6</b>
<b>Expenditures</b>										
Operating Expenditures	124091.7	90550.6	90550.6	90550.6	90550.6	99672.7	99672.7	99672.7	99672.7	99672.7
Other (family labor adjustment)	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
<b>Total Expenditures</b>	<b>64091.7</b>	<b>30550.6</b>	<b>30550.6</b>	<b>30550.6</b>	<b>30550.6</b>	<b>39672.7</b>	<b>39672.7</b>	<b>39672.7</b>	<b>39672.7</b>	<b>39672.7</b>
<b>Gross Family Income</b>	<b>49608.3</b>	<b>244079.0</b>	<b>244079.0</b>	<b>244079.0</b>	<b>244079.0</b>	<b>310987.8</b>	<b>310987.8</b>	<b>310987.8</b>	<b>310987.8</b>	<b>310987.8</b>
Less: Consumption market basket	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0
<b>Net Surplus</b>	<b>-70391.7</b>	<b>121079.0</b>	<b>121079.0</b>	<b>121079.0</b>	<b>121079.0</b>	<b>187987.8</b>	<b>187987.8</b>	<b>187987.8</b>	<b>187987.8</b>	<b>187987.8</b>

IRR of net surplus: 173.67%

a/ Livestock sales.

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Table 11  
Farm Budget of Average Plot  
Tingo Maria/La Divisoria  
(1988 Intis)

Item	Project Participant Farmer									
	1	2	3	4	5	6	7	8	9	10
	Income									
Value of Production										
Crops	98250.0	142747.5	176587.9	240157.8	257969.6	283070.7	313763.1	325948.9	336930.3	351959.4
Other income	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0	12000.0
TOTAL REVENUES	110250.0	154747.5	188587.9	252157.8	269969.6	295070.7	325763.1	337948.9	348930.3	363959.4
	Expenses									
Investment	29566.7	15000.0	25000.0							
Operating Expenditures	123683.5	128062.7	131376.2	135855.0	140916.5	147047.9	153875.8	161493.2	168494.0	176107.5
Other (Family labor adjustments)	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
TOTAL EXPENDITURES	93350.1	83062.7	96376.2	75855.0	60916.5	97047.9	93875.8	101493.2	108494.0	116107.5
	Net income without financing									
Gross farm income	16839.9	71684.8	92211.7	176302.8	185053.1	208022.8	231897.3	236455.7	240436.3	247851.8
Net Surplus	-103100.1	-51315.2	-30788.3	53302.8	66053.1	85022.8	106897.3	113455.7	117436.3	124851.8
	Financing Flows									
Inflows	115000.0	60000.0	43000.0	0.0						
Debt Service		7666.7	11666.7	14533.3	14533.3	14533.3	14533.3	14533.3	14533.3	14533.3
Net flow	115000.0	52333.3	31333.3	-14533.3	-14533.3	-14533.3	-14533.3	-14533.3	-14533.3	-14533.3
	Net income after financing flows									
Net Income	11839.9	1018.2	545.0	38769.5	51519.7	70489.4	94353.9	98922.4	102902.9	110318.5
Minimum consumption basket	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0

IRR of farmer that participates in project = 26.02  
IRR of farmer that returns to coca = 173.72

14-Jul-88

Tasa de crecimiento anual canasta familiar 2.52

growth with rates averaging 5% per year. Overall revenues treble between the first and the tenth year, reaching a gross income level comparable to the coca farmer's.

On the cost side, operating expenditures climb steadily reflecting the same cost factors discussed for the Tocache/Aucayacu plot. These expenditures also reflect the family labor adjustment, and the investment budget for the participant farmer shown in Table 9. Gross family income is also adjusted for the minimum consumption basket, leaving a net cash surplus stream that is negative the first three years - the farmers financing requirements. The internal rate of return of the cash surplus stream is estimated to be 26 percent. A cash flow exercise also shows that this farmer can easily service zero real interest rate debt needed to meet his cash shortfall the first three years of the project.

c. Profitability of the eligible but non-participant farmer

Table 12 shows the farm budget of the eligible but non-participant farmer. This budget was estimated using the same methodology for the corresponding farmer in the previous section. Yearly total revenue is on average about 10% lower than its counterpart. However, total operating expenditures are about 20 lower than its counterpart, resulting in a higher gross farm income for the farmer in the Tingo Maria/La Divisoria region. Consequently, when this figure is adjusted for the minimum consumptions basket, the negative yearly cash flow suggests that this farmer would have to reduce his/her standard of living an average of 14 percent in order to cultivate only legal crops.

5. Conclusions

The foregoing analysis attempted to quantify the project's impact on a farmer's options after his/her plot has been eradicated. This approach, instead of the traditional economic analysis for agricultural projects was undertaken for several reasons. First, the traditional economic analysis would require imputing the "social" value of coca production---a theoretical exercise that would not assist in determining whether farmers would participate in the project---an important determinant of the success of the project. Second, the previous economic analysis did not approach the project from the farmer's perspective. And third, this approach captures the integral nature of eradication and project activities.

The analysis clearly shows that on a profitability basis alone, there is a strong incentive for eradicated farmers to return to coca cultivation. It is quite unlikely that any reasonably designed project activity can generate the kind of profitability needed to compete with coca cultivation. What the analysis does not, and cannot show, is whether the profitability of planting coca will be sufficiently high to cover the "risk" that farmers associate with returning to illegality of growing coca after eradication. The perception of that risk is a function of unquantifiable factors such as the intensity and effectiveness of eradication programs, legal sanctions associated with coca cultivation, etc.

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The analysis also shows that project activities make a significant difference on the farmer's options after eradication. Whereas without the project the return to legality implies a substantial, and sustained, reduction in standard of living, the project offers the possibility of sustaining a minimum standard of living, and obtaining a respectable cash surplus---all within a legal framework. The availability of a viable alternative to a reduction in the eradicated farmer's standard of living, and the incentive it provides to returning to legality provides a strong justification to implement the project.

Table 12  
 Farm Budget of Average Plot  
 (Ingo Maria  
 (1988 Intis)

Item	Eligible Non-Participant Farmer									
	1	2	3	4	5	6	7	8	9	10
<b>Revenues</b>										
Value of Production	97200.0	98229.5	98229.5	98229.5	98229.5	104660.6	104660.6	104660.6	104660.6	104660.6
Other Income	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0	6000.0
<b>Expenditures</b>										
Operating Costs	55091.7	59418.4	59418.4	59418.4	59418.4	65459.4	65459.4	65459.4	65459.4	65459.4
Other (family labor adjustment)	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0	-60000.0
Total Expenditures	-4908.3	-581.6	-581.6	-581.6	-581.6	5459.4	5459.4	5459.4	5459.4	5459.4
<b>Net Income</b>										
Less: Consumption market basket	120000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0	123000.0
Net Income after consumption	-11891.7	-18168.9	-18168.9	-18168.9	-18168.9	-17798.8	-17798.8	-17798.8	-17798.8	-17798.8

01-Jul-89

ANNEX I

GOP REQUEST FOR EXTENSION AND INCREASED FUNDING

INSTITUTO NACIONAL DE DESARROLLO

Lima, 22 SET. 1988

OFICIO N° 163 -88-INADE-5101

Señor  
WILLIAM A. BINNS  
Agencia para el Desarrollo  
Internacional-AID  
Presente.-

Tengo el agrado de dirigirme a usted, con el fin de solicitarle la ampliación del Convenio Perú-AID N° 527-T-077 por un período de 3 años.

De acuerdo a las conversaciones sostenidas con el Instituto Nacional de Planificación, Proyecto Especial Alto Huallaga y ustedes, la ampliación del Proyecto Alto Huallaga permitirá apoyar las actividades de Desarrollo de dicha área. Los componentes a ejecutar serían Extensión Agrícola, Investigación y Capacitación, Crédito Agrícola, Servicios a la Producción, Desarrollo de la Comunidad y Mantenimiento de Caminos.

Los recursos necesarios para financiar estos componentes son de \$ 7'300,000 dólares americanos, de los cuales \$ 2'800,000 corresponderían a Tesoro Público y \$ 4'500,000 a donación.

Sírvase encontrar adjunto un cuadro de fondos y desembolsos proyectados por año.

Por lo expuesto, agradeceré gestionar la ampliación del Convenio.

Aprovecho la oportunidad para expresarle los sentimientos de mi especial consideración.

Atentamente,



ING. JOSE REREA CACERES  
GERENTE DE PROYECTOS ESPECIALES

RECEIVED  
MAIL ROOM

88 SEP 22 AM 11:11

RECEIVED  
RECEPTION

88 SEP 22 AM 10:14

USAID/LIMA  
ANNEX I

Page 1 of 1 page

USAID/LIMA

*Am. date 9/30*

ACTION COPY

ACTION TAKEN:	<i>PP Supplement</i>
	<i>UHAD Project</i>
DATE:	<i>9/26</i>
INITIALS:	<i>W. Binns</i>

ACTION:	<i>SPO</i>
Info:	<i>OR</i>
	<i>CONT</i>
	<i>D</i>
	<i>RA</i>

ANNEX II

STATUTORY CHECKLIST AND FAA 611 CERTIFICATIONS

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Listed below are statutory criteria applicable to: (A) FAA funds generally; (B)(1) Development Assistance funds only; or (B)(2) the Economic Support Fund only.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

- |  |   |
|--|---|
| <p>1. <u>FY 1988 Continuing Resolution Sec. 526.</u><br/>Has the President certified to the Congress that the government of the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?</p>  | <p>No.</p>  |
| <p>2. <u>FAA Sec. 481(h).</u> (This provision applies to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct source of illicit drugs significantly affecting the United States, through which such drugs are transported, or through which significant sums of drug-related profits are laundered with the knowledge or complicity of the government), has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without</p> | <p>Yes, President certified in 1988 INCSR, that Peru complied with Subsections (a) and (b) and Congress has not disapproved such certification.</p> |

Congressional enactment, within 30 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (a) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, and to prevent and punish drug profit laundering in the country, or that (b) the vital national interests of the United States require the provision of such assistance?

3. Drug Act Sec. 2013. (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major illicit drug producing country" or "major drug-transit country" (as defined for the purpose of FAA Sec 481(h)), has the President submitted a report to Congress listing such country as one (a) which, as a matter of government policy, encourages or facilitates the production or distribution of illicit drugs; (b) in which any senior official of the government engages in, encourages, or facilitates the production or distribution of illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country?

No such report has been submitted to Congress on Peru.

4. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government? No.
5. FAA Sec. 620(e)(1). If assistance is to a government, has it (including any government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No. ENRON, owner of Belco's assets, and the GOP continue to work cooperatively to resolve the problem of compensation for expropriated assets. We are unaware that any U.S. citizen or entities have interests in those banks which may be affected by the GOP's law to nationalize the financial system.
6. FAA Secs. 620(a), 620(f), 620D; FY 1988 Continuing Resolution Sec. 512. Is recipient country a Communist country? If so, has the President determined that assistance to the country is vital to the security of the United States, that the recipient country is not controlled by the international Communist conspiracy, and that such assistance will further promote the independence of the recipient country from international communism? Will assistance be provided directly to Angola, Cambodia, Cuba, Iraq, Libya, Vietnam, South Yemen, Iran or Syria? Will assistance be provided to Afghanistan without a certification? No.
7. FAA Sec. 620(i). Has the country permitted, or failed to take adequate measures to prevent, damage or destruction by mob action of U.S. property? No.
8. FAA Sec. 620(l). Has the country failed to enter into an investment guaranty agreement with OPIC? • Yes. However, the GOP is officially discussing signing the agreement. The GOP had two issues with signing it which are now resolved; one with the location of general dispute settlement and the other concerned the Andean Pact. The GOP has made known its willingness to sign it now; however, the USC requires the Belco Co. expropriation matter be resolved first.

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9. FAA Sec. 620(o); Fishermen's Protective Act of 1967 (as amended) Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel because of fishing activities in international waters? (b) If so, has any deduction required by the Fishermen's Protective Act been made?

No.

10. FAA Sec. 620(q); FY 1988 Continuing Resolution Sec. 518. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the FY 1988 Continuing Resolution appropriates funds?

(a) As of 3/2/88, the GOP was more than 6 months in arrears on Loan No.527-W-082. Payment was due 9/1/87. (b) The GOP is under Brooke-Alexander sanctions which are triggered when the government is more than 12 months in arrears on Foreign Military Sales.

11. FAA Sec. 620(s). If contemplated assistance is development loan or to come from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment? (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

The GOP budget does not break out all the military budget items. It does show the budget for the Ministry of Defense and Ministry of Interior, but not what portion is military.

12. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?

No.

13. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? (Reference may be made to the Taking into Consideration memo.)
- The GOP is not in arrears in its obligatory payments of UN dues which must be paid in order to participate (vote) in the UN. Payments to the development assistance programs are voluntary, and thru 1985, the GOP paid \$250,000 per year. Since President Garcia was elected in mid-85, these voluntary payments have not been made. However, the GOP plans to pay a symbolic amount for 1986.
14. FAA Sec. 620A. Has the President determined that the recipient country grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism or otherwise supports international terrorism?
- No.
15. FY 1988 Continuing Resolution Sec. 576. Has the country been placed on the list provided for in Section 6(j) of the Export Administration Act of 1979 (currently Libya, Iran, South Yemen, Syria, Cuba, or North Korea)?
- No.
16. ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures?
- No.
17. FAA Sec. 666(b). Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA?
- No.
18. FAA Secs. 669, 670. Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.)
- No.
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19. FAA Sec. 670. If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device? No.
20. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. on Sept. 25 and 28, 1981, and did it fail to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.) Yes, however this has been taken into account in the Administrator's 1986 Taking Into Consideration Memorandum.
21. FY 1988 Continuing Resolution Sec. 528. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States? No.
22. FY 1988 Continuing Resolution Sec. 513. Has the duly elected Head of Government of the country been deposed by military coup or decree? If assistance has been terminated, has the President notified Congress that a democratically elected government has taken office prior to the resumption of assistance? No.
23. FY 1988 Continuing Resolution Sec. 543. Does the recipient country fully cooperate with the international refugee assistance organizations, the United States, and other governments in facilitating lasting solutions to refugee situations, including resettlement without respect to race, sex, religion, or national origin? Not applicable.

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

No.

FY 1988 Continuing Resolution Sec. 538. Has the President certified that use of DA funds by this country would violate any of the prohibitions against use of funds to pay for the performance of abortions as a method of family planning, to motivate or coerce any person to practice abortions, to pay for the performance of involuntary sterilization as a method of family planning, to coerce or provide any financial incentive to any person to undergo sterilizations, to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

No.

2. Economic Support Fund Country Criteria

FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest?

No.

FY 1988 Continuing Resolution Sec. 549. Has this country met its drug eradication targets or otherwise taken significant steps to halt illicit drug production or trafficking?

Yes.

5C(2) - PROJECT CHECKLIST /

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1988 Continuing Resolution Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified?

CN expired on 8/24/88.

2. FAA Sec. 611(a)(1). Prior to an obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

Yes.

3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?

Legislative action will basically be approval of PEAH annual budget. This has occurred in a timely manner each year of the project.

4. FAA Sec. 611(b); FY 1988 Continuing Resolution Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.) Not applicable.
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively? Yes.
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. No.
7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to:  
(a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. Yes.
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). Encouragement to U.S. private sector will take place thru project procurement.
9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars. The GOP contribution to the project will be 32% of project costs.

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10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release? Not applicable.
11. FY 1988 Continuing Resolution Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? No.
12. FY 1988 Continuing Resolution Sec. 553. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel? No.
13. FAA Sec. 119(q)(4)-(6). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas? No.

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? Not applicable.
15. FY 1988 Continuing Resolution. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? Not applicable.
16. FY Continuing Resolution Sec. 541. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? Not applicable.
17. FY 1988 Continuing Resolution Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? Yes. See State 271981.
18. FY Continuing Resolution Sec. 515. If deob/reob authority is sought to be exercised in the provision of assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified? Yes. See State 271981.
19. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). Yes.

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B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FY 1988 Continuing Resolution Sec. 552 (as interpreted by conference report). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?

No.

- b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and

See Beneficiaries Section of this PP Supplement. Also, Section on Other Donor Coordination.

insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

- c. FAA Secs. 103, 103A, 104, 105, 106, 120-21. Does the project fit the criteria for the source of funds (functional account) being used? Yes.
- d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? Yes.
- e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? Yes. GOP contribution to this project will total 32%.
- f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? Yes.

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

See Project Description Section of the PP Supplement for response.

h. FY 1988 Continuing Resolution Sec. 538. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?

No.

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?

No.

Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

No.

i. FY 1988 Continuing Resolution. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization?

No.

If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?

Not applicable.

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j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?

Yes.

k. FY 1988 Continuing Resolution. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 20 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)?

The existing T.A. contractor is a minority firm with a contract totalling \$1.8 million.

l. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared

Yes.

No.

or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) utilize the resources and abilities of all relevant U.S. government agencies?

- m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity?

Yes.

- n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? No.
- o. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development? Not applicable.
- p. FY 1988 Continuing Resolution If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in Not applicable.

accordance with the policies contained in section 102 of the FAA; (c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

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2. Development Assistance Project Criteria  
(Loans Only)

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest. Not applicable.
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest? Not applicable.
- c. FY 1988 Continuing Resolution. If for a loan to a private sector institution from funds made available to carry out the provisions of FAA Sections 103 through 106, will loan be provided, to the maximum extent practicable, at or near the prevailing interest rate paid on Treasury obligations of similar maturity at the time of obligating such funds? Not applicable.
- d. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities? Yes.

3. Economic Support Fund Project Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA? Yes.
  
- b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes? No.
  
- c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? Not applicable.

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5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1. FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes.
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? Yes.
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) Yes.
5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those No.

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countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)

6. FAA Sec. 603. Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates? No.
7. FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? Will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.
8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes.
9. FY 1988 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? Yes.
10. FY 1988 Continuing Resolution Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)? Yes.

B. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used? Not applicable.
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? Yes.
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP), or does assistance have the express approval of Congress? Yes.

C. OTHER RESTRICTIONS

1. FAA Sec. 122(b). If development loan repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter? Yes.
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? Yes.
3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? Yes.

4. Will arrangements preclude use of financing:

- a. FAA Sec. 104(f); FY 1987 Continuing Resolution Secs. 525, 538. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; or (4) to lobby for abortion? Yes.
- b. FAA Sec. 483. To make reimbursements, in the form of cash payments, to persons whose illicit drug crops are eradicated? Yes.
- c. FAA Sec. 620(g). To compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President? Yes.
- d. FAA Sec. 660. To provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes.
- e. FAA Sec. 662. For CIA activities? Yes.
- f. FAA Sec. 636(j). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes.

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- g. FY 1988 Continuing Resolution Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for prior or current military personnel? Yes.
- h. FY 1988 Continuing Resolution Sec. 505. To pay U.N. assessments, arrearages or dues? Yes.
- i. FY 1988 Continuing Resolution Sec. 506. To carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)? Yes.
- j. FY 1988 Continuing Resolution Sec. 510. To finance the export of nuclear equipment, fuel, or technology? Yes.
- k. FY 1988 Continuing Resolution Sec. 511. For the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? Yes.
- l. FY 1988 Continuing Resolution Sec. 516; State Authorization Sec. 109. To be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress? Yes.

PID APPROVAL CABLE (STATE 232415)

UNCLASSIFIED

STATE 232415

ANNEX III  
Page 1 of 1 page

ACTION: AID-2 INFO AMB DCM ECON

VZCZCPE0521  
RR RUEHPE  
DE RUEHC #2415 2012111  
ZNR UUUUU ZZH  
R 192107Z JUL 88  
FM SECSTATE WASHDC  
TO AMEMBASSY LIMA 0522  
BT  
UNCLAS STATE 232415

19-JUL-88

TOR: 21:06  
CV: 38197  
CHRG: AID  
DIST: AID  
ADD:

ACTION COPY	
ACTION TAKEN:	N.A.N.
DATE:	7/21
INITIALS:	BB

*du*  
*dat*  
*7/27*

AIDAC

E.O. 12356: N/A  
TAGS:

SUBJECT: UPPER HUALLAGA AREA DEVELOPMENT PID SUPPLEMENT  
(527-0244)

REF: (A) LIMA 08508, (B) STATE 203943

1. THIS IS TO CONFIRM THAT AA/LAC DELEGATION OF AUTHORITY FOR MISSION TO APPROVE PP SUPPLEMENT CONTAINED REF B INCLUDED AA/LAC APPROVAL OF A PACD EXTENSION FOR THE PROJECT FROM DECEMBER 31, 1988 TO SEPTEMBER 15, 1991 IF USAID APPROVES THE PP SUPPLEMENT AND IT REQUIRES SUCH AN EXTENSION.

2. WITH RESPECT TO THE QUESTION OF SOURCE OF FUNDS FOR THIS PROJECT RAISED PARA 2 REF A, AS YOU KNOW, THE OMB IMPOSED CEILING ON DEOBS-REOBS HAS THUS FAR PREVENTED US FROM UNDERTAKING DEOBS FROM THE SMALL HYDRO PROJECT OR CENTRAL SELVA FOR REOBLIGATION THIS FISCAL YEAR IN THE UPPER HUALLAGA PROJECT. IF THE OMB IMPOSED RESTRICTIONS ARE LIFTED, WE WILL MAKE EVERY ATTEMPT TO UTILIZE FUNDS UNDER SMALL HYDRO FOR THIS PROJECT. WHITEHEAD  
BT  
#2415

NNNN

UNCLASSIFIED

STATE 232415

ACTION: SPD (FILES)

INFO: DR  
PROG  
DD  
D

USAI/LIMA

20 JUL 20 1988

MAIL ROOM  
ATTENTION

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RESPONSE TO DEAC REVIEW GUIDANCE

This Annex is keyed to STATE 203943 (dtd. 24 June 1988, attached) which listed the AID/W guidelines resulting from the DAEC review of the Upper Huallaga Area Development PID supplement. (See adjoin attached Cable)

- I. (Paragraph 1 - Summary). Mission acknowledges Bureau's concerns about GOP eradication activities - particularly those employing herbicides - which may have adverse impact on the environment or the cultivation of other agricultural crops. The project staff will monitor the GOP efforts in this area and track all adverse consequences because they may impact on the Government of Peru's crop substitution efforts.
  - II. (Paragraph 2 - Baseline Data). The data of concern to AID/W is available on the Project site, but was not brought together and analyzed by PEAH. However, PEAH recently contracted with the Ministry of Agriculture, Sectoral Statistics Office (OSE), to gather and analyze data and statistics on part of the Upper Huallaga Valley (UHV). The raw data had been available but not utilized to date. The report is titled "Statistical Information on Santa Lucia and adjacent populated Centers." In fact, with Project funding, there has been a systematic gathering of information on the UHV by OSE but PEAH has chosen not acknowledge or transmit the information provided. The Mission will include, as a Condition Precedent, that PEAH must have data gathered in a systematic way that allows for both tracking of Project inputs and measurement of impact on beneficiaries income and productivity.
  - III. (Paragraph 3 - Project Complexity). The Project is necessarily complex because it is an area development effort that must be implemented in a broad geographic area under very trying security conditions. PEAH has become the most visible GOP presence from the national level and line ministries have been more than willing to defer to PEAH's implementation aggressiveness and funding lead in the deteriorating security situation. It will be a covenant in this amendment that the GOP acknowledges that the role of PEAH is limited and temporary and that the traditional line ministries must meet their responsibilities in the UHV. The covenant will probably ask for an action plan on a phased time table that has the ministries accepting implementation responsibilities and PEAH gradually being reduced in size and geographic expanse.
  - IV. (Paragraph 4 - Credit Component). The need for a credit component in the Project has never been questioned by the Project staff. At issue is whether a continuation of the Project component under only USAID funding will ensure that the target Project beneficiaries will be reached. As it now is viewed, the BAP is not willing to change its lending criteria to reach the target populations and AID could not obtain necessary data to confirm who the Project loan recipients actually were and how the funds were used. As the paper points out, the problem is not lack of funds to lend, but the ability to establish acceptable and effective lending requirements.
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- V. (Paragraph 5 - Funding Levels). The issue raised by AID/W on funding levels has been resolved. See State 232415 and the follow-up cables that advised of the lifting of OMB imposed restrictions/ceiling on DEOBS-REOBS.
- VI. (Paragraph 6 - Use of Herbicides). PP does make clear that AID funding is not available for herbicides and their use or non-use in the Project area is not needed for Project success. However, the deteriorating security situation in the Project area will have a definite adverse impact on the Project.

ANNEX IV. A

STATE 203943

145

ACTION: AID-2 INFO AMB DCM ECON

UNCLAS STATE 203943

24-JUL-88

TOR: 13:25  
CR: 33605  
CHRG: AID  
DIST: AID  
ADD:

VZCZCP0950

RR RUEHPE

DE RUEHC #3943 1761323

ZNR UUUUU ZZH

R 241319Z JUN 88

FM SECSTATE WASHDC

INFO AMEMBASSY LIMA 0107

BT

UNCLAS STATE 203943

ACTION: SPD (FIES)

INFO: DR  
PROG  
CONT  
D  
DD

AIDAC

E.O. 12356:6: N/A

TAGS:

SUBJECT: UPPER HUALLAGA AREA DEVELOPMENT PID SUPPLEMENT  
(NO, 527-0244)

1, SUMMARY: DAEC REVIEW OF SUBJECT PROJECT WAS HELD ON JUNE 6, WITH MISSION DIRECTOR LION AND JOHN WALL REPRESENTING THE MISSION, THE DAEC EXPRESSED CONCERN REGARDING THE MISSION'S PROPOSED STRATEGY SHIFT TO LINK PROJECT BENEFITS DIRECTLY TO NON-COCA OR EX-COCA PRODUCERS WHILE WE UNDERSTAND WHY THE GOP WILL BE CARRYING OUT HERBICIDE ERADICATION IN WHICH THE AID PROJECT IS NOT INVOLVED, THE BUREAU WISHES TO ENSURE THAT GOP ERADICATION ACTIVITIES (EITHER MANUAL OR AIRBORNE) DO NOT CAUSE ENVIRONMENTAL DAMAGE OR IMPED THE GROWTH OF ALTERNATIVE CROPS, THE MISSION WAS GIVEN THE AUTHORITY TO APPROVE THE PP SUPPLEMENT SUBJECT TO THE FOLLOWING GUIDANCE:

2, BASELINE DATA: THE PROJECT TO DATE DOES NOT SEEM TO HAVE ADEQUATE DATA ON NUMBER AND TYPE OF PROJECT BENEFICIARIES, LEVEL OF PROJECT INPUTS/CREDIT RECEIVED

BY FARMERS AND CONSEQUENTLY, PROJECT IMPACT CANNOT BE ADEQUATELY DETERMINED, THE PP SUPPLEMENT SHOULD ASSURE THAT THIS BASELINE DATA IS COLLECTED PRIOR TO DISBURSEMENT OF FUNDS UNDER THE SUPPLEMENT, INCLUDING IDENTIFYING THE NUMBER AND CHARACTERISTICS OF THE PROJECT'S TARGET GROUP, PROVIDING A MECHANISM FOR TRACKING THE PROJECT'S INPUTS/ BENEFITS TO THESE INDIVIDUALS, AND DETERMINING INCOME AND PRODUCTIVITY IMPACT.

3, PROJECT COMPLEXITY: THE PROJECT SUPPLEMENT PROPOSES TO REDUCE THE NUMBER OF COMPONENTS, YET THE NUMBER OF ACTIVITIES ARE NOT SIGNIFICANTLY DECREASED, THE PROJECT STILL SEEMS UNNECESSARILY COMPLEX, WITH NUMEROUS PARTICIPATING INSTITUTIONS AND COMPONENTS, MISSION REPRESENTATIVES CLARIFIED THAT IT IS THE USAID'S INTENTION OVER THE REMAINING PROJECT LIFE TO TRANSFER IMPLEMENTATION RESPONSIBILITY FOR MANY OF THESE ACTIVITIES TO THE GOP LINE MINISTRIES. THE PP SUPPLEMENT SHOULD CONTAIN A CLEAR DESCRIPTION AND TIMETABLE FOR THE TRANSFER OF THESE COMPONENTS, AND THE

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*Case 8508*  
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PROJECT AGREEMENT SHOULD ENCOMPASS BENCHMARKS AND OBJECTIVES FOR THE TRANSFER OF ACTIVITIES TO GOP INSTITUTIONS, AS WELL AS A COMMITMENT TO CONTINUE PROJECT ACTIVITIES ONCE THIS PROJECT ENDS.

4. CREDIT COMPONENT: THE MISSION REPRESENTATIVES NOTED THAT THEY ARE REEXAMINING THE NEED FOR A CREDIT COMPONENT AND ONE MIGHT BE INCLUDED IN THE FINAL PROJECT DESIGN, GIVEN THE SCARCITY OF DOLLAR RESOURCES FOR THIS PROJECT, THE BUREAU ASKS TO REVIEW THE RATIONALE AND APPROVE A DOLLAR FUNDED CREDIT COMPONENT, IF THIS IS PROPOSED,

5. FUNDING LEVELS: THE MISSION HAD EXPECTED THAT FUNDS WOULD BE AVAILABLE THIS FISCAL YEAR FOR THE PP SUPPLEMENT FROM A DEOB OF FUNDS FROM THE CENTRAL SELVA PROJECT. WITH A POSSIBLE CEILING ON FUNDS THAT CAN BE REOBLIGATED, THIS SOURCE OF FUNDS LOOKS LESS LIKELY. ONCE THE ACTUAL LEVEL OF DEOBLIGATION AUTHORITY IS DECIDED, THE BUREAU WILL CONSULT WITH THE MISSION TO DETERMINE THE FY 88 LEVEL FOR THE PROJECT,

6. USE OF HERBICIDES: WHILE THE PROJECT DOES NOT INCLUDE FINANCING OF HERBICIDES, THE PP SUPPLEMENT SHOULD MAKE CLEAR THAT THE IMPLEMENTATION OF SUCCESS OF THIS PROJECT IS NOT DEPENDENT ON THE APPLICATION, EITHER

MANUAL OR AIRBORNE, OF HERBICIDES. IF HERBICIDES ARE A COMPONENT OF THIS PROJECT, A.I.D. ENVIRONMENTAL REGULATIONS WOULD BE APPLICABLE TO THE USE OF HERBICIDES, THE MISSION SHOULD ASSURE ITSELF THAT THE IMPACT OF HERBICIDE APPLICATION ON PRODUCTION OF ALTERNATIVE CROPS IS TAKEN INTO CONSIDERATION IN THE PROJECT'S TECHNICAL/FEASIBILITY ANALYSIS. SAULTZ

LT  
#3948

NNNN

CARACTERIZACION DEMOGRAFICA Y SOCIAL  
DEL AMBITO DEL PROYECTO ESPECIAL ALTO HUALLAGA

Preparado por:  
Esaú Hidalgo Murrieta  
Asesor Desarrollo Comunal  
Julio de 1988

RESUMEN EJECUTIVO

1. La ocupación del valle del Alto Huallaga se remonta a la época pre-colonial. La población masiva del área se inicia en la década del 40, por migrantes espontáneos provenientes, en su mayoría, de la Sierra. La población total del área ha crecido de 11,623 habitantes en 1940 a 173,718 habitantes en 1987. La mayor tasa de crecimiento de la población se dio en 1972 debido a la construcción de la carretera marginal en el tramo Norte de Tingo María y a la iniciación de un programa de colonización promovido por el Estado.
2. Entre 1940-1987 hay una constante entre la proporción de la población urbana y rural del ámbito. Sin embargo, en los últimos años se observa una notoria tendencia hacia la urbanización, concentrándose el 93.24% de este tipo de población, en 6 comunidades: Tingo María, Aucayacu, Tocache, Nuevo Progreso, Uchiza y Monzón.
3. Hay una relación directa entre el período de llegada y la densidad demográfica de las áreas de asentamiento. Alrededor del 60% de los campesinos en la totalidad del área tenía más de 10 años de residencia en 1981. En las zonas de Tingo María y Aucayacu, en ese año, los migrantes ubicados en las áreas rurales llegaban al 95.6% y 98.4%, respectivamente. En cambio, en los pueblos más antiguos como Uchiza y Tocache, la población nativa sobrepasaba el 18%.
4. En algunas zonas de asentamientos formados por grupos migratorios existe una organización social que se basa en las relaciones parentales entre los campesinos ya establecidos. Esto se evidencia más en las áreas rurales del distrito de Campanilla, Cholon (La Morada), Hermilio Valdizán y en la zona de Bambamarca (Tocache).
5. El ámbito del Proyecto abarca 14 distritos pertenecientes a los departamentos de Huánuco (8) y San Martín (6). El 72% (125,234) de la población total del ámbito del Proyecto se distribuye en los distritos del Departamento de Huánuco y el 28% (48,484) en los distritos del Departamento de San Martín.  
  
Desde Cayumba hasta Puerto Pizana la mayoría de comunidades se entrelazan a través de 323.9 km de carretera de los cuales están asfaltados 91.8 km y afirmados 140.1 km. Los 92 km de trocha corrozable, con tramos en completo mal estado, que distan entre Puerto Pizana y Campanilla hacen que esta última zona esté prácticamente desintegrada del resto del área.
6. La situación deficitaria de los servicios sociales básicos se ha mantenido estable en el ámbito del Proyecto, debido, fundamentalmente, a la retracción de los sectores responsables y al explosivo crecimiento poblacional.

7. El Proyecto Especial Alto Huallaga, en los últimos tres años ha venido apoyando a los sectores de salud y educación, principalmente, en el desarrollo de programas de capacitación de promotores locales de salud y de profesores de áreas rurales, así como en la construcción y rehabilitación de locales para estos servicios.

Con la participación comunitaria se han construido importantes sistemas de agua potable en comunidades rurales y pueblos jóvenes. Este tipo de actividad es la que permitió la concurrencia del mayor número de participantes, por períodos más o menos extensos.

8. En general, el poblador del ámbito del Alto Huallaga mantiene un bajo nivel de expectativas respecto a las instituciones públicas y sus representantes. La situación de inestabilidad social ha alterado su escala valorativa y sus fuentes motivacionales. Actualmente, se viene conformando, paulatinamente, una nueva cultura basada en las normas de vida que viene imponiendo el narcotráfico y la subversión. Esta nueva situación requerirá de un trabajo permanente dirigido a recuperar la confianza de la población a través del desarrollo de actividades basadas en las reales posibilidades del Proyecto y en la decidida participación de la comunidad.

La participación de la comunidad debe permitirle un mayor acceso a la planificación, ejecución y manejo administrativo de las actividades.

9. Las acciones del componente de Desarrollo Comunal deben tener una mayor incidencia en las actividades de carácter productivo relacionadas con los problemas de mano de obra, la falta de canales de riego y drenaje, la construcción de almacenes, el abastecimiento de insumos agrícolas y la infraestructura para el transporte y la comercialización de productos.

CARACTERIZACION DEMOGRAFICA Y SOCIAL  
DEL AMBITO DEL PROYECTO ESPECIAL ALTO HUALLAGA

A. ASPECTOS DEMOGRAFICOS

1. Orígenes de la Población del Alto Huallaga

La ocupación del valle del Alto Huallaga se remonta a la época pre-colonial. Murra (1), menciona a los "chupaycho" de Huánuco (1540-1560) y refiere que poseían parcelas de coca en la Selva de Huánuco en lo que es actualmente el límite sur del valle.

Durante la colonia los primeros asentamientos fueron iniciados por las misiones jesuitas y franciscanos durante los Siglos XVII y VIII. Estas misiones se ubicaron en los principales afluentes del río Huallaga, áreas en donde actualmente se ubican los pueblos de Uchiza y Tocache.

En épocas más recientes, según el estudio de Aramburú y Bedoya (2), se pueden distinguir cuatro fases de inmigración y tipos de asentamiento.

a) 1850 - 1900. Fase relacionada al cultivo de coca para el consumo tradicional en los Andes. La mayoría de inmigrantes eran campesinos y mestizos provenientes de Pataz, Celendín y Huamachuco, de la Sierra de los departamentos de Ancash y La Libertad. La vinculación económica y cultural con los Andes era mantenida gracias a los caminos de herradura.

Los actuales pueblos de Uchiza y Tocache tuvieron ese origen, pero al igual que otros pueblos también tuvieron que mudarse varias veces debido a epidemias (viruela en Uchiza, 1852 o inundaciones en Tocache, 1865).

b) 1900 - 1960. Surgen en este período los asentamientos vinculados a la extracción de caucho que tuvo su mayor auge en las tierras bajas de la amazonía. Esto ocurrió durante los 15 primeros años del Siglo. Los pueblos que aparecieron en esta fase se originaron como "campamentos de caucho", localizados como puertos a lo largo del río Huallaga. La mayoría de los pueblos que hoy están localizados en las márgenes del Huallaga tuvieron ese origen, siendo los principales en el valle, de Sur a Norte: Aucayacu, Puerto Progreso, Puerto Pizana, Madre Mia, Puerto Prado, Aspuzana, La Roca, etc. La declinación de la extracción del caucho tuvo su período más crítico hacia 1914 y muchos de estos campamentos se despoblaron, retornando la población local a la agricultura de subsistencia como su fuente principal de vida. Sin embargo, la expansión permanente de la frontera demográfica empezó recién después de 1945-1950 con la construcción de carreteras que unieron el valle del Huallaga con la Sierra y la Costa.

(1) Murra, John. Una apreciación Etnológica de la visita de Huánuco de Iñigo Ortíz de Zúñiga. Instituto de Investigaciones Andinas, 1966.

(2) Carlos Aramburú y Eduardo Bedoya. Poblamiento y Uso de los Recursos en la Amazonía Alta: El Caso del Alto Huallaga, 1986.

c) 1950 - 1975. Los esfuerzos colonizadores con intervención estatal comienzan en enero de 1930, (Decreto 8621) cuando se selecciona el área próxima a Tingo María para colonización agrícola. Hacia 1943 la carretera Central entre Lima-Huánuco-Tingo María-Pucallpa estaba por ser completada y en 1964-66, la primera parte de la marginal de la Selva unió Tingo María con Aucayacu y Tocache.

Esta fase de ocupación poblacional se caracteriza por la introducción y expansión de cultivos comerciales tales como: té, café, tabaco, así como también por la explotación forestal y la expansión del sistema de haciendas y plantaciones en el valle. Muchos de los pobladores iniciales arribaron al área como trabajadores temporales para trabajar en las plantaciones de té o café. Igualmente, un numeroso grupo de obreros que trabajaron en la construcción de la carretera marginal, permanecieron en la zona como agricultores una vez concluida ésta. Como asentamientos espontáneos a lo largo de la marginal surgieron, entre otros, los pueblos de: Pueblo Nuevo, Santo Domingo de Anda, Aucayacu, y como asentamientos planificados: La Morada y algunas Cooperativas.

Es durante este período que la zona experimentó el crecimiento poblacional más acelerado.

d) 1975 - 1987. Esta fase que se caracteriza por presentar las más recientes olas migratorias está ligada a la expansión del cultivo de la coca para la elaboración de la pasta básica de cocaína. Estudios realizados por el Fondo de Desarrollo Nacional (1981) señalan que existen básicamente dos clases de cocaleros: aquellos que cultivan coca conjuntamente con otros productos y los monocultivadores de coca. Estos últimos, generalmente, son migrantes de la última década y están localizados, en su mayoría, fuera de las zonas catastrales.

## 2. Población Total: Rural y Urbana

Según datos de los distintos períodos censales, la población del ámbito del Alto Huallaga ha crecido aceleradamente entre 1961 y 1981, pasando de 45,187 habitantes a 134,600 en este lapso, y de acuerdo a las proyecciones de la Oficina Sectorial de Estadística (OSE) del Ministerio de Agricultura de Tingo María, la población de 1987 había alcanzado a un total de 173,718 habitantes, lo que significaría en relación al último dato censal de 1981, un crecimiento de 4.8%, como se indica en el cuadro siguiente:

POBLACION	AÑOS				
	1940	1961	1972	1981	1987*
Población Total	11,623	45,187	92,237	134,600	173,718
% Rural	64.8	62.3	62.6	58.3	63.4
% Urbana	35.2	37.7	37.4	47.1	36.6
Tasa Crecimiento Anual	5.6%	6.2%	4.2%	4.8%	

\* Proyección de OSE-Tingo María.

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En 1940 se estimaba una población total de 11,623 habitantes. En 1961 el total de la población registrada llegó a 45,187, lo que significa que se dio un incremento de 2.9 veces del total de población registrada en el período anterior, con un crecimiento anual de 5.6%. Este rápido crecimiento se debió a la apertura de la carretera central que unió Lima con Huánuco y Tingo María. La mayor parte de esta población migró de la Sierra y se asentó en la parte Sur del valle, en las proximidades de Tingo María.

En 1972 la población se duplicó a 92,237 personas, con una tasa de crecimiento anual de 6.2%. Este incremento se debe a la construcción de la carretera marginal, al Norte de Tingo María y a la iniciación, por el Estado, de un ambicioso programa de colonización.

El censo de 1981 indicó una población de 134,600 habitantes, habiéndose producido un nuevo incremento aunque con un ritmo menor de crecimiento anual - en relación a los períodos anteriores - que alcanzó al 4.2%, porcentaje que, como lo expresa Aramburú (3), hubiera sido menor de no ocurrir el "boom" del cultivo de la coca, motivo, este último, que explicaría, también, el promedio del crecimiento anual alcanzado hasta 1987.

En 1981, la población rural era de 78,472 habitantes (58.3%), mientras que la población urbana llegaba a 56,128 habitantes (41.7%). En 1987, en cambio, según OSE-Tingo María, la proporción porcentual entre la población rural y urbana recuperó la tendencia de los períodos anteriores.

Como se aprecia, en las últimas cinco décadas el crecimiento de la población fue realmente espectacular, aproximadamente de 11 veces la población inicial, lo que señala la importancia del área como centro migratorio. Durante el período en referencia, la distribución urbano rural permaneció virtualmente constante. Sin embargo, en los últimos años se observa una notoria tendencia hacia la urbanización especialmente en las 6 comunidades donde se concreta el 93.24% del total de la población urbana y la mayor parte de los servicios básicos estatales, los bancos, los comercios, etc.

	<u>1972</u>	<u>1981</u>	<u>1987</u>
1. Tingo María	12,198	15,528	35,003
2. Aucayacu	3,908	7,744	9,515
3. Tocache	3,484	6,822	6,931
4. Nuevo Progreso	1,100	1,156	3,132
5. Uchiza	985	1,710	2,230
6. Monzón	-	-	2,499

(3) Aramburú, Carlos. La Expansión de la Frontera Demográfica y Económica en la Selva Alta Peruana. En Colonización en la Amazonía. CIPA, Lima, 1982.

Aunque la tendencia a la urbanización forma parte del problema nacional, en la zona del Alto Huallaga este fenómeno se ha acelerado a partir de los operativos "Verde Mar", primero, y de los sucesivos operativos "Condor", después, cuando los cultivadores de coca abandonaron la mayor parte de los terrenos planos del valle y se trasladaron a las zonas de laderas de difícil acceso, para seguir sembrando coca. Esto puede constatarse, actualmente, a través de reconocimientos aéreos, o comparando las fotografías de los años 81-86 y 87, tomadas por el Servicio Aéreo Nacional de la FAP (S.A.N.). La circunstancia descrita a la que se suman las oleadas subversivas y la represión policial ha hecho que los padres, en resguardo de la integridad de los demás miembros de su familia, envíen a sus hijos a los centros urbanos.

Sólo en la provincia de Leoncio Prado (Tingo María), entre 1980 y 1987, se han cerrado 27 Centros Educativos del área rural, incrementándose la población escolar de la provincia de 18,000 en 1985 a 25,000 alumnos en 1987. La mayoría de estas escuelas se cerraron a fines de 1984 (13) y durante 1985 (8), períodos en que la subversión y la represión policial y militar aparecieron con más violencia.

Es posible que por las situaciones descritas, la composición familiar básica se ha modificado, separando de su estructura a sus miembros en edad escolar, mientras los padres, a pesar de los riesgos, permanecen en sus chacras o se trasladan a zonas más remotas impulsados por el fuerte incentivo de cultivar coca. La "empresa agrícola" - lícita o ilícita - que tradicionalmente estaba constituida por la fuerza de trabajo familiar no remunerada, también está siendo alterada, teniendo que recurrir con más frecuencia a la utilización de la escasa y cara mano de obra ajena para las labores agrícolas.

### 3. Distribución de la Población en el Ambito del PEAH

El ámbito del Proyecto abarca 8 distritos del Departamento de Huánuco y 6 distritos del Departamento de San Martín, con una población de 125,234 (72%) y 48,481 (28%) habitantes, respectivamente. Las mayores concentraciones poblacionales la tienen los Distritos de Rupa Rupa (Tingo María), con 47,710 (27.4%) habitantes, José Crespo y Castillo (Aucayacu), con 30,548 (17.6%) habitantes y Tocache (Tocache), con 17,354 (10%) habitantes. En cambio, los distritos de Shunte (Tambo de Paja), Cholón (La Morada), Hermilio Valdizán y Campanilla, son los que concentran las menores cantidades de población debido a la carencia de servicios y a su ubicación distante de la carretera Marginal, entre otros factores.

De acuerdo a los estudios de Aramburú y Bedoya (4), hay una asociación directa entre el período de llegada y la densidad demográfica de las áreas de asentamiento. Alrededor del 60% de la población del área tenía más de 10 años de residencia (1981), lo que sugiere un importante nivel de estabilidad. En las zonas de Tingo María y Aucayacu los migrantes ascienden al 95.6% y 98.4%, respectivamente, de la muestra de la población rural. Sin embargo, en pueblos más antiguos como Uchiza y Tocache la población nativa sobrepasa el 18%.

(4) Aramburú, obra citada. (1981)

Distribución de la Población del Ambito del PFAH  
por Distritos\*

DISTRICTOS	POBLACION CAPITAL DISTRICTAL	TOTAL	%	POBLACION			
				URBANA	%	RURAL	%
<u>DEPTO. DE HUANUCO</u>							
Ripa Ripa	Tingo María	47,710	27.4	35,003	73.4	12,707	26.6
Daniel Aconia Robles	Punalmasi	6,543	3.7	381	5.8	6,162	94.2
Hermilio Valdizán	Hermilio Valdizán	3,822	2.2	351	9.2	3,471	90.8
José Crespo y Castillo	Aucayacu	30,548	17.6	9,515	31.1	21,033	69.0
Padre Dnyando	Naranjillo	8,609	5.0	1,067	12.4	7,542	87.6
Mariano D. Beraún	Las Palmas	10,902	6.2	569	5.2	10,336	94.8
Monzón	Monzón	13,513	7.8	2,499	18.5	11,014	81.5
Cxolón	La Morada	3,587	2.0	124	3.5	3,463	96.5
<u>DEPTO. DE SAN MARIN</u>							
Tocache	Tocache Nuevo	17,354	10.0	6,931	40.0	10,423	60.0
Nuevo Progreso	Nuevo Progreso	8,224	5.0	3,132	30.0	5,092	70.0
Polvora	Polvora	4,778	2.8	513	10.8	4,265	89.2
Shunte	Tambo de Raja	1,408	0.8	343	24.4	1,065	75.6
Uchiza	Uchiza	12,732	7.3	2,230	17.5	10,502	82.5
Campanilla	Campanilla	3,985	2.2	951	23.9	3,034	76.1
TOTALES GENERALES		173,718	100.0	63,609	36.6	110,109	63.4

\*Proyectada a 1987 - OSE-Tingo María

NOTA:

Es necesario aclarar que las cantidades que aparecen en la columna referida a la población urbana, corresponde también a la localidad designada como capital distrital, es decir, fuera de las capitales distritales, las comunidades entran en la clasificación de rural.

En algunas zonas se dan ciertas características que confirman que al interior de los asentamientos formados por grupos migratorios existe una interesante organización social que se basa en las relaciones parentales entre los campesinos ya establecidos, como medio para facilitar la migración y disminuir el riesgo de llegar a un ambiente nuevo. En el caso del Alto Huallaga esto se evidencia más en las áreas rurales de Campanilla, La Morada y Hermilio Valdizán.

## B. ASPECTOS GEOGRAFICOS

### 1. Ubicación y Extensión

El ámbito del Proyecto Especial Alto Huallaga se ubica a lo largo de ambos márgenes del río Huallaga, con una superficie aproximada de 2,000,000 de hs., de las cuales 210,000 son de aptitud agropecuaria y 539,000 de aptitud forestal. El valle del río Huallaga, en el ámbito del Proyecto, comprende altitudes entre los 670 metros sobre el nivel del mar, en la parte de Tingo María y los 350 m.s.n.m. en la zona de Campanilla.

Desde Cayumba en la Provincia de Leoncio Prado (Huánuco) al Sur, hasta Balsayacu en la Provincia de Mariscal Cáceres (San Martín), al Norte del ámbito del Proyecto, la carretera marginal recorre 323.9 km., con un tramo asfaltado de 91.8 kms., hasta Pucayacu, un tramo afirmado de 140.1 km., de aquí hasta Puerto Pizana, y, una trocha carrozable de 92 km. desde este último punto hasta Balsayacu, en el distrito de Campanilla.

Por la intensa precipitación pluvial (entre 2,000 m.m. y 3,200 m.m.) el río Huallaga sufre bruscos cambios en su caudal, generando zonas críticas, con erosión en tramos de carretera y áreas de terrenos de uso agropecuario. Por esta misma causa, la carretera marginal permanece en constante deterioro, dificultando el tránsito vehicular en los tramos afirmados y de trocha carrozable; por estas causas los ámbitos comprendidos en la zona norte del distrito de Tocache se encuentran desintegradas con respecto a las demás zonas.

En los últimos tres años, la carretera marginal ha sufrido el deterioro más intenso por causa de las acciones de violencia creadas por los paros y huelgas regionales que ocasionan bloqueos, destrucción parcial del pavimento y la voladura de puentes.

Actualmente, el tránsito por la carretera marginal no sólo es dificultoso por el mal estado en que se encuentra en los distintos tramos de su recorrido, sino, también, representa un real peligro debido a los frecuentes atentados que cometen los grupos subversivos contra vehículos y personas del Proyecto o de los sectores públicos.

Esta realidad, unida a otras razones de carácter técnico y administrativo, nos sugieren una cautelosa y racional delimitación del ámbito del Proyecto y una adecuada selección de las áreas de trabajo. Por ello, debe considerarse la posibilidad que a partir de 1989, se excluya del ámbito del Proyecto los distritos de Shunte, Pólvora y Campanilla.

C. APSECTOS SOCIALES

1. Situación de los Servicios Básicos

1.1 Salud

La situación deficitaria de los servicios básicos se ha mantenido estable en el ámbito del Proyecto. Esto se debe, fundamentalmente, a la retracción de los sectores responsables y al explosivo crecimiento de la población.

De acuerdo a datos proporcionados por el Area Hospitalaria de Tingo María se desprende que entre 1981 y 1987 siguen prevaleciendo las mismas causas de morbi-mortalidad. En el primero de los casos, debido a traumatismos y envenenamiento, ocasionados por armas de fuego y al mal uso de compuestos químicos utilizados en actividades agrícolas; y, en el segundo de los casos, debido a enfermedades del aparato respiratorio.

En los últimos años han vuelto a aparecer enfermedades, como la fiebre amarilla, que en 1981 habían sido controladas. En 1987 se registraron 38 muertos dentro del ámbito del Proyecto, por causa de la fiebre amarilla. Entre enero y marzo de 1988, se han vuelto a registrar 19 casos de muerte también por esta misma enfermedad.

En los últimos tres años, se ha desarrollado un importante programa para el área rural basado en la filosofía de la atención primaria de la salud, apoyando la capacitación de promotores locales, (sanitarios y parteras tradicionales), además de construir y equipar un significativo número de Postas Sanitarias.

1.2 Agua y Desague.

Aunque con apoyo del PEAH y DISABAR (Dirección de Saneamiento Básico Rural) se han construido aproximadamente 20 sistemas de agua potable, por gravedad, en igual número de comunidades rurales y pueblos jóvenes, el porcentaje de beneficiarios no se ha incrementado significativamente. Sólo el 12% de la población (en 1985) se aprovisionaba de agua de red pública. El 81% de esta población estaba ubicada en Tingo María. En la actualidad Aucayacu, Uchiza, Tocache y otros centros poblados importantes carecen de este servicio y siguen aprovisionándose de agua de río, o en el mejor de los casos de manantiales y pozos.

En el caso de los servicios de desague la situación es similar a la anterior. El 97% de las viviendas (en 1985) no poseían este servicio y el existente se concentraba en Tingo María.

### 1.3 Electricidad

El servicio eléctrico en la zona del Alto Huallaga es sumamente restringido. El servicio que se presta actualmente en Tingo María, Tocache, Aucayacu, Uchiza y otros centros poblados procede de grupos electrógenos particulares o de las provenientes de fuentes termoeléctricas de ELECTROCENTRO. En 1985 esta institución tenía una potencia instalada de 4,893 kw, concentrada en un 75% en Tingo María.

A fines de 1987, ELECTROPERU, había concluido el levantamiento de las torres de alta tensión hasta Tingo María. Por ellas se tenderán las redes que conducirá la energía eléctrica desde la central del Mantaro.

### 1.4 Educación

Según datos de la OSE-Tingo María, la población escolar en 1985 alcanzó a 37,859 alumnos matriculados en los diferentes niveles del sistema, como se indica en el siguiente cuadro:

Población y Nivel Educativo - 1985\*

DISTRITOS	DE 1 A* 5 AÑOS	DE 6 A 14 AÑOS	DE 15 A* 64 AÑOS	NIVEL EDUCATIVO (NO. ALUMNOS)		
				INICIAL	PRIMARIA	SECUNDUNDARIA
Rupa Rupa	6,046	9,244	25,339	689	7,196	3,007
D. A. Robles	1,011	1,409	3,200	23	970	77
H. Valdizán	607	780	1,907	48	726	56
J.C. Castillo	4,518	6,588	15,615	145	3,694	606
P. Luyando	1,374	1,939	4,638	122	1,301	168
M. D. Beraún	1,763	2,396	5,478	-	1,339	97
Monzón	2,122	2,728	7,074	80	2,024	239
Cholón	609	820	1,878	18	420	44
Campanilla	717	1,046	1,964	125	1,321	97
Tocache	2,531	3,629	8,706	146	4,014	491
Nuevo Progreso	1,087	1,543	4,217	156	2,129	462
Pólvora	733	977	2,416	342	1,555	324
Shunte	196	270	659	-	137	-
Uchiza	1,777	2,495	6,317	175	2,900	396
<b>TOTAL</b>	<b>25,091</b>	<b>35,864</b>	<b>89,408</b>	<b>2,069</b>	<b>29,726</b>	<b>6,064</b>

\* OSE-Tingo María; Proyecciones educacionales en base a datos de la supervisión provincial de Leoncio Prado, Tocache y Mariscal Cáceres.

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De acuerdo con esta información el déficit educacional promedio en el ámbito del Proyecto estaría entre el 20 y 25%. El déficit educacional más alto lo tendría el distrito de José Crespo y Castillo (Aucayacu), con el 48% y el de Leoncio Prado (Tingo María) alcanzaría al 12%.

Según la fuente citada, un elemento particularmente alarmante es el relacionado con la elevada deserción escolar, que alcanzó en 1985 al 19% de la población escolar matriculada.

Centros Educativos, Personal Docente y Número de Aulas  
en 1985\*

DISTRITOS	CENTROS EDUCATIV.			PERSONAL DOCENTE			AULAS EN USO		
	INI CIAL	PRIMA RIA	SECUN DARIA	INI CIAL	PRIMA RIA	SECUN DARIA	INI CIAL	PRIMA RIA	SECUN DARIA
<u>TOTAL AMBITO DEL PEAH</u>	<u>42</u>	<u>309</u>	<u>33</u>	<u>60</u>	<u>790</u>	<u>353</u>	<u>55</u>	<u>654</u>	<u>202</u>
Rupa Rupa	12	43	9	16	185	163	16	133	90
D. A. Robles	1	17	1	1	26	4	1	27	4
H. Valdizán	1	11	1	2	17	3	2	20	5
J.C. y Castil.	2	52	4	3	140	43	4	85	14
Padre Luyando	1	11	3	3	35	12	3	33	17
M. Dámaso Ber.	-	23	1	-	43	8	-	42	5
Monzón	1	30	3	4	74	21	4	71	12
Cholón (La Mor.)	1	9	1	1	18	6	1	15	4
Tocache	3	32	1	5	46	27	4	40	10
Campanilla	4	14	1	4	36	7	4	36	5
Nuevo Progreso	4	12	3	5	49	16	4	46	14
Pólvora	6	19	4	8	42	26	6	36	11
Shunte	-	5	-	-	5	-	-	5	-
Uchiza	6	31	1	8	74	17	6	65	11

\* Fuente: Supervisión Provincial de Leoncio Prado, Tocache y Mariscal Cáceres.

El 76% del total de maestros del ámbito carece de título pedagógico. Este porcentaje es superior al promedio nacional que bordea el 60%.

Los mayores porcentajes de profesores sin título están en las Supervisiones de Campanilla, 96%; Tocache, 88%; Uchiza, 84%; Aucayacu, 83% y Leoncio Prado-Tingo María, 69% de intitutados.

El PEAH, como una acción de apoyo al mejoramiento de la situación descrita, desde 1986, ha venido colaborando con las respectivas Supervisiones en el desarrollo de eventos de capacitación docente y en la construcción y rehabilitación de aulas. Desde el citado año viene funcionando en Tingo María un Programa de Profesionalización Docente, que en un lapso de cinco años debe otorgar títulos profesionales a los maestros que allí están estudiando. A partir de 1988 comenzó a funcionar en Aucayacu, el Instituto Pedagógico Superior que titulará docentes en áreas técnicas, como Mecánica Agrícola, Agropecuaria, además de Educación Primaria.

En 1987, según datos extraoficiales proporcionados por la Supervisión de Tingo María se ha producido un importante éxodo de la población escolar rural hacia Tingo María. Por este motivo, se habilitaron nuevos turnos de trabajo docente.

### 1.5 Vivienda

El censo de 1981 arrojaba un total de 24,312 viviendas, de las cuales el 67% se ubicaban en el área rural. Aunque en los últimos años las condiciones de vivienda han mejorado notablemente especialmente en las áreas urbanas, sin embargo, en estas mismas áreas (Tingo María y Tocache) se han construido gran cantidad de precarias viviendas que conforman numerosos pueblos jóvenes sin los servicios esenciales.

## 2. La Organización y Participación Comunitaria

En el Project Paper original se prevé el apoyo a las organizaciones existentes en la zona y la formación de nuevas para la conducción de tareas específicas a nivel de la comunidad. Durante los primeros años, a través de Promoción Social impulsado por INIPA, se organizaron Clubes Agrícolas Juveniles (CAJP) y Clubes de la Mujer Rural (CMR) como instituciones básicas para la promoción de la mujer y la juventud rurales en eventos de capacitación y actividades productivas como artesanía y huertos escolares y comunales.

A partir del año 1986 a través de los Promotores Sociales y Extensionistas del PEAH, se promueve la formación de Comités de Desarrollo a nivel comunal, distrital y provincial. A través de estos Comités debieron planificarse y ejecutarse las actividades relacionadas con las obras cívicas y las de carácter productivo. Esta alternativa no prosperó debido a la falta de capacitación de sus miembros y a un efectivo apoyo técnico y financiero de los sectores responsables.

Las organizaciones asociativas tales como las Cooperativas: Santa Lucía, Arequipa, El Porvenir, Té-Café, Jardines de Té, están prácticamente quebradas, a excepción de la Cooperativa Naranjillo que recibe fuerte apoyo técnico y financiero de organismos internacionales. El virtual fracaso de estas organizaciones se debió a aspectos de carácter administrativo, a la falta de asistencia técnica y a la deserción de sus miembros para dedicarse a otras actividades, como el cultivo de la coca.

C. El Desarrollo Comunal y la Promoción Agropecuaria

En la actualidad, el componente de Desarrollo Comunal se desarrolla a través de cinco líneas de acción:

- a. Agua Potable y Saneamiento Ambiental.
- b. Servicios de apoyo a la atención primaria de la Salud.
- c. Proyectos productivos de autoconsumo, chacras integrales y huertos comunales.
- d. Servicio de apoyo a los Programas de Educación y Recreación.
- e. Organización y Capacitación Comunitaria.

- Dentro de las 5 líneas citadas, el referido a proyectos productivos de autoconsumo es el que más directamente se vincula a los aspectos de la producción agrícola, aunque como en el caso de los huertos escolares, se ha enfatizado el criterio pedagógico en desmedro del criterio productivo. En el desarrollo de las acciones de apoyo a los servicios de educación y salud, se ha enfatizado el apoyo a las obras de infraestructura y capacitación al personal que presta servicios a nivel comunitario. En el caso de la línea de organización y capacitación comunitaria se ha insistido en estereotipos organizativos descuidando los aspectos estratégicos y motivacionales indispensables en áreas de inestabilidad social como el Alto Huallaga.

Al margen de la indiscutible importancia que dentro del componente de desarrollo comunal se otorga a los aspectos relacionados con la salud, educación, saneamiento ambiental, etc., debe procurarse, por las peculiaridades de la zona, una mayor atención a los esfuerzos por mejorar la producción agrícola lícita frente a la difusión del cultivo de la coca.

Desde el inicio del Proyecto se ha venido apoyando la atención de sentidas necesidades en cuanto a servicios de infraestructura básica, a veces con criterio táctico de ofrecer una mejor imagen del Proyecto. Pero, frente al expresado problema de la difusión del cultivo de la coca y de las acciones subversivas, es necesario reforzar la organización comunitaria sobre la base de actividades de carácter productivo dirigidas a enfrentar los problemas de mano de obra, la falta de canales de riego y drenaje, la construcción de almacenes, el abastecimiento de insumos agrícolas y la infraestructura para el transporte y la comercialización de productos.

1. Factores Motivacionales y Limitantes de la Participación Comunal

El trabajo de desarrollo comunal implica una permanente acción de motivación psicológica y de promoción social entre los individuos y grupos participantes. Por eso, es importante identificar los factores que contribuyen a mantener los necesarios niveles motivacionales que impulsen a la cohesión grupal y a la acción sostenida.

En general, el poblador del área mantiene un bajo nivel de expectativas respecto a las instituciones públicas y sus representantes. La situación de inestabilidad social ha alterado su escala valorativa y sus fuentes motivacionales. La apertura del habitante selvático y la tradicional solidaridad del serrano han disminuído notablemente. Sobre la difusa cultura de los migrantes que mayoritariamente habitan la zona, viene imponiéndose la cultura de la desconfianza y la violencia. El campesino del área, indudablemente, viene asimilando esta cultura.

El contexto actual del Proyecto es distinto al de sus inicios. Las fuentes motivacionales han variado. En muchos casos el campesino no puede decidirse libremente por determinadas opciones. Por razones de seguridad el PEAH y algunos sectores públicos han paralizado sus actividades en el campo, mientras que otras, han decidido abstenerse de seguir trabajando en el área.

Bajo las condiciones descritas se requiere, en primer lugar, recuperar la confianza del poblador del área. Para ello, las actividades de beneficio público deben decidirse con participación mayoritaria de la población y ésta debe estar enterada de las posibilidades y limitaciones técnicas y materiales de los sectores. La asamblea comunal promovida por los propios líderes locales puede constituirse en la forma más efectiva de convocatoria comunal.

Para los trabajos productivos, relacionados con los cultivos agrícolas, debe mejorarse la organización de los actuales Comités de Productores. Esto debe implicar el reforzamiento de los mecanismos para la adquisición de insumos y facilidades para el transporte y la comercialización de su productos. La asistencia técnica debe brindarse a través de promotores surgidos de los propios comités.

En las áreas erradicadas de cultivos de coca debe ampliarse el modelo PESIP de cultivos rotativos experimentado por el Proyecto en estos dos últimos años, pero, debe incluirse en el programa las áreas adyacentes con cultivos alimenticios. En este caso, también, la asistencia técnica debe brindarse a través de agricultores - promotores, previamente capacitados por los técnicos del Proyecto.

D. Implicancias Sociales de la Presencia del Narcotráfico y la Subversión en el Alto Huallaga

Un indicador constante en el análisis de la problemática del Alto Huallaga, durante los últimos 5 años es, sin lugar a dudas, la situación de convulsión e inestabilidad creada por la presencia del narcotráfico y el terrorismo. Esta situación no sólo ha influído en los aspectos económicos, políticos y sociales, sino que debe conllevar necesariamente, a la modificación de las estrategias y al reajuste constante de las prioridades en la ejecución de los planes de desarrollo.

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Los planes que se elaboren al margen de de esta realidad, no podrán contribuir eficazmente en la consecución de los reiterados propósitos de elevar los niveles de vida y de preservar los valores locales de la población de la zona.

Como lo expresáramos anteriormente, el área del Alto Huallaga se ha formado por permanentes flujos y desplazamientos migratorios de pobladores provenientes de las zonas colindantes de los departamentos de Huánuco y San Martín y de otros departamentos de la Sierra y de la Costa del país. Por este hecho, la población de la zona se ha caracterizado por una frágil identidad local reflejada en la carencia de expresiones culturales prototípicas y en la fácil asimilación de modelos exteriores. Hasta las modalidades y tonalidades lingüísticas que identificaban al poblador selvático han sufrido variaciones que en muchos casos dificultan su reconocimiento.

#### 1. La Situación Actual

En la actualidad, la zona del Alto Huallaga es conocida por ser la gran productora de la hoja de coca, de la que se extrae, primero, la pasta básica de cocaína (PBC), con la que se obtiene, después, el cloridrato de cocaína que luego se distribuye al mercado nacional e internacional. Además, a partir de la década actual, se agrega la presencia subversiva de los grupos maoistas y moscovitas de Sendero Luminoso (S.L.) y del Movimiento Revolucionario Túpac Amaru (MRTA).

Al margen de las conocidas situaciones de inestabilidad y violencia creadas por ambos fenómenos, es necesario precisar algunas graves consecuencias sociales que vienen acarreado.

En primer lugar, se debe reconocer que en la zona, independientemente del tipo de relación que mantienen, cohabitan narcotraficantes y terroristas. La "situación de pobreza" de la zona, en el contexto tradicional de la lucha armada, no justificaría la presencia de estos últimos grupos subversivos. Sin embargo, éstos han enarbolado como bandera de lucha, la necesidad de proteger a la población (principalmente a los productores de maíz y coca) de los bajos precios que se les asignan a sus productos agrícolas tradicionales y contra los programas de erradicación que con apoyo policial se realizan en el área.

1.1 El narcotráfico y la subversión han redefinido valores y comportamientos. Los niños de las áreas rurales que tradicionalmente formaban parte de la fuerza laborar familiar no asalariada, actualmente vienen participando activamente, en el proceso productivo de la coca y sus derivados, dentro y fuera del grupo familiar. Otro tanto, está abandonando el área rural y el seno familiar en busca de mayor seguridad y de mejores perspectivas educacionales.

La adolescencia y la juventud son, posiblemente, los más involucrados en las actividades del narcotráfico y la subversión. El mayor porcentaje de detenidos por estas causas la constituyen los jóvenes. Sin embargo, lo grave de esta situación radica en el prestigio que vienen ganando

estas actividades, especialmente, el narcotráfico, dentro del contexto social del Alto Huallaga. Al narcotraficante le ha reconocido un status espectante dentro de la estructura social local; su capacidad adquisitiva es alta, factor que se vuelve importante en una zona como ésta donde la vida es muy cara y muy riesgosa. Pero, esta juventud, fuera del contexto descrito, es decir, al margen del narcotráfico y la subversión, tendrá muy limitadas perspectivas.

Aunque cuando se aborda el problema del narcotráfico, por lo general, sólo se enfoca los aspectos de producción y comercialización, es necesario considerar, en su verdadera magnitud el problema de consumo. Además de algunos datos encontrados en los estudios sobre la realidad de la drogadicción en el Alto Huallaga, es posible inferir el alto riesgo a la que está sometida la población más joven. Se ha comprobado que en Tingo María, Aucayacu, Tocache, Nuevo Progreso, entre otros centros poblados, se viene incrementando el número de consumidores de pasta básica, principalmente. Sin embargo, hasta la fecha no se ha desarrollado ningún programa serio de prevención y tratamiento.

1.2 La presencia de la subversión, como lo dijimos, ha contribuido a modificar el contexto social, especialmente en lo relacionado con la organización comunitaria. En los inicios de la presente década, la presencia subversiva se manifestaba a través de células móviles que incursionaban en las comunidades rurales difundiendo la doctrina subversiva a través de la distribución de panfletos y de discursos en obligadas asambleas populares.

A base de persuasión, amanezas y atentados, la subversión copó un importante espacio político y social en el área. A esto han contribuido, sin lugar a dudas, la escasa e ineficiente presencia de los sectores del estado y la creciente desconfianza de la población en la eficiencia y moralidad de las acciones de las fuerzas encargadas de combatir el narcotráfico y la subversión.

En la actualidad, un importante número de comunidades y extensas áreas del ámbito del Proyecto, (ver Mapa 2) han sido copadas por los grupos subversivos. A diferencia de lo que ocurría en el comienzo de este movimiento, donde las "células subversivas" itinerantes se desplazaban por las comunidades, actualmente cada comunidad tiene su propia organización, representada por un "delegado" local, quien coordina y autoriza la ejecución de las actividades de la comunidad. En realidad estos "delegados" tienen más ascendencia que las autoridades formales que representan al Estado o al Gobierno Municipal.

Además de la situación de violencia creada por los fenómenos anotados, existe en la zona un alarmante crecimiento de la delincuencia común y de la prostitución. Las causas de muerte por armas de fuego o punzo-cortantes, registradas en los Hospitales de Tingo María, Aucayacu y Tocache son porcentualmente, unas de las más altas.

## 2. Recomendaciones Básicas

En las actuales circunstancias, es difícil precisar cuáles serían las estrategias más coherentes contra la subversión y el narcotráfico, sin embargo, creemos pertinente recoger algunos criterios de trabajo que pueden ser compatibles con la situación descrita sobre la zona.

1.2 Deben revisarse los actuales mecanismos de participación de la población y de los sectores correspondientes en la selección y priorización de las actividades relacionadas con las obras de infraestructura social y de extensión y promoción agropecuaria.

En el caso de las obras de infraestructura, la comunidad debe tener más acceso a la administración de la obra y a su evaluación, además de su ejecución física. Los representantes de los sectores, junto a la asistencia técnica que brindan, deben promover actitudes que demuestren su inquebrantable vocación de servicio y honradez. Esto, contribuirá a recuperar la confianza en las instituciones públicas.

En cuanto a las actividades relacionadas con la extensión y promoción agropecuarias, deben estar encaminadas a promover, mejorar y ampliar los cultivos alimenticios y la crianza de animales para el consumo humano. La recuperación de los niveles de producción y productividad de las chacras o parcelas de panllevar deben ser prioritarias frente a la agroindustria que resulta riesgosa en una situación de inestabilidad y violencia. En este caso, la rentabilidad de los cultivos alimenticios no debe medirse sólo en términos económicos sino, también, sociales.

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RECOMMENDATIONS OF 1986 INTERIM PROJECT EVALUATION

RECOMMENDATIONS OF 1986 INTERIM REPORT EVALUATION

An evaluation of the Upper Huallaga Area Development (UHAD) Project was carried out by ECONSULT, S.A. during the middle part of 1986. The evaluation covered each of the components of the Project going from the Project's inception, December, 1981 through June 30th, 1986.

The evaluation's Executive Summary included general recommendations which are addressed in this report.

PROJECT OFFICE:

The evaluation states the following:

"The Project Office has assumed the direct execution of some activities of some components and as a consequence of Amendment No. 5 to the Project Agreement its direct action in Community Development was increased. This has generated a considerable growth particularly in its administrative structure giving the impression of an over-dimensioned institution and one which is centralized in Aucayacu where 81% of the employees of Upper Huallaga Special Project Office (PEAH) are located.

It is recommended that the entry of new administrative personnel be limited to the replacement of vacant posts judged to be indispensable. It is also recommended that some of the vacancies which occur should be filled by personnel qualified in the social sciences and forestry, to occupy advisory and first line posts, since PEAH does not possess this type of specialist among its personnel." 1/

The Draft Project Paper Supplement addresses this recommendation in several places:

"1. GOP Administrative Support. The Project currently funds PEAH's operations, which include an administrative and management central staff numbering about 75 persons (not including management and support personnel of the various line divisions). These individuals range from professionals (lawyers, accountants, engineers) to clerks, guards, messengers. The staff is involved in planning, budgeting, data management, auditing, legal affairs, public relations, and overall direction policy formulation. Vehicles and drivers are assigned to separate line divisions and do not form part of the centralized administrative structure. The Project will continue to support PEAH's administrative and management operations, although staff will be reduced to no more than 50 people. In addition to personnel costs, the modest upkeep costs of PEAH's headquarters will continue to be Project financed." 2/

1/ Econsult, S.A., Executive Summary, "Final Report of the Evaluation of A.I.D. Project No. 527-0244 - Development of the Upper Huallaga Area", Page XIX, Jan. 1987.

2/ USAID/SPD, Draft PP Supplement Upper Huallaga Area Development Project, Section G, "Project Administration and Advisory Support".

The evaluation further refers to the Project Office stating:

"In order to ensure the better functioning of the Project Office it is considered necessary to adopt measures designed to strengthen the coordination within PEAH between the executive direction and the line and zonal directions. Similarly between the executive direction and other entities whose jurisdiction and activities may overlap with those of PEAH, such as CORDESAN, in order to avoid the duplication of efforts and financing for the same activities and works." 3/

The PP Supplement addresses this point in the following manner:

"The Project also finances a small office in Lima. This office will be strengthened through consolidation with National Development Institute (INADE) operations. Rather than serving largely as a point for distribution of PEAH correspondence to Lima offices and the control point for local procurement, the newly restructured office will be expected to interact directly with INADE, promoting improved backstopping from them and monitoring the programs of GOP line ministries in the Upper Huallaga Valley (UHV) and lobbying for additional GOP resources allocation in the area." 4/

These issues are dealt within two of the PP Supplement's draft Conditions Precedent. First in Condition Precedent No. 3, which states the following:

"Unless A.I.D. otherwise agrees in writing, that INADE will create and staff a Liaison Office in Lima no later than December 31, 1988, which will provide technical and administrative backstop to PEAH operations in the UHV, will coordinate project-related activities with other GOP institutions and will seek out increased GOP commitment and support for the overall development of the UHV." 5/

Secondly, in draft Condition Precedent No. 4, which says in part:

"... that PEAH will develop a plan no later than June 31, 1989, for management structure and staff levels which will implemented completed by the end of calendar year 1990." 6/

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3/ See Footnote 1 of Page 1.

4/ See Footnote 2 of Page 1.

5/ Ibid.

6/ Ibid, Section F "Conditions and Covenants".

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RESEARCH:

The evaluation makes the following recommendation:

"Rather than developing costly programs in search of technological innovations, emphasis should be placed on research aimed at confirmation or validation and employing agriculturalists' own land. Validation research should be concentrated on productive systems for ex-coca producing areas using the experience accumulated regarding the use of acid soils with problems of aluminum toxicity." 7/

Agricultural research has been one of the principal activities of the Project since inception. A continuing research capability is required, especially in regard to recuperating eradicated lands and in the ability to combat new diseases which may appear in the UHV. Currently the Project finances several research efforts, some combined with extension and/or training. One of these is the Integrated Program of Agricultural Development in Areas of Eradicated Coca Cultivation (PESIP).

PESIP was created by PEAH specifically to operate in eradicated areas. This special program operates utilizing a demonstration plot methodology, whereby it supplies seeds, inputs, and regular advisory support to a farmer willing to replant all or part of his/her eradicated land with the recommend crops. PESIP has been quite successful to date, and its experience shows that in the subsequent agricultural cycle some four times as much of the demonstrated crops are planted, by the same or by neighboring farmers, when the farmers have access to the required inputs.

The extension of the Project includes the continuation of research activities which will be carried out by the National Agricultural and Agro-Industrial Research Institute (INIAA). PEAH will revise the agreement with INIAA in order to play a stronger role in the selection of research projects and the utilization of the resultant data to improve technology.

EXTENSION:

The evaluation recommended that:

"The extension service operation be restructured, inserting it within a broader and more integral concept of agricultural and livestock development ..."

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7/ See Footnote 1 of Page 1, Page XX.

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It also states the following:

"Within the methodological framework continuous training of agents for change should be contemplated also the use of audiovisual educational systems and mass media especially radio, a preferentially group-oriented concept of the subject of change and also the intensification of extension-credit and extension-research links - in the latter case by means of group work in plots for confirmation or validation of results." 8/

The link between research and extension is often made by having the same entity responsible for both. To some degree this now takes place in the UHV, with both PEAH and the National University of the High Jungle (UNAS) carrying out integrated research/extension programs. The extension of the Project promotes the concept that INIAA should take the lead role in research, while PEAH provides extension services.

As stated in the PP supplement,

"The extension of the Project also considers that the organization best qualified to bridge the gap between research and extension is UNAS. UNAS currently has a research/extension/training program, called the Coordination Office for University Extension and Outreach (OCEPU). It is the intention of the Project to transform OCEPU into a Center for Training and Technology Transfer (CTTT). The CTTT's primary function will be to train extension agents in appropriate and applicable agricultural technologies. Based on research carried out by INIAA and UNAS access to trained technicians, national and international research publications, etc. UNAS faculty members (Many of whom have received advanced degrees financed by the Project) will carry out short practical training courses and provide individual consultation services for PEAH's extension agents. The objective will be to have the extension agents thoroughly familiar with the 20 or so crops which will be targeted for introduction and promotion. Likewise, CTTT will use extension agents' experiences with various technologies to evaluate the progress of research and extension programs." 9/

#### TRAINING:

The following recommendations given in the evaluation have been addressed in the previous section:

"It is recommended, in order to take advantage of installed capacity and of the human potential of the student body, that PEAH promote coordination

8/ See Footnote 1 of Page 1, Page XXI.

9/ See Footnote 2 of Page 1, Section D, "Components and Outputs", (2) Center for Training and Technology Transfer.

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between INIPA and UNAS for the elaboration of a program of agricultural research to be executed by students of UNAS and which could serve to satisfy the requirements for the presentation of their graduation thesis." 10/

"It is recommended that INIPA (now INIAA) and UNAS should develop training events related to appropriate methods for the transfer of technology to agriculturalists, as well as to the production of improved seeds." 11/

CREDIT:

The evaluation makes the following recommendations regarding credit:

"For the continuation of credit operations with the remainder of the PEAH funding and the amounts recovered from borrowers, it is necessary to adopt measures designed to resolve these 'bottlenecks'. We make the following recommendations:

- a) PEAH's resources should be oriented towards areas not traditionally attended by BAP.
- b) Priority should be given to medium and long-term loans for agroindustry, as well as to loans for the commercialization of supplies and products.
- c) The use of supervised credit should be favoured.
- d) The possibility should be studied of extending credit to colonists who are apparently not coca growers and who have a low level of income.
- e) A greater degree of coordination should be established between the Peruvian Agricultural Bank (BAP) and extension agents, in order to broaden loan placements and grant group or joint credits.
- f) The training of INIPA (now INIAA) extension agents in credit systems and procedures, with the active participation of BAP and UNAS technicians, should be promoted and organized." 12/

The objective of this component of PEAH is to extend and increase credit mechanisms and real annual placement levels in order to compensate for the loss of liquidity caused by coca eradication. It should be noted that legal dispositions regarding drugs prohibit the delivery of technical assistance, credit or other aid to agriculturalists who grow coca, except in cases of substitution of this crop. The placing of credit was channelled through BAP.

Agricultural credit has not fulfilled its role in activating the productive process of licit crops in the Upper Huallaga. The resources provided by the Project have in part served to replace BAP's own funds.

10/ See Footnote 1 of Page 1, Page XXIII.

11/ Ibid.

12/ Ibid, Page XXV.

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For this reason, the continuation of credit operations during the extension period will be funded with GOP funds. The credit operations will have the characteristics which were mentioned in the above recommendations.

FARM PRODUCTION SERVICES:

There are three sub-components included within this component:

1. Land Titles and Land Registry
2. Services for Purchase-Sale of Supplies and Products
3. Agroindustrial Promotion

1. Land Titles and Registry:

The purpose of this sub-component is to correct the precarious system of rural private property which exists in the Upper Huallaga.

The evaluation's Section 6.6 "Production Services Component" stated several recommendations which addressed the lack of coordination among the different offices which deal with Land Titling and Registry. The following are examples of these recommendations:

"PEAH, DGRAAR and ONARP should agree upon and implement the procedures for the coordination of functions of the Registry Office and the Survey, Agrarian Reform and Rural Settlement Department of Aucayacu, in order to provide a mapping and survey basis for the rural property register."

"PEAH should coordinate with CORAH in order to obtain the aerial photography"

"PEAH should coordinate with CORAH in order to give preference to the granting of land titles to ex-coca growers."

The norms governing the procedures to effectuate the coordination between the Registry Office and the Survey-Agrarian Reform and Rural Settlement Departments are given in Law Statutes which regulate Rural Communities (Comunidades Campesinas). There are several articles within the Rural Community Law which regulate the use of maps, registration procedures, processing of data, etc. The problem lies in the compliance of these norms by the parties concerned. The technical assistance has been addressing this concern by coordinating and disseminating data in the form of cadastre maps, registration data, aerial photography, etc. among the parties concerned.

## 2. Services for the Purchase-Sale of Supplies:

The evaluation recommended the following:

"It is recommended that the possibility be studied of an amendment to the Project Agreement which would permit the annual provision of Loan funds for working capital to ENCI and ECASA which would allow them to acquire the harvests of rice and maize with immediate payment, constituting a genuine incentive to producers." 13/

The primary activities, regarding this sub-component, relate to the improvement of the capacity for grain storage and handling by means of the enlargement of warehouses, the installation of dryers and the improvement of the technical capacity of ENCI and ECASA. Two rice mills have been procured and delivered. The installation of these mills are currently being coordinated with the PEAH technical assistance.

Negotiations are currently under way in order to guarantee \$1.2 million of GOP funds to be delivered throughout the extension of the Project under the credit component. These funds are to be delivered in a way acceptable to AID in order to attend the needs of eradicated farmers throughout this period. Many alternatives concerning the delivery of credit are currently being considered and discussed with various GOP entities.

The PP Supplement through the ASDS and CTTT mechanisms are two specific examples addressing this concern.

## 3. Statistical Information System:

The evaluation makes several recommendations concerning this sub-component, such as the following:

"The statistical information system should be restructured and activities should not be carried out by OSE but by PEAH, including those which OSE requires for national agricultural and livestock statistics. This restructuring should include the data bases, survey design, sampling method, experimental design, estimation and analysis methods, and the design and dissemination of bulletins directed with priority towards service to the agriculturalist, as well as to other components. It is important that estimates be carried out on the basis of a sampling frame by area." 14/

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13/ See Footnote 1 of Page 1, Page XXVI.

14/ Ibid, Page XXVII.

There are many inefficiencies in regards to the current delivery of statistical data by OSE. Project technical assistance is currently working with OSE in order to optimize the gathering and processing of statistical information. One of the objectives to be attained during the extension period is to provide a methodology which will process statistical information which will measure the impact of Project activities in the UHV. PEAH-APODESA are currently developing a Geographic Information System (GIS) which establishes a methodology which attains the objectives mentioned above. The GIS requires the application of the Aerial Sample Frame (ASF) technology as a primary method of obtaining basic resource data.

The ASF technique is a methodology for scientifically selecting the smallest sample necessary to obtain information representative of an area. The actual collection of data is carried out by means of interviews in the sampled areas (segments). The selection of the segments is made on the basis of photo-interpretation techniques, utilizing aerial photography, cadastral maps, land use maps, and road maps. The construction of the ASF is carried out in three stages. First, the total area is divided into primary land use strata such as forest, intensive cultivation, pasture, urbanized areas, etc. The strata are homogenous with respect to land use. Second, the strata are subdivided into smaller contiguous areas called "count units", for example the surveyed cadastre units. Copunt units are randomly selected to construct the frame. Finally, the selected maps and aerial photographs. The segments for interviews are then randomly selected. The information obtained from the segments can be expanded to provide estimates for the areas as a whole.

The original Project Paper considered that the construction of an ASF would have two important advantages for the Project:

"(1) It provides a scientific sample frame that accommodates multiple uses. OSE can use it as the base for estimated area production. Researchers can use it as the base for specialized experiments addressing the needs for pest control and crop yield improvement through better seed strains, etc. It provides the base for establishing benchmark statistics and their monitoring overtime for Project evaluation.

"(2) It is less costly than a census and is probably more accurate. In addition, the data generated by the ASF will have four special uses for the Project:

- Project impact evaluation,
- systematic understanding of the constraints and needs of area farmers,
- monitoring of coca eradication progress, and,
- development of data base for future Project activities." 15/

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The original Project Paper also stated that the Project would carry out a series of activities to obtain the basic information required to support the full development of the Project Area agricultural resources. These basic resources development activities will continue to be carried out in the valley between Tingo Maria and Puerto Pizana, and include:

- aerial photography covering 900,000 Has.,
- topographic maps of the agricultural areas,
- land use capability maps, and,
- updated cadastral surveys.

Adequate aerial photography coverage of the entire Project Area is the key element required to carry out the basic surveys and inventories in the field and to expand existing coverage of cadastral and resource maps. There have been numerous contractual agreements between the National Aerial Photography Service (SAN), and entities such as the National Development Foundation (FDN), National Office of Rural Resource Evaluation (ONERN), U.S. Embassy, etc. which try to obtain the aerial photography covering the areas of interest to the Project. Aerial photography is pending on approximately 341,000 Has. SAN has not been able to deliver all the aerial photography because of weather constraints. OSE has not implemented the ASF methodology in the UHV because of the constraints mentioned above. Significant advances have occurred, since then, in aerial cadastre, topographic coverage of the valley which allows the application of ASF methodology in the Project area.

#### ROAD MAINTENANCE:

The evaluation states the following:

"It is recommended that the institutional strategy for the maintenance of the road network be changed. In the case of the Marginal Highway, it is suggested that PEAH in close collaboration with the Ministry of Transport and Communications (MTC) establish an Operative Unit termed the Highway Office of the Upper Huallaga, and which should be duly provided with personnel, workshops, laboratories and financial resources. During the first stage (1987-88) this office should remain under direct administration of PEAH and after this period be transferred to the MTC and become its sole Operative Unit in the Upper Huallaga, substituting in this territorial area the Departamental Development Corporations of Huanuco and San Martin." 16/

The extension of the Project will serve as a transition period in which road maintenance responsibilities will be transferred to appropriate GOP agencies. The PP Supplement indicates that the transfer of road maintenance equipment, personnel, etc. to the corresponding GOP agencies will take place during the extension period.

16/ See Footnote 1 of Page 1, Page XXIX.

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EA AMENDMENT APPROVAL (STATE 312384)

UNCLASSIFIED STATE 312324

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TAGS:

SUBJECT: EA AMENDMENT APPROVAL - UPPER HUALLAGA AREA  
DEVELOPMENT PROJECT EXTENSION (527-2244)

REF: (-SOUTH-)SON TELCON SEPT 20, 1988

1. LAC CHIEF ENVIRONMENTAL OFFICER HAS REVIEWED AMENDED ENVIRONMENTAL ASSESSMENT FOR PROPOSED EXTENSION OF UPPER HUALLAGA AREA DEVELOPMENT PROJECT AND HEREBY APPROVES AMENDED EA SUBJECT TO FOLLOWING PROVISIONS.

2. THE UZAD PROJECT PROPOSES TO EXTEND BASIC AGRICULTURAL SUPPORT SERVICES TO ELIGIBLE FARMERS (I.E. COCA FREE) IN THE CONSOLIDATED PROJECT AREA. SUCH ASSISTANCE COULD CONCEIVABLY INVOLVE ASSISTANCE WITH THE PROCUREMENT OR USE OF PESTICIDES. PRIOR TO ANY SUCH PURCHASE, USE OF RECOMMENDATION OF PESTICIDES UNDER THIS PROJECT, AN AMENDED ENVIRONMENTAL ASSESSMENT MUST BE PREPARED AND APPROVED BY THE LAC CHIEF ENVIRONMENTAL OFFICER.

3. CONCURRENCE IS FURTHER BASED ON CONDITION, AS STATED IN THE EA AMENDMENT, THAT NO AID FUNDS WILL BE USED FOR

THE PROCUREMENT OR APPLICATION OF HERBICIDES FOR COCA ERADICATION. SHULTZ

BT  
#2334

NNNN

*Done date 9/27*

**ACTION COPY**

ACTION TAKEN: <i>Copy PP Supplement</i>
<i>UZAD Project</i>
DATE: <i>9/27</i>
INITIALS: <i>W Binne</i>

UNCLASSIFIED STATE 312324

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