

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



**ANNUAL BUDGET SUBMISSION
FY 1979**

USAID / ANDEAN REGIONAL

**DEPARTMENT
OF
STATE**

JUNE 1977



ANDEAN REGIONAL
FY 1979 ANNUAL BUDGET SUBMISSION

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ANDEAN REGIONAL PROGRAM

ABS NARRATIVE STRATEGY STATEMENT

BACKGROUND

During the past years the Latin American Bureau has assisted regional and subregional integration efforts in Central and South America and the Caribbean. Regional loan and grant activities in Central America and in the Caribbean are two of the Bureau's larger programs. This is in line with our Congressional Presentations which have identified as a major objective of the Latin American program the encouragement of regional and subregional integration to foster the growth of internal markets and overcome the diseconomies of small national scale.

The most important integration effort in South America has been that of the Andean Pact -- a subregional grouping comprised of Bolivia, Peru, Ecuador, Colombia, Venezuela and, until recently, Chile. Owing to technical and political difficulties associated with some of the Pact's early integration efforts, initial opportunities for AID participation in the Pact's activities were limited and our regional program in South America has been more modest than in other regions. To date AID support for Andean integration has included the following:

- Minor grant funds to the Andean Pact for technical advisors. Currently an FY 78 Andean Regional Integration Grant for \$100,000 will assist the Pact in designing and implementing regional projects. This grant should be fully obligated by the end of CY 78.

- AID also assisted in the establishment of the Andean Development Corporation (CAF) through a \$15.0 million loan approved in 1972 to be used for relending in the private sector for integration-related activities. The AID project has financed a number of large subloans for establishing and expanding industrial enterprises that could serve the subregional Andean market. The AID loan is

now nearing completion and it should be fully disbursed during 1978.

The Andean Pact has focused almost exclusively on removing trade barriers among member countries, developing a common foreign investment code and implementing regional industrial planning. The CAF has directed most of its financing to large private and public sector industrial enterprises and to some infrastructure projects. It has vigorously supported the Andean Pact's sectorial programs of industrial development and its underlying long-term objective of capital intensive import substitution. Until recently, very little Andean Pact attention and very little CAF financing have been directed to regional agricultural development or other programs that might directly address some of the fundamental problems of the poor in the Andean Region. Thus, since the establishment in 1973 of AID's New Direction legislation, it has been difficult to expand our Andean Regional Program. If no new Andean projects are initiated, AID's involvement with the Andean Pact and with the CAF will terminate in 1978.

During a recent project identification mission one of the Bureau's senior staff visited the Andean Pact offices in Lima and the CAF offices in Caracas for exploratory discussions on possible new AID initiatives for assisting Andean regional development and integration. These discussions followed an ARA sponsored conference in Lima on the future of the Andean Pact and President Carter's speech to the OAS in which he reiterated continued USG support for Andean integration. The combined events of the ARA Andean Pact Conference, President Carter's speech to the OAS and our project identification mission led to several requests from officials of the Andean Pact and the CAF for expanded AID assistance for Andean Regional Projects. Also, in his response to President Carter's OAS speech, the U.S. Ambassador to Peru recommended that "... AID move as rapidly as possible to expand its Andean Regional Program."

THE ANDEAN GROUP

The Andean Group was formally established in late 1969 with the signing of the Group's basic charter, the Agreement of Cartagena by the Governments of Bolivia, Chile, Colombia, Ecuador and Peru. Venezuela membership in the

Group was agreed upon in early 1973. The basic reason for the formation of the Group was to enable the member countries to compete on a more equal basis with the Latin American big three -- Brazil, Mexico, and Argentina -- and to accelerate the process of economic integration and development among member countries.

During the first five years of its existence, the Andean Group exhibited substantial harmony and dedication in both agreeing on integration programs and implementing them. Intra-regional trade barriers were substantially reduced and trade among the six Andean countries increased by more than 400% in the period 1969-75. Two major regional industrial allocation and development programs -- one in the metalworking industry and the other in the petrochemical industry -- were completed and implemented. A common Andean Foreign Investment Code (referred to as Decision 24) was agreed to by member countries and a legal framework was developed for promoting Andean Multinational Enterprises (Decision 46). The Andres Bello Convention covering the integration of the educational, cultural and scientific sectors was approved and was followed by Decision 84 that proposed, among other initiatives, an effort to promote Andean Regional scientific and technological development. During this period, the CAF rapidly developed into one of Latin America's most important Regional Development Banks and was increasingly able to attract international resources to meet the growing regional industrial development needs of member countries. Likewise, the Andean Pact developed a highly competent staff of more than 40 economists, engineers and regional planners who provide support for regional decision-making, planning and implementation mechanisms. In the period 1969-75, encouraged by the Andean Pact and the CAF, a positive integration momentum surged through the Andean Region.

However, in the past few years, the Andean Pact's early success has given way to a much slower pace of progress, as the difficulty of reconciling conflicting interests on such sensitive issues as industrial planning has proven considerably greater than anticipated. Likewise, the withdrawal of Chile from the Pact in October 1976 because of a dispute over the Pact's investment code and schedule for reducing tariffs -- plus Chile's fundamental disagreement with the Pact's import substitution strategy -- has greatly contributed to a major rethinking of the Andean Pact's previous development and integration strategy. As

most observers agree, Andean integration is at a critical turning point. The response to current problems could either lead to the stagnation of Andean integration or to the emergence of significant new opportunities for promoting the growth of South America's most important subregional grouping.

PROPOSED AID STRATEGY

A number of very preliminary new Andean Regional initiatives in agricultural development, nutrition improvement, science and technology development, environmental protection and regional training already appear to be emerging. We believe that these new ideas could represent the beginnings of a fundamental shift in the Andean Pact's previous development strategy and that USG support and the possible availability of future AID funding could make a critical difference in the further development of these new initiatives. The implementation of these new concepts could begin moving Andean integration towards a more balanced regional development strategy, encourage expanded concern for the poor and promote the implementation of less politically sensitive regional programs that would continue to reinforce the commitment of member countries to integration while the Pact's more ambitious efforts are being worked out.

A number of new Andean Regional projects that could be funded by AID beginning in FY 1979 and later have been identified. The overall purposes of this program would be to encourage Andean Regional initiatives in addressing new areas of regional concern such as agricultural development, rural poverty, nutrition improvement, environmental protection, natural resources planning, manpower training, science and technology development, and regional satellite technology utilization. This effort would demonstrate USG support for Andean development and integration as well as encourage the Andean Group to look beyond its narrow strategy of import substitution industrialization to a broader view of Andean Regional cooperation. Specifically, the AID strategy would be designed to serve the following basic purposes:

- Support the implementation of Andean Regional development and integration policies that can more effectively

deal with the Region's serious rural poverty problems.

- Encourage the development of policies and programs that will increase the productivity of the Andean Agricultural Sector, promote integration among the agricultural sectors of the five Andean countries and thereby encourage the Andean Pact and the CAF to implement a more balanced regional development and integration strategy.

- Assist the Andean Group develop organizational structures and implementing mechanisms for dealing with such new concerns as environmental protection, science and technology development, manpower training, agricultural crop insurance and satellite technology that are increasingly important developmental concerns.

- Develop regional programs that reinforce the commitment of member countries to regional cooperation and integration.

- Demonstrate USG support for Andean integration and for the human rights records of the Andean member countries.

Titles of Project Identification Documents and funding levels for Fiscal Years 1979 through 1981 are shown below:

Fiscal Year 1979

	<u>In Million \$</u>
Regional Agricultural Sector Development Loan	38

Fiscal Year 1980

Regional Science and Technology Development Loan	25
Regional Satellite Technology Transfer Loan	10

Fiscal Year 1981

	<u>In Million \$</u>
Regional Environmental and Natural Resource Sector Loan	20
Regional Manpower Development	10

Since these PIDs represent new initiatives for the Andean Pact, the CAF and for AID, several years of project development and analysis will be required if these projects are to be ready for authorization in the fiscal years shown above. PID approval is being requested now so that AID can move forward and encourage the Andean Pact/CAF to organize project development teams and begin undertaking the expensive and time-consuming studies and analyses that will be required to demonstrate the feasibility of particular projects. In addition, PID approvals are requested so that AID Project Development Teams can begin negotiations on these projects with the highest level officials of the Andean Pact and the CAF.

If the above loan program could be implemented, we believe that it would represent some fundamental shifts in the Andean Pact's development policies and that it would encourage the Pact to establish new programs and mechanisms for dealing with fundamental Andean regional problems that will continue well into the next several decades. Such an AID effort would represent a new USG commitment to Andean integration and it would allow AID to play a more creative and dynamic role in assisting Andean Regional Development and Integration.

Country/Program - Andean Regional

Table II

Funding Levels for FY 1977, FY 1978, FY 1979
(in 000)

	<u>FY 1977^{1/}</u>	<u>FY 1978</u>	<u>FY 1979</u>
Food/Nutrition	---	100	38,050
Grants	---	100	50
Loans	---	---	38,000
Population/Health	---	---	---
Grants	---	---	---
Loans	---	---	---
(Population)			
(Grants)			
(Loans)			
(Housing)			
(Grants)			
(Loans)			
Education	---	25	25
Grants	---	25	25
Loans	---	---	---
Relative Development Activities	---	300	300
Grants	---	300	300
Loans	---	---	---
Sub Total	---	425	38,375
Grants	---	425	375
Loans	---	---	38,000
Security Supporting Assistance			
Grants			
Loans			
Total	---	425	38,375
PL 800			
Title I			
Title II			
Housing Investment Guarantees			

^{1/} Reflects currently approved OYB.

ABS/CP SUMMARY - TABLE III

1. TRANSACTION CODE

A
 A = ADD
 C = CHANGE
 D = DELETE

2. ABS/CP

DOCUMENT CODE **6**

3. COUNTRY/ENTITY

Andean Regional

4. DOCUMENT REVISION NO.

5. OPERATIONAL YEAR FY

7 | 8

6. BUREAU/OFFICE

SYMBOL: LA B. CODE: [05]

7. GEOGRAPHIC CODE

[598]

8. TYPE DATA

1 = ABS 2 = ABS REVISION
 3 = CP 4 = CP NOTIFICATION

9. TYPE ASSISTANCE

1 = PROJECT
 2 = PROGRAM

10. PROJECT SEQUENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. STA. FOR. OBLIG.	13. EST. FY. AUTH. OBLIG. FINAL	14. AFF. PR. TION	15. PRIMARY PURPOSE CODE	16. LOAN GRAN. INDICATOR	17. BUDGETS IN \$ US			
							AY	QY	SY	LOP
0001	Regional Agricultural Sector		79	FN	189	L				
0000	Program Development and Support	4		FN		GC		300		
0000	Program Development and Support									
0000	Program Development and Support									

18. DATE DOCUMENT RECEIVED IN AID/W

MM | DD | YY
 | | 1 | 1 | 1 |

TABLE V - FY 1979 PROPOSED PROGRAM RANKING

RANK	DECISION PACKAGES/PROGRAM ACTIVITY/SUPPORT ITEM DESCRIPTION	DECISION UNIT	REVISOR	RESOURCE REQUIREMENTS				PROGRAM FUNDING	
				APPROPRIATE ACCT	FORMULA- MIS- SION OPERATING EXPENSES (000)	WAGE INCREASE		INCREMENTS (000)	CUMULATIVE
						US	FN		
	<u>Decision Package - Minimum:</u> Workforce and operating Expenses (Assuming no FT 1979 obligations)								
1	0001 Regional Agricultural Sector (L)	F/N		---	---	---	---	15,000	15,000
2	0000 Program Development and Support (GN)	F/N		---	---	---	50	15,050	
3	0000 Program Development and Support (GN)	SDA		---	---	---	100	15,150	
	<u>Decision Package - M - Expansion</u>								
4	0001 Regional Agricultural Sector (L)	F/N		---	---	---	10,000	25,150	
5	0000 Program Development and Support (GN)	EHR		---	---	---	25	25,175	
6	0000 Program Development and Support (GN)	SDA		---	---	---	200	25,375	
	<u>Decision Package - Proposed</u>								
7	0001 Regional Agricultural Sector (L)	F/II		---	---	---	13,000	38,375	

0

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE
 A A = ADD
 C C = CHANGE
 D D = DELETE

PID
 2. DOCUMENT CODE
 1

3. COUNTRY/ENTITY
 ANDEAN REGIONAL

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
 595-0001

6. BUREAU/OFFICE
 A. SYMBOL LA B. CODE 05

7. PROJECT TITLE (MAXIMUM 90 CHARACTERS)
 REGIONAL AGRICULTURE SECTOR

8. PROPOSED NEXT DOCUMENT
 A. 3 2 = PRP
 3 = PP
 B. DATE 01/17/9

10. ESTIMATED COSTS
 (\$000 OR EQUIVALENT, \$1 =)

FUNDING SOURCE	AMOUNT
A. AID APPROPRIATED	38,000
B. OTHER	
1. U.S. AID	
2. Andean Pact	53,000
C. HOST COUNTRY CONTRIBUTION	
D. OTHER DONOR(S)	15,000
TOTAL	106,000

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 a. INITIAL FY 79 b. FINAL FY 83

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) FN	100		100		38,000		38,000
(2)							
(3)							
(4)							
TOTAL					38,000		38,000

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)
 To increase the productivity and incomes of the Andean rural population with special emphasis on small farmers and the rural poor.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)
 To support the implementation of the Andean Region's first Agricultural Development and Integration Program and assist the Andean Pact/CAF develop planning and financing mechanisms for better dealing with the Region's serious agricultural and rural poverty problems.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
 One Ag. Economist/Planner (18 MM - \$50,000) - One LA/DR Agricultural Economist Short-term Project Specialists (18 MM - \$50,000) - One LA/DR Finance Officer

18. ORIGINATING OFFICE CLEARANCE
 Signature: Charles B. Weinberg
 Title: Associate Assistant Administrator for Development Resources Bureau for Latin America
 Date Signed: 06/25/77

19. DATE DOCUMENT RECEIVED BY AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION.
 MM DD YY

PROJECT IDENTIFICATION DOCUMENT
(PID)

ANDEAN REGIONAL AGRICULTURE SECTOR

I. STATEMENT OF THE PROBLEM

Since the establishment of the Andean Group in 1970 it has focused a major amount of its energy and attention on the removal of industrial trading barriers among member countries, the control of foreign investments and the promotion of an industrial development strategy that has emphasized capital intensive import substitution policies. Little or no attention has been directed to the problems of regional agricultural development or to the problems of rural poverty and growing income inequalities between the urban and rural areas of the Andean countries. Previous development policies of the Andean Pact and some of its member countries have tended to benefit large enterprises located in the urban/industrial and export sectors, while the rural economy has been virtually untouched by Andean Regional development and integration policies. With most of the countries of the Andean Group moving towards higher levels of industrial production and urban incomes, large elements of the Andean rural population have been left in impoverished living conditions or have been forced to migrate to urban areas. Previous Andean Pact policies have supported these trends and in a sense have accentuated the already skewed distribution of incomes and wealth in many of the Andean countries.

As a result of national and regional policies that have tended to favor capital intensive industrial development, the Andean Pact countries are confronted today by growing unemployment and large income inequalities, massive rural poverty and an agricultural sector that cannot provide the Andean population or its commercial/industrial sectors with sufficient agricultural commodities. Large segments of the Andean rural population have been virtually untouched by three decades of development and remain trapped in rural poverty. Likewise, one Andean country tends to grapple with its own agricultural problems in isolation from other member country programs, leading to needless duplication of efforts in areas such as agricultural research and lost opportunities to create regional mechanisms and expanded markets that could better support national agricultural development.

II. RESPONSE TO THE PROBLEM

As indicated in the ABS Strategy Statement, Andean integration is at a critical turning point. A rethinking of the Andean Pact's previous development and integration strategy is currently underway. There appears to be a growing awareness that to further the development of the Andean Region, which remains predominantly agricultural, there is a need to increase the productivity of the

agricultural sector, increase the employment and income of the rural agricultural labor force (including land-holding as well as landless small farmers) and achieve greater integration between the agricultural and industrial sectors. It is recognized that increasing the productivity of the Andean Agricultural Sector can also contribute to a more equitable distribution of income. The implementation of regional agricultural development and integration policies that adequately coordinate, support and influence national development programs are increasingly recognized as important elements in the further development of the Andean Agricultural Sector.

Representative of these new concerns within the Andean Region, in November 1976 the Ministers of Agriculture of Bolivia, Peru, Ecuador, Colombia and Venezuela met to discuss and analyze the Andean Agricultural Sector. From this conference emerged twenty-two recommendations for expanding regional agricultural development activities that taken together represent the formulation of the Andean Pact's first Agricultural Development and Integration Program. Working from studies and staff reports prepared by the Andean Pact, the Ministers of Agriculture recommended the establishment of a new Department of Agricultural and Livestock Development in the Andean Pact that can better plan, coordinate and prepare regional agricultural policies and programs. Other important actions encouraged the Pact to develop improved regional planning and statistics gathering, expanded mechanisms for better coordinating national agricultural development plans and programs, regional systems for the interchange and development of agricultural technical personnel, the development of improved rural technologies, the regional interchange of applied agricultural research and new planting (seed) materials, the development of expanded agricultural marketing infrastructure and mechanisms that promote greater intra-regional agricultural trade, studies for a regional agricultural crop insurance program and the promotion of regional agribusiness enterprises. Special emphasis was also attached to actions that would assist the agricultural sectors of the least developed countries of the Region -- Bolivia and Ecuador.

In January 1977 the Andean Pact staffed its new Department of Agriculture and Livestock. This Department began formulating a long range regional agricultural development plan and specific regional development and integration projects for the Andean Agricultural Sector. While the initial steps have been taken, the implementation of a new Andean Regional Agricultural Sector Program will be a major long term undertaking. Successful program implementation will require substantial political will, difficult policy changes and large infusions of capital and technical assistance to move the Andean Region towards a more balanced regional development and integration strategy that can effectively address the Region's serious agricultural and rural poverty problems. However, as with other Andean Regional initiatives, without adequate support, this new agricultural development program -- representing a significant shift in Andean Regional policies -- may never be implemented.

III. PROPOSED AID ANDEAN REGIONAL AGRICULTURAL SECTOR LOAN

This PID proposes to undertake an intensive review for an AID loan of up to \$38.0 million that would support the implementation of the Andean Pact's first Regional Agricultural Development and Integration Program. The goal of the loan will be to support the shift in Andean Pact policies toward agriculture and rural development and to increase the agricultural productivity of the Andean Agricultural Sector with specific emphasis on regional activities benefitting small farmers and the rural poor. The purposes of the program will be:

-- to develop a regional agricultural planning and policy-program coordinating capacity in the Andean Pact that can create a policy environment favorable to regional agricultural development and integration and encourage efforts that will deal with the Region's serious rural poverty and agricultural problems,

-- to establish regional agricultural development mechanisms in areas of critical concern for the rural poor that can better support national level agricultural and rural development programs and promote the integration of the Agriculture Sectors of the five Andean countries,

-- to develop improved marketing systems, facilities and infrastructure that can encourage the expansion of intra-regional trade in Andean agricultural commodities with special emphasis on small farmer products,

-- to develop integrated agribusiness activities that promote regional agricultural integration as well as provide benefits to the rural poor.

IV. SECTOR PROGRAM DESCRIPTION

While the intensive review for this sector loan will further define the structure and components in this program, it is expected that AID funding will be provided for activities in the following areas:

1. Regional Agricultural Planning and Coordination: In late 1976 the Ministers of Agriculture of the five Andean countries encouraged the Andean Pact to move more aggressively into supporting regional agricultural development programs and recommended that a new Agricultural Department be made operational to plan and coordinate such activities. It is expected that this new Department would prepare the Region's agricultural development and integration plans, improve coordination among member country agricultural planning, reduce duplication of efforts among member country agriculture research efforts, expand the interchange of information about agricultural programs, formulate policies for promoting agricultural integration and create for the Andean Agricultural Sector the type of planning mechanisms that the Pact has already established for the industrial sector. Such a unit could be a vehicle for not only proposing policies and

programs that highlight the regions serious rural poverty problems, but if adequately structured and funded, it could encourage improved national level agricultural and rural development policies that better address the problems of the poor. AID loan funding of up to \$2.0 million will be provided to assist the Andean Pact establish and make operational its regional agricultural planning and coordination mechanisms. AID loan funds will finance technical advisors, management consultants, some commodities and special studies needed to carry out this activity. The intensive review will determine how this planning effort can best be coordinated with the planning efforts being undertaken by IICA.

2. Regional Agricultural Training and Interchange of Technical Personnel: Some Andean countries continue to be plagued by major shortages of agricultural technical personnel while other countries in some field have agriculturally trained personnel who are employed outside of agriculture or who are under-employed in agriculture. In addition, there appears to be an overall lack of trained personnel particularly in the least developed countries of the Region. The Pact believes that regional mechanisms that could facilitate the flow of agricultural technical personnel among Andean Pact countries both for short and long term assignments and increase the overall quantity of trained Andean agricultural technical personnel could make a major contribution to both regional agricultural development and integration. AID loan resources of up to \$3.0 million will assist the Andean Group develop a pilot effort to establish a data bank of qualified agricultural technical personnel and consulting firms, develop mechanisms to facilitate their use in member country agricultural programs and expand the training of agricultural personnel based on a regional manpower development plan for the Andean Agricultural Sector. AID funding will place special emphasis on the training and interchange of technical personnel required for programs that benefit the rural poor.

3. Regional Appropriate Small Farmer Technologies: There is a growing awareness in all five of the Andean countries that improving the efficiency of farm operations requires, in the first instance, improving the choice of farm technology since technology mediates and embodies the factor relationships of land, labor and capital in any economic activity. As factor endowments vary from farm to farm so must the optional combination of these factors and hence technology. There is a growing recognition that there is a need to develop within the Andean Agricultural Sector a capacity for identifying and developing a wider range of farm technologies and to select appropriate technologies for each of a number of types of farming enterprises that are found throughout the five Andean countries. While some initiatives in this area have already been started by national level governments, there is no regional mechanisms that can coordinate these efforts and facilitate the regional dissemination of innovative results. The AID loan will provide the Andean Pact with up to \$3.0 million to initiate a program for evaluating work on developing small farmer technologies in the Andean countries, disseminate results among member countries and contract with national level or other institutions for development work on new technologies in the context of a regional plan for small farmer technology development. The intensive review will also investigate the feasibility of this effort eventually leading to the establishment of an Andean Center for the Development of Appropriate Small Farmer Technologies.

4. Regional Agricultural Crop Insurance: One of the most important actions to be produced by the 1976 meeting of the Andean Ministers of Agriculture was a recommendation to the Andean Pact and to the CAF to initiate studies that might lead to a regional system of agricultural crop insurance. Increasingly national level governments are recognizing the importance of crop insurance systems for encouraging agricultural production and developing the small farmer subsector of national economies. The proposed AID loan will provide up to \$2.0 million to enable the Andean Pact and/or the CAF to assist member countries develop national crop insurance systems. This effort will initiate the first phase of a program that may eventually lead to a regional crop reinsurance system to be established in the CAF. Funding will be provided for technical advisors in crop insurance and perhaps some seed capital for initiating national crop insurance programs. Special attention will be directed to designing programs that can benefit the Andean small farmer subsector. The intensive review will determine how best to coordinate this effort with the LA Region Agricultural Crop Insurance Project.

5. Regional Agricultural Marketing Information and Trade: While Andean Integration has greatly facilitated expanded intra-regional trade in industrial goods only a small proportion of this trade has involved products from the agricultural sectors of member countries. Thus, the advantages of regional integration have not yet been translated in any great extent into expanded demand and higher incomes for the Andean agricultural sector. The agricultural sectors of most member countries continue to experience major production deficits in critical areas while surpluses in some commodities often cannot find markets at acceptable prices. Narrow markets limit agricultural production and place particular hardship on the small farmer subsector. Until recently each country has attempted to grapple with its own agricultural marketing problems in isolation although a number of member countries (e.g., Venezuela) are beginning to look to the Andean Region as a major source of -- or market for -- agricultural commodities. While the entire area of intra-regional Andean Agricultural Trade is complex and requires additional study during intensive review, the Andean Pact believes that lack of agricultural marketing information among member countries, national level policies and lack of marketing credit and promotional facilities to encourage intra-regional trade are some of the critical constraints to increasing agricultural trade among member countries and improving the conditions of the small farmer subsector.

Based on a detailed analysis of Andean regional agricultural trade constraints, the AID loan will assist the Andean Pact and the CAF develop a Regional Agricultural Marketing Information System that can build upon, expand and better coordinate national level marketing information systems and develop through the CAF expanded marketing credit and promotional mechanisms for facilitating regional agricultural trade with emphasis on small farmer products. Up to \$5 million of the AID loan will be used for technical assistance and commodities for a regional marketing information system and technical assistance for intra-regional agricultural trade promotion. It is expected that the CAF will provide necessary credit resources for this element of the program.

6. Regional Agricultural Marketing Infrastructure: While the development of the Andean Region's infrastructure network has been rapidly advancing during the past two decades, increasing concern has been raised that sufficient attention has not been given to the construction of integrated facilities that could promote the flow of agricultural production in one country to marketing centers in another country. The CAF has identified several areas where inter-related infrastructure projects (a frontier road network bordering two Andean countries, rural airports, small seaports, etc.) could open up new intra-regional markets for small farmers and encourage the expansion of agricultural production. Up to \$8.0 million of AID loan funds will be combined with CAF funds to initiate a pilot effort for constructing agricultural marketing infrastructure for servicing two or more Andean countries that will assist small farmers expand their marketing and production opportunities.

7. Regional Agro-Industrial Development Fund: Concentration on capital intensive industrial development in urban areas has been a major focus of previous Andean Pact policies and programs. As noted above little attention has been directed to agricultural development or to the promotion of regional agribusinesses. However, there is growing awareness that increasing the productivity of the Andean Agricultural Sector is vital for future development and for dealing with the Region's serious rural poverty problems. Andean Pact studies seem to confirm that the development of integrated agribusiness enterprises that encompass all the participants in the production, processing and marketing process offer one of the most promising development strategies for increasing agricultural productivity. A preliminary review appears to indicate that a number of agricultural products for which potential intra-regional and foreign markets exist are not at present economically exportable because of various inter-related deficiencies in the production, processing and marketing chain for a particular product. For example, in some cases it may be lack of storage facilities; in others, refrigerating or freezing capacity; in others transportation or farm suppliers. The existence of one or more of these types of bottlenecks could doom a potentially profitable agribusiness investment opportunity. However, profitability may only be apparent in the context of an integrated system.

The Andean Development Corporation has recently initiated a new development strategy to promote the expansion of vertically integrated agribusiness enterprises in accordance with the above concepts. It is expected that four categories of agribusiness projects may be financed as follows: 1) agribusiness enterprises that serve Andean Regional markets, 2) agribusiness enterprises composed of stockholders from two or more Andean countries, 3) successful national agribusiness enterprises that are prepared to expand into a second Andean country and 4) multinational agribusiness enterprises along the frontiers of two Andean Pact countries that must operate in both countries to be feasible. It is expected

that the CAF will provide debt and/or equity funding and technical assistance for the development and expansion of such enterprises. Up to \$15.0 million of AID loan funds will be provided for an Agribusiness Development Fund to be established in the CAF. The intensive review for this project will also investigate possible LAAD participation in this effort.

V. FINANCIAL PLAN

While the intensive review for this project must determine the final structure and financing for this sector program, it is expected that AID loan funds and Andean Group counterpart resources will be allocated to program components approximately as indicated below:

<u>Program Activity</u>	<u>AID</u>	<u>Andean Pact Countries</u>	<u>Private Sector</u>
1) Regional Agricultural Planning and Coordination	\$2.0	\$2.0	-
2) Regional Agricultural Training and Interchange of Technical Personnel	3.0	3.0	-
3) Regional Appropriate Small Farmer Technologies	3.0	3.0	-
4) Regional Agricultural Crop Insurance	2.0	15.0	-
5) Regional Agricultural Marketing Information and Trade	5.0	10.0	5.0
6) Regional Agricultural Marketing Infrastructure	8.0	5.0	-
7) Regional Agribusiness Development	<u>15.0</u>	<u>15.0</u>	<u>10.0</u>
TOTAL	\$38.0	\$53.0	\$15.0

It is expected that program funds will be disbursed over a five year period (1980-84) and program activities will be administered by both the Andean Pact and the CAF. While the intensive review will further investigate the feasibility of particular AID loan terms, it is expected that the PP will recommend loan terms of 25 years for those credit elements of the sector program and 30 years for those elements that will finance technical assistance, training and institutional building aspects of the program.

VI. PROGRAM PREPARATION AND DOCUMENTATION

Upon the approval of this PID, discussions will be initiated between AID and the highest officials of the Andean Pact and the CAF. AID will express its willingness to consider funding a program such as the one described above provided that studies and analyses during the intensive review indicate that the final program proposal is feasible and acceptable to the Andean Group countries. This program will be developed in two stages as follows:

-- First, a Program Development Team of Andean Pact, CAF and AID Officers will be established to review all major regional agricultural studies, reports and national level sector assessments. From this work the Andean Pact/CAF will be requested to prepare an Andean Regional Agricultural Sector Assessment that will identify and analyze the major regional constraints to increasing agricultural production, improving the small farmer subsector and dealing with the Region's serious rural poverty problems. A special section of this assessment will focus on required policy changes at both the regional and national level. Based on this Sector Assessment and a Progress Report on Program Design will be presented for AID/W review by June 1978.

-- Second, based on the above reviews, final analyses will be completed for the Project Paper. The PP should be ready for final AID/W review by January 1979, although the PP could possibly be ready for late FY 78 authorization.

It is expected that LA/DR will continue to function as the USAID Mission for the Andean Regional Program and that it will assign an Agricultural Officer and a Finance Officer to work on the development of this program. It is also expected that up to \$100,000 in FY 78 Project Preparation and Technical Support Funds will be necessary for the following: (1) One high level contract Agricultural Planner and Economist to work with the Andean Pact/CAF in the development of this program over the next 18 months (\$50,000) and (2) short-term contract personnel for various aspects of program analysis (\$50,000).

PROJECT IDENTIFICATION DOCUMENT FACESHEET

TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE

A = ADD
 C = CHANGE
 D = DELETE

PID

2. DOCUMENT CODE

3. COUNTRY/ENTITY

Andean Region

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)

6. BUREAU/OFFICE

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)

[] []

A. SYMBOL B. CODE

Regional Science and Technology Develop.

8. PROPOSED NEXT DOCUMENT

A. 2 = PRP
 3 = PP

B. DATE 10/7/80

10. ESTIMATED COSTS

(\$000 OR EQUIVALENT, \$1 =)

FUNDING SOURCE		AMOUNT
A. AID APPROPRIATED		25,000
OTHER	1. Andean Pact	
	2. U.S.A.I.D.	
A. HOST COUNTRY	Andean Pact/CAF	25,000
B. OTHER DONOR(S)		10,000
TOTAL		60,000

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION

a. INITIAL FY 80 b. FINAL FY 84

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 79 or 80		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1)					25,000		25,000
(2)							
(3)							
(4)							
TOTAL					25,000		25,000

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)

To improve the capacity of the Andean Pact countries to select, generate and adapt technology with special emphasis on technologies that can improve the productivity and quality of life of small farmers and the rural and urban poor.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)

To assist the Andean Pact/CAF develop improved mechanisms for developing the scientific and technological resources of the Andean region and utilize these resources for addressing public and private sector research requirements related to the critical development problems of the region.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)

One Science and Technology Planner (24MM \$80,000) One AID Science & Technology Officer
 Short-Term Consultants (5MM \$20,000) One LA/DR Finance Officer

18. ORIGINATING OFFICE CLEARANCE

Signature: Charles B. Weinberg
 Title: Director
 Office of Development Resources
 Bureau for Latin America

Date Signed: 10/6/80

19. DATE DOCUMENT RECEIVED BY AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

PROJECT IDENTIFICATION DOCUMENT
(PID)

ANDEAN REGIONAL SCIENCE AND TECHNOLOGY DEVELOPMENT

I. STATEMENT OF THE PROBLEM

Since the establishment of the Andean Pact in 1970, one of the central concerns of its policy debates has been the need to improve the Andean Region's control of -- and access to -- technology, and the need to develop the Region's scientific and technological resources. That science and technology have a critical role to play in the development process is now part of the conventional wisdom in the Andean Region. However, while in recent decades the Andean countries have experienced rapid rates of economic growth, nearly all of the technological advances that have contributed to this growth process have been of foreign origin. Confined to the most rapidly available and easily applicable technologies, these imported advances have been incorporated into the production system with little or no adaptation. Little progress has been made in the local production of new techniques required for economic growth or for dealing with the Region's serious poverty problems.

Thus the process of technological change in the Andean countries has not been paralleled by an internal capacity for generating technical knowledge. Otherwise stated, the Andean countries are dependent for technical change upon the results of research developed abroad. In terms of its capacity to meet the research needs of its many development problems, the Andean countries are very underdeveloped despite the dimensions of their industry and the many institutions dedicated to scientific and technical activities.

The Andean dependence on foreign scientific and technological research and the weakness of local research institutions can be viewed as one result of the intensive process of import substitution industrialization which greatly neglected the development of an indigenous ability to select, generate and adapt technology. With too few exceptions, both the public and private sectors either buy expensive foreign technology (often poorly selected and inadequately adapted) or they drift into technological obsolescence. On the other hand, the universities and technological institutes in the Region go on performing research for its own sake (much of which is irrelevant for Andean problems) unaware of or indifferent to the critical development needs in the Region.

II. RESPONSE TO THE PROBLEM

The Andean Pact countries have become increasingly concerned about their dependence on technologies developed abroad. A lagging scientific and technological structure has come to be viewed by the

Andean Pact as a critical bottleneck. First, because it impedes the improvement of the competitive capacity of industry and deters continued growth and employment expansion. Second, lagging indigenous technology development often results in the misallocation of resources. Since most of the technology imported by Andean countries came from the U.S. and Western Europe, it tends to be labor-saving while the Andean countries have a rapidly expanding labor force. Third, the Region's critical development and poverty problems in areas such as nutrition improvement, agricultural and rural development, health care, rural education, employment generation, natural resources development, environmental improvement, and management sciences require the development and dissemination of new technologies that respond to local factor endowments and local needs. Four, continued dependence on foreign sources of technological development restricts the formation of a local Andean scientific and technological infrastructure that can select, adapt and generate technology as well as better control technology transfers from abroad. And lastly, technological dependence accentuates conflict between the Andean countries and foreign sources of technology.

In response to some of these problems, the Andean Pact has initiated several important actions during the past several years. In 1974 the Pact established in its Decision 84 the basis for an Andean Regional policy on scientific and technological development. This policy statement discusses the importance of science and technology for the development and integration of the Andean Region and recommends to member governments expanded controls over the importation of foreign technology, improved mechanisms for the adaptation and assimilation of technology and the need for the Region to expand its ability to generate new technologies responses to local needs. Decision 84 also mandated the Andean Pact to initiate regional projects for the development of technologies required in two or more Andean countries and led to the establishment of the Andean Pact's Technology Department which is to plan, coordinate and implement Andean Technology Development Projects (PADTs).

To date, the Andean Pact's Technology Development Department has concentrated its major attention on the planning and implementation of PADTs. These projects typically identify a regional technological problem, mobilize public and/or private sector institutions in two or more Andean countries to work on the problem with the Andean Pact providing funding and overall coordination. Typically the nature of the technological problem being addressed requires the use of public and/or private sector institutions in two or more of the Andean countries because of the limited availability of technical and scientific resources in any one country. To date, projects for developing new technologies for exploiting tropical forests and technologies for small copper mines have been initiated. A large effort to deal with the Region's serious nutrition problem through the development of new low cost food products and the development of the production and marketing technologies for these products is currently awaiting funding. Other PADTs in the areas of appropriate rural technologies and health care are in early planning stages.

The Andean Pact sees these initial PADTs as pilot projects in regional technological development that will evolve into a regional system that will develop stronger linkages among the Region's universities, research institutes and the public and private sectors. To date, the private and public sectors are not using the available research capability to the degree potentially possible. Nor are the universities and the technology institutes oriented or equipped to provide services to industry and to the public sector. In a number of very limited and experimental cases the Pact has filled this gap with its PADTs by bringing together private-public sector research requirements with available research facilities. However, it is felt that the Pact should eventually develop a system that identifies basic technological problems and opportunities and then assists the public or private sector in meeting their needs through contracts with competent research institutes or university research departments in one or more Andean Pact countries.

III. PROPOSED AID ANDEAN REGIONAL SCIENCE AND TECHNOLOGY DEVELOPMENT LOAN

This PID proposes to undertake an intensive review for an AID loan of up to \$25.0 million that would assist the Andean Pact implement a system for developing the Region's scientific and technological capacity and directing these resources to address problems affecting small farmers and the rural and urban poor. The project would encourage the development of linkages among the universities, research institutes and private and public sectors throughout the Andean Region. It would encourage suppliers of technology to be more responsive to the needs of the private and public sectors, particularly as these relate to research requirements for addressing the problems of the poor. In turn, it would encourage the public and private sectors to use local universities and research institutes for dealing with technological problems that can affect the poor. In other words, the proposed system will aim to increase the capacity of selected universities and research institutes to supply technological solutions to critical Andean development problems. At the same time, a program will be undertaken to increase the demand for these new technological services in both the public and private sectors.

The goal of the proposed program is to improve the capacity of the Andean Pact countries to select, generate and adopt technology with special emphasis on technologies that can improve the productivity and the quality of life of small farmers and the rural and urban poor. The purposes of the program will be as follows: (1) to assist the Andean Pact expand regional planning and coordinating mechanisms for science and technology development; (2) to improve the capacity of selected local universities and research institutes to respond to demands from the Andean public and private sectors for work on technological problems related to the poor; and (3) to encourage public and private sector enterprises to utilize local suppliers of technology for addressing critical development problems.

IV. PROGRAM DESCRIPTION

While the intensive review for this loan will further define the structure and components of this program, it is expected that AID funding will be provided for activities in the following areas:

1. Regional Science and Technology Planning: Up to \$5.0 million of the AID loan will be provided to assist the Andean Pact further develop its institutional capacity for doing regional science and technology development planning. A regional science and technology development plan will be prepared, priorities will be established for technological development, an inventory of all major research projects and institutions in the Andean Region will be developed, coordinating mechanisms among national level science and technology development programs and policies will be established, special studies will be undertaken for establishing regional and national policies in various areas of science and technology development, studies that identify critical poverty problems that can be addressed by the Region's research institutions will be financed and regional conferences of scientists and technologists will be organized. The intensive review will also investigate the possibility of encouraging the formation of a private sector Andean Academy of Science and Technology to serve as an Advisory Group to the Andean Pact. AID loan funding will provide for technical advisors, management consultants, some commodities, special studies and possibly some consulting contracts between the Andean Pact and the National Academy of Sciences and U.S. universities.

2. University and Research Institution Upgrading: Up to \$10 million of the AID loan will be provided to improve the capacity of selected universities and research institutions to provide services required by public and private sector entities throughout the Andean Region. Institutions targeted for AID assistance will be those that have a capacity or a desire to do research related to critical problems affecting the AID target group of small farmers and the rural and urban poor and who are prepared to respond to demands from any public or private sector entity in the Andean Pact. While specific research requests will be generated by public and private sector entities, the types of projects might involve the following: formulation of high protein low-cost foods that can effectively deal with the Region's nutrition problem, production and marketing technologies for these low-cost food items, means of improving the traditional foods consumed by the poor, the development of small farmer technologies appropriate for the Andean Region, research for developing efficient labor intensive technologies or converting highly capital intensive production processes to more labor intensive processes, new technologies for delivering rural health services and education to the poor, improved means of managing large pools of agricultural labor, etc. The intensive review will identify specific institutions that will be targeted for assistance and the AID loan will provide for technical assistance, management consultants,

and contracts with U.S. universities and research institutions to help build up the capacity of selected institutions to respond to research demands throughout the Region. It is expected that a counterpart contribution of at least \$10 million will also be provided by the Andean Pact countries.

3. Credit Fund for Research and Development: This credit fund will provide financial incentives to encourage public and private sector entities to contract with Andean R&D facilities for specific technological development activities. Projects might involve P&D assistance to enterprises in adopting new, nonconventional employment generating technologies. Other types of projects might involve R&D contracts to develop new products that deal with a critical development problem for AID's target group. While specific subproject selection criteria will be developed during the intensive review, all subprojects to be financed will have a direct or indirect impact on the AID target group. It is expected that this credit fund will be administered by the CAF and that a counterpart contribution of at least \$10 million be provided to the CAF by the Andean Pact countries.

V. FINANCIAL PLAN

While the intensive review for this project must determine the final structure and financing for this sector program, it is expected that AID loan funds and Andean Group counterpart resources will be allocated to program components approximately as indicated below:

<u>Activity</u>	<u>AID</u>	<u>Andean Pact Countries</u> (In millions of \$)	<u>Private Sector</u>
Regional Science and Technology Planning	5.0	5.0	-
University and Research Institution Upgrading	10.0	10.0	5.0
R&D Credit Fund	<u>10.0</u>	<u>10.0</u>	<u>5.0</u>
Total	25.0	25.0	10.0

It is expected that program funds will be disbursed over a five-year period (1980 or 1981 to 1985) and program activities will be administered by both the Andean Pact and the CAF. While the intensive review will further investigate the feasibility of particular AID loan terms, it is expected that the PP will recommend loan terms of 25 years for the credit component of the program and 30 years for those elements that will finance technical assistance, training and institution building.

VI. PROGRAM PREPARATION AND DOCUMENTATION

Upon the approval of this PID, discussions will be initiated between AID and the highest officials of the Andean Pact and the CAF. AID will express its willingness to consider funding a program such as the one described above provided that studies and analyses during the intensive review indicate that the final program proposal is feasible and acceptable to the Andean Group countries. The program will be developed in two stages as follows:

- First, a Program Development Team of Andean Pact, CAF and AID officers will be established to review all major regional science and technology policies, reports and national level programs and assessments. From this work the Andean Pact/CAF will be requested to prepare a Regional Science and Technology Development Plan for 1980-85 that will identify critical program constraints and identify how the Region's scientific and technological resources can be mobilized for addressing the problems of the AID target group. A special section of this plan will focus on required policy changes at both the regional and national level. Based on this plan, a more refined program design will be developed. Both the Regional Science and Technology Development Plan and a Progress Report on Program Design will be presented for AID/W review by December 1978.
- Second, based on the above review final analyses will be completed for the Project Paper. The PP should be ready for final AID/W review by October 1979, although the PP could be ready for authorization in FY 79.

It is expected that LA/DR will continue to function as the USAID Mission for the Andean Regional Program and that it will assign a Science and Technology Officer and a Finance Officer to work on the development of this program. It is also expected that up to \$100,000 in FY 78 and FY 79 Project Preparation and Technical Support Funds will be necessary for the following: (1) one full-time contract Science and Technology Planner to work with the Andean Pact over the next two years in the development of this program (\$80,000), and (2) short-term contract personnel for various aspects of program analysis (\$20,000).

PROJECT IDENTIFICATION DOCUMENT FACESHEET

TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE

A = ADD
 C = CHANGE
 D = DELETE

PID

2. DOCUMENT CODE

3. COUNTRY/ENTITY
ANDEAN REGIONAL

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
595-00

6. BUREAU/OFFICE
A. SYMBOL LA B. CODE 05

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)
Satellite Technology Transfer

8. PROPOSED NEXT DOCUMENT

A. 3 2 = PRP
3 = PP

B. DATE 06/80

10. ESTIMATED COSTS

(8000 OR EQUIVALENT, \$1 =)

FUNDING SOURCE		AMOUNT
A. AID APPROPRIATED		10,000
B. OTHER		
C. HOST COUNTRY		10,000
D. OTHER DONOR(S)		
TOTAL		20,000

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION

a. INITIAL FY 80 b. FINAL FY 80

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 80		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) SDA	750	-	874	-	10,000	-	10,000
(2)							
(3)							
(4)							
TOTAL					10,000	-	10,000

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)

To alleviate communications and transportation constraints to rational natural resource utilization, provision of basic services to isolated communities, and and effective disaster relief.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)

To create an indigenous capability in the Andean countries to utilize satellite technologies for development objectives.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)

150 work-days: \$50,000 from FY 78 Regional Remote Sensing grant.

18. ORIGINATING OFFICE CLEARANCE

Signature: Charles B. Weinberg
Title: Associate Assistant Administrator
for Development Resources
Bureau for Latin America

Date Shipped
MM DD YY
07 01 77

19. DATE DOCUMENT RECEIVED BY AID/W, OR FOR AID/W DOCUMENTS. DATE OF DISTRIBUTION

MM DD YY

PROJECT IDENTIFICATION DOCUMENT

ANDEAN REGIONAL

SATELLITE TECHNOLOGY TRANSFER

Statement of the Problem

The harsh and varied geography of the Andean subregion presents serious obstacles to economic and social development. The rugged terrain of the Andes mountains and dense jungle forests pose formidable obstacles to natural resource assessment and exploration. Severe climatic conditions present a constant threat of crop failure and flooding. Geological formations make the subregion vulnerable to earthquakes and landslides.

All of these problems are exacerbated by a relative lack of basic communication and transportation infrastructure. The geography of the subregion itself is an impediment to developing this infrastructure. The costs of building ground transportation and communication links over such inhospitable terrain are prohibitive. Yet the development of such links is essential to rationalizing investment decisions, rapid and effective disaster relief, delivery of basic health and education services, and prompt response to threatened crop failure due to drought or flooding.

In recognition of these constraints, a number of Andean countries have expressed interest in utilizing modern satellite technologies as a less costly and more immediate substitute for essential transportation and communications links. Such advanced technologies are, however, beyond their means to develop independently. Since relevant and accessible satellite technologies are the sole property of the US Government, they can only be acquired through a direct technology transfer, to which the US has made a repeated commitment in recent international discussions. The transfer of satellite technology in communications, resource assessment, and disaster prediction and assistance is a uniquely responsive effort to directly address the needs of the less developed world through the sharing of the benefits of US technology.

Response

This PID proposes to finance a project to address these constraints to rational natural resource utilization, provision of basic services to isolated communities, and effective disaster relief. The purpose of the project will be to create an indigenous capability to utilize satellite technology for development objectives. This will be done by establishing a remote sensing and satellite communications center in the Andean region to service member country needs. This center will have the capability to utilize remote sensing data from satellites and aircraft which would

permit the Pact members to explore for new mineral sources, monitor the extent of deforestation on the eastern slopes of the Andes, as well as other land use practices indicative of human development, and map coastal and jungle resources. The Pact's capability to extend both the technology as well as products generated from it to central governments would be provided by the development and implementation of a satellite educational communications facility at the remote sensing center. Both the remote sensing center and the communications system would permit the Andean Pact to deal with physical resource problems of direct relevance to all member countries.

The indicators objectively verifying the end of project status are:

1. The Regional Center is operating with a Landsat data processing facility, photographic dark room image archiving facility, Computer Compatible Tape (CCT) and map files, a photogrammetric, mapping, and surveying laboratory, a drafting and map preparation room, a classroom and a research laboratory with offices.
2. The Center is capable of processing and interpreting, with a minimum of external help, remote sensing data by visual and computerized techniques. For example, the Center will be able to acquire Landsat CCT's on its own, and generate land cover maps of relevant interest.
3. The Center provides ON-THE-JOB (OTJ) training, promotional activities (newsletter and outreach), and a remote sensing library with a Landsat browse file.
4. The Center's satellite communications system is capable of assisting local governments develop systems for transmitting educational, medical diagnostic, and remote sensing information to rural outlying areas and national governmental centers in near real time.

Project Description

Outputs: There are four major outputs describing how the purpose of the project; i.e., the development of a viable regional remote sensing technology and satellite center, is to be achieved:

1. The Center generates classified land cover computer tapes and colored map products by processing and interpretation of remote sensing imagery data.
2. The Center provides instruction, training, and research in remote sensing analysis and satellite communications.

3. The Center maintains a communications link, via satellite and other media, to NASA, the USGS, and other U.S. institutions of competence in remote sensing, education, and communications.

4. The Center can assist governments to develop systems that maintain communications links via satellite and other media, to outlying villages and national capitals or other governmental centers.

General output magnitudes can be realized by the following Center capacity:

1. 10 Landsat scenes processed per day
2. storage facility for 1,000 CCT's
3. 100 sq. ft. for map storage
4. visual analysis equipment: one each of color additive viewer, density slicer, zoom transfer scope, and rear view projector
5. class and lab-workroom for 10-12 students
6. offices for staff of 4 professionals
7. 1 photogrammetric stereocompiler
8. 1 audio-visual lab. - 3 projectors, 3 tape recorders
9. 2 office duplicators
10. 1 interactive digital processing system
11. 4-wheel drive vehicle
12. access to 1 aircraft with remote sensing equipment
13. complete surveying equipment
14. other as necessary

Inputs: Technical and physical resource inputs consist of an A.I.D. loan for funding of the institutional development by means of training, technical assistance, and equipment. The Andean Pact or the Andean Development Corporation (CAF) would match this loan providing funds for land lease and/or purchase, and construction of laboratories and other facilities associated with the Center. Member countries of the Pact would initially fund salaries of the remote sensing trainees from their respective countries; later they would be expected to contribute to the annual operating costs of the Center.

The staff for the Center would consist of one Director, two Assistant Directors (one for remote sensing, the other for communications), and four staff for research and training. Up to ten man years of technical assistance by US experts in remote sensing and satellite technologies will be provided during the life of the project.

Assumptions: The critical assumptions for providing these inputs are the approval of the Project Paper for this Center and the cooperation of the CAF, the Andean Pact, and by the fifth year, representative governments of the Pact.

For achieving the stated outputs, the basic assumptions are:

1. That remote sensing data, aircraft and/or satellites, will be available for applications in areas of interest;
2. That US and/or other communications satellites will cover the Andean countries and be accessible by them during FY 78-83;
3. That NASA and the USGS will be cooperative in helping to transfer the latest aerospace technology to the Andean Center.

Even more critically, the basic assumptions upon which the stated purpose, i.e., the Center, hinge are:

1. That individual member countries will provide qualified personnel for training and eventual staffing of the Center;
2. That member governments will budget funding for the annual operating costs of Center facilities;
3. That the Andean Pact and the Andean Development Corporation remain strong regional entities and expand their integration efforts;
4. That interest and special contributions can be solicited from member countries;
5. That the Center has access to good ground communications and transportation facilities; and
6. That ties between the Center and educational and/or user organizations can be quickly established.

Verification of End-of-Project Status and Outputs: The end-of-project status (EOPS) and project outputs will be verified in the following manner:

1. Inspection of Center facilities, records, and images and maps produced;
2. Post evaluation of former students' performances on the job after receiving instruction at the Center;
3. Center records inspection and inventory of Landsat scenes processed per day;
4. Check on resource statistics (such as acres of agricultural crops) generated by Center against national statistics gathered by conventional field methods;
5. Assessment of the Center's outreach activities by surveys of intra-country resource planners who would generally need to use remote sensing data; and

6. A communications demonstration via an available satellite.

Alternatives: The various alternatives to this project are: (1) establish the Center under the auspices of the Department of Technology of the Andean Pact; (2) establish an autonomous Center independent of any regional or governmental group; (3) establish the Center under the Andean Development Bank directly; and (4) establish the Center under a viable and interested national agency, such as GEOBOL (Geological Survey of Bolivia).

Alternative (1) appears to be the optimum in that the Department of Technology has the scientific breadth to understand the complex issues related to the development of the Center. It is headed by a dynamic and enthusiastic individual with whom preliminary discussions of the Center have been made. The Andean Pact probably represents the extent of political muscle that exists for regional development.

Alternative (2) would most probably lead to very difficult years at the beginning of the project -- there would probably be little political interest and few matching funds. The universities would probably represent the only technically interested agencies.

Alternative (3) would be somewhat unwieldy since the Bank, as a lending institution, would probably prefer not to get involved in technical matters related to the Center and, if it did so, could make decisions detrimental to the Center's interest. A counter-argument is of course the World Bank, which does perform remote sensing for the developing countries. However, the remote sensing staff have had difficult times dealing with the Bank's Directors and have been quite limited in the scope of the projects which they have been able to undertake.

Alternative (4) would result in a national center which, in the example given, would orient the remote sensing applications to Bolivia's needs at the expense of natural resource requirements for the region. It must be pointed out, however, especially in the example given, that a more immediate reception could be expected from a national agency such as GEOBOL which has been extensively involved in remote sensing applications for many years and already possesses much of the equipment and capability needed at the Regional Center.

Spread Effect: This project is in itself a result of a spread effect, i.e., the AIDSAT demonstration and follow-on which have encouraged several developing countries to request A.I.D. technical assistance in establishing regional remote sensing centers. In the case of the Andean countries, Bolivia and Peru have both already made strong requests to A.I.D. for the purpose of locating the Latin American regional remote sensing and user assistance centers in each of their respective countries. The concept of the regional remote sensing center described herein encompasses strong linkages and

network system by which the technology of remote sensing, and its applications in resource monitoring and crop production estimating, are transferred to national agencies responsible for planning for the food and fibre needs of the very poor.

Financial Requirements

This project is expected to cost an estimated \$20 million, and require a five-year disbursement period. A.I.D. would provide a \$10 million loan directly to the Andean Development Corporation which would match these funds for a total of \$20 million. The salaries of all trainees at the Center would be paid for by the sponsoring member countries. As various trainees or other remote sensing investigators are selected for staff assignments at the Center, their salaries would be financed under the project. After the fifth year, the annual operating costs of the Center (\$300,000 to \$1 million) would be picked up by budget appropriations of the respective member countries.

Project Development

Considerable ground-work has already been laid for development of this project. A.I.D.'s Office of Science and Technology, in cooperation with the Africa Bureau, will open a Regional Center for Remote Sensing Training and User Assistance in Nairobi, Kenya, in the fall of 1977. The developmental preparation and planning experience which went into this Center during the past year will be relevant to the proposal for an Andean Center.

In addition, A.I.D. has sponsored several remote sensing development projects in Latin America and specifically in the Andean region. As examples, Bolivia utilized Landsat imagery in making last year's dramatic discovery of lithium in the Salar de Uyuni. In addition, Bolivia has been using satellite imagery to classify land use themes indicating developing regions of uniform population density. They have extended this successful technique to their eastern provinces in the Sub-tropical Land Colonization Project. Bolivia has utilized Landsat data for geological mapping and mineral exploration in a stretch of land running to the Pacific Ocean which is under negotiation for opening up Bolivia's access to the sea in exchange for providing the Landsat-derived information and future potential mineral rights to Chile. Peru is beginning to use Landsat data for highway locations in their newly settled eastern and central provinces.

A.I.D. has begun discussions with NASA to ensure the orderly flow of Landsat data from the receiving station located in Brazil to the proposed Andean Training Center. The Brazilian station covers all of Bolivia and most of the eastern flanks of Peru, Ecuador, and Colombia. A future ground receiving station either in Costa Rica or southern Mexico would provide Landsat coverage of the remaining Andean areas.

Upon approval of this PID, A.I.D. will initiate discussions with top officials of the Andean Pact and member governments. Negotiations will follow on how the proposed Center will be organized and operated and what degree of financial and institutional support the Pact will give the project. The technical studies required to develop the PP will be carried out by a consultant contracted by TA/OST for an estimated 30 work-days, and by remote sensing and satellite communications experts from TA/OST and TA/EHR for approximately 120 work-days of TDY assistance. These project development costs are expected to total \$50,000, and will be financed under the FY 78 regional remote sensing grant (598-0580).

Agency Selection Criteria

The development of a regional remote sensing training and user assistance center will provide the Andean Pact and member countries with the capability to map natural resources of direct value to their expanding industrial development. These resources include mineral deposits which in some way affect soil and rock formations at the surface which can be identified by remote sensing techniques. The identification of economically exploitable minerals is a valuable asset in mining and export of these minerals, thus improving the economy and standard of living of the very poor. In addition, the technology permits accurate a priori crop production estimates and communicating these estimates to local and national planners permitting them to take corrective action to decrease the human anguish and suffering to the poor associated with mass crop losses.

The regional center is directly related to OST's on-going program for establishing regional centers throughout the world. The Andean Center would be the second center to come into existence, the first opening in the fall of 1977 in Africa. Additional centers are planned for South East Asia, the Near East, and Central America. The types of applications which might conceivably be carried out at the Center are presently being supported by remote sensing grants from TA/AGR, the Latin America Bureau, the African Bureau, and the Southeast Asia Bureau.

If, for example, the Andean Center decides to apply remote sensing for national or regional agricultural inventory to upgrade crop production estimates, extensive ground truth will be required to verify the remote sensing crop acreages. This implies a labor intensive activity, with as many as 100 semi-skilled enumerators gathering statistics regarding cropping practices on the ground. Thus the Center's activities can generate employment for unskilled labor with a very minimum of training.

This project is concerned with transferring knowledge and understanding in the environmental field and hence will have no direct significant impact on the environment. Nor will the secondary impacts. For the foreseeable future, however, this activity should foster improved developing country capabilities in making more environmentally sound decisions regarding development and thus contribute to the protection of their own environment. A negative determination is, therefore, recommended.

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE
 A = ADD
 C = CHANGE
 D = DELETE

PID
 2. DOCUMENT CODE
 1

3. COUNTRY/ENTITY
 ANDEAN REGIONAL

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
 595-0004

6. BUREAU/OFFICE
 A. SYMBOL LA B. CODE 05

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)
 Regional Environmental Improvement

8. PROPOSED NEXT DOCUMENT
 A. 2 = PRP 3 = PP
 B. DATE 11 0 80

10. ESTIMATED COSTS
 (\$000 OR EQUIVALENT, \$1 =)

FUNDING SOURCE		AMOUNT
A. AID APPROPRIATED		20,000
B. OTHER		
C. HOST COUNTRY		15,875
D. OTHER DONOR(S)		
TOTAL		35,875

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 a. INITIAL FY 81 b. FINAL FY 81

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) SDA	750	--	877	--	20,000	--	20,000
(2)							
(3)							
(4)							
TOTAL					20,000	--	20,000

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)
 To improve environmental quality and natural resource planning for environmentally-sound economic growth in the Andean countries.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)
 To create an institutional capacity to formulate and carry out an environmental strategy at the regional level.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
 Project preparation and technical support funds: FY 78 \$200,000; FY 79 \$200,000.

18. ORIGINATING OFFICE CLEARANCE
 Signature Charles B. Weinberg
 Associate Assistant Administrator
 for Development Resources
 Bureau for Latin America
 Date Signed 10 17 80

19. DATE DOCUMENT RECEIVED BY AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
10 17 80

PROJECT IMPLEMENTATION DOCUMENT

ANDEAN REGIONAL

ENVIRONMENTAL SECTOR PROGRAM -- \$20 million

Problem

In recent years, it has become widely accepted that environmental protection is a concern not only of the developed world. Environmental protection is of particular consequence to the countries of the Andean subregion. Due to the nature of their past economic growth and to their relatively advanced stage of development these countries are now confronting a variety of environmental problems in a uniquely exaggerated form. First, extractive industries predominate in all of the Andean countries: Venezuela and Ecuador are major petroleum exporters, Peru's economy has traditionally been based on its exports of copper and fishmeal, Bolivia's economic prospects depend almost entirely on its mining of tin, silver, petroleum, and natural gas, and Colombia has the largest coal reserves in Latin America as well as significant reserves of oil and natural gas. Associated with this predominance of extractive industries is a host of smelters, refineries, and extensive transportation networks. The environmental consequences of this pattern of industrial development are in many cases already apparent. A major river system which irrigates central Peru's highlands is so polluted by effluent from a large copper smelter that experts fear that the rich soils in the region which have long been irrigated from this system may be irreversibly damaged. The sulphurous waste of smelters and refineries in high altitudes near the large mines have created a serious health hazard for the hundreds of thousands of workers who live in mining towns throughout the subregion. In other cases, the environmental consequences are as yet unknown. The environmental impact of the oil pipelines, railroad grids, and electric power lines which traverse wide expanses of virgin territory serving these industries has never been assessed.

The Andean subregion, like the rest of Latin America, also features one of the highest rates of urbanization in the world, owing to rural-urban migration and rapid industrialization. The haphazard growth of major cities in the subregion has led to poor patterns of land-use, as in Lima, where some of the most fertile land on the Peruvian coast has been turned over to housing projects and industrial complexes. Rapid urban growth in all the capital cities has outpaced the governments' capacity to build sanitation systems, and untreated waste is dumped into rivers and oceans. Industrial waste from out-dated manufacturing processes contribute to worsening pollution levels in urban areas throughout the subregion.

And last, since much of the total land area is covered by the Andes mountains, the subregion's man-to-arable land ratio is extremely small and

growing population is constantly reducing this ratio even further. The subsistence farmers in the highland areas must resort to increasingly intensive use of the limited productive resources, leading to over-grazing, over-fishing, deforestation, erosion, and depletion of essential minerals in the soils.

These patterns reflect a history of governments' and industries' response to short-term production needs. They could, however, lead to irreversible damage to limited productive natural resources, undercutting these countries' economic base and limiting long-run productive potential. A strategy to control negative environmental consequences and protect the productive natural resources is critical to the future economic development of the subregion.

There is no lack of awareness of the need for such a strategy within the Andean countries. Tentative first steps have been taken in response to environmental problems. The Government of Venezuela has recently created a Ministry of the Environment and Renewable Natural Resources. The Government of Peru has required a major state-owned copper smelter to reduce the amount of effluent released into an adjoining river. Other governments and regional organizations have expressed interest in expanded environmental programs.

But such efforts are isolated, limited in number and scope by lack of technical knowledge, financial resources, and institutional coordination. Environmental protection demands the application of new technologies, requiring major investments in research and development, industrial design, and natural resource utilization. This is a costly and complex effort, representing a significant financial and institutional burden which most of the Andean countries are not equipped to assume.

By virtue of the scientific and managerial expertise which has been developed in the United States to deal with environmental problems, A.I.D. is uniquely qualified to assist in preparing these countries to assume this burden and to assure environmentally sound economic growth. Policy Determination #63, issued in 1975, encourages the Agency "to assist in strengthening the indigenous capabilities of developing countries to appreciate and evaluate the potential environmental effects of proposed development strategies and projects, and to select, implement and manage effective environmental measures ..." Furthermore, it is expected that the FAA for FY 1978 will mandate that A.I.D. expand its assistance to developing countries for programs for improving environmental quality and natural resources planning.

Response

It is proposed in this PID, therefore, that A.I.D. undertake to develop an environmental sector program with the Andean countries. This program will

finance a variety of activities illustrative of the environmental protection measures which can be implemented by both the public and private sectors. The purpose of the program will be to create an institutional capacity to formulate and carry out an environmental strategy.

It is proposed to create this capacity at the subregional level for several reasons. First, the Andean countries share common interests in environmental protection. As described above, many of the current problems are shared by all or most of the countries in the subregion. There are obvious economies of scale in addressing these problems on a subregional level. Some problems -- such as the pollution and over-fishing of Lake Titicaca which borders on both Bolivia and Peru -- can only be treated on a regional basis. Further, given economic interdependence among the Andean countries, which are directly linked by trade, there is an interest in resolving environmental problems which go beyond national borders. Environmental damage to a productive sector in one country can hurt other countries in the subregion which are dependent on imports from that sector.

Second, the long-run viability and effectiveness of an environmental strategy must incorporate controls which are standard throughout the subregion. Unless environmental control standards are uniform for all the Andean countries, those countries with stringent controls will lose their share of the subregional market and prospective investments to less environmentally stringent neighbors. Standardization is necessary to fairly distribute among member countries the economic costs of environmental protection. The Andean Pact is well qualified to take the lead in formulating and monitoring standards on a subregional level. There already exists a precedent for the Pact to assume this role in its Foreign Investment Code (Decision 24), which establishes minimum criteria for foreign private investors to be applied uniformly throughout the subregion.

Third, a regional institution is more apt to take the risks associated with an innovative environmental program. The Andean Pact was created as a technical body to carry out economic planning for the subregion. A mandate to develop an environmental strategy would clearly be consistent with this technical role. Furthermore, as a regional technical institution staffed with international civil servants, the Pact is well suited to balance competing political pressures involved in the task of making recommendations for environmental policy.

The proposed programs then, will be implemented through the subregional institutions of the Andean Pact. The CAF will be the Borrower and will carry out program activities in coordination with the Andean Pact. Other subregional organizations, such as training institutions, are also expected to participate in the program.

Program Description

This program will be initiated with grant funded technical assistance for program development costs. The purpose of this activity will be (1) to identify subregional personnel and institutions which are sensitive to environmental concerns and have a capability of articulating these concerns within the host-country context; (2) to make a preliminary assessment of the most critical environmental problems which affect the subregion, utilizing the people and institutions identified under (1); and (3) to outline proposals for implementation of a broad environmental improvement program on a subregional basis. An important element of this technical assistance is the involvement of host-country expertise in the development of the sector loan and to promote an awareness of, and institutional interest in, environmental considerations in economic planning. It is expected that up to \$400,000 in A.I.D. grant funds would be made available to the Andean Pact to finance program development costs in FY 78 and FY 79.

Based on this preparatory work, the loan-financed program will be developed for authorization in FY 80 or FY 81. While further definition of the specific activities to be funded under this loan will be made as a result of the assessment, it is expected that the program will include the following elements:

1. Technical Assistance in Regional Environmental Planning: Up to \$1.5 million in A.I.D. loan funds will be allocated to finance training and technical assistance to develop scientific and managerial expertise within an Environmental Policy Unit to be established in the Andean Pact. With the assistance of project-financed experts from the US and Andean countries, this unit would (1) carry out studies of selected environmental problems in the subregion; (2) conduct research into environmental control technologies adapted to the Andean countries; (3) develop tools for planning and policy formulation, including proposals for standardized protective measures to be applied in the subregion; and (4) promote awareness of environmental considerations in economic planning by conducting seminars and teaching courses at major training institutions in the subregion. A.I.D. loan funds would be used to finance technical advisors, management consultants, special studies, and some commodities. The possibility of drawing on the US Environmental Protection Agency for some of these technical advisory services will be explored in the intensive review.

2. Environmental Institution-Building Grant Fund: An estimated \$3.5 million in A.I.D. loan funds will be allocated to make grants by the CAF for the development of institutions capable of providing advisory services in the field of environmental protection. Grants will be available to member governments wishing to establish an institutional capacity to make environmental assessments of prospective investments and to design

environmental protection programs. During the intensive review the possibilities of making grants available to private sector institutions will also be studied. One such possibility would be to provide seed capital to private consulting firms to broaden their capability of offering technical services in environmental analysis. It is anticipated that a minimum counterpart contribution of 25% would be required of firms receiving such grants.

3. Environmental Improvement Fund: The major project component will be credit assistance to establish a fund in the CAF to finance pilot projects utilizing environmental protection technologies. This fund will be capitalized with up to \$15 million in A.I.D. loan funds and up to \$15 million in contributions from member countries, representing \$3 million from each of five Andean Pact countries. Credit from this fund will be made available for three kinds of investments:

-- natural resource protection programs, which would include reforestation, erosion control, river defense, water storage, and cleaning up polluted rivers and oceans; these credits could be made available to both private and public sector institutions;

-- public infrastructure, such as waste disposal systems and clean and energy-efficient transportation projects; these credits could be made to municipalities, with national government guaranty;

-- industrial investments in pollution control and development of renewable sources of energy; these credits would be made to private firms or state-owned enterprises, which would be required to contribute up to 25% in counterpart funds.

Credit from this fund will be given on concessional terms, and will be available to finance both feasibility studies and capital investments. Specific terms and conditions of sub-lending and sub-project eligibility criteria will be determined in the course of project development.

4. Private Voluntary Environmental Organizations: To complement the institution-building objectives of this A.I.D. loan, the possibility of providing a companion OPG to US private voluntary organizations will be explored. Likely candidates for grant-financing would be environmental groups such as the Sierra Club International and Friends of the Earth, which would be able to establish and strengthen counterpart organizations in the Andean countries. The objective of this activity would be to create a pool of scientific expertise and consumer interests which would be capable of organizing and articulating environmental concern to industry and government. This would be of particular importance in encouraging public participation in the formulation and enforcement of national environmental policies. However, the feasibility of this proposed activity will have to be carefully examined during the intensive review.

Financial Plan

The estimated financial requirements of the proposed loan program are indicated below.

<u>Activity</u>	<u>A.I.D.</u>	<u>Andean Pact Countries</u> (in US \$ 000)	<u>Private Sector</u>
1. Regional Environmental Planning	\$ 1,500	\$ 500	-
2. Environmental Institution-Building	3,500	375	250
3. Environmental Improvement Fund	<u>15,000</u>	<u>15,000</u>	<u>3,750</u>
TOTAL	\$20,000	\$15,875	\$4,000

These allocations are tentative, subject to determination of technical assistance requirements and of the demand for the different types of proposed credit, which will be undertaken during the intensive review. The counterpart contributions will be negotiated with the Andean Pact and the CAF.

It is expected that A.I.D. loan funds will be disbursed over a five-year period beginning in FY 1980 or FY 1981. While the intensive review will further investigate the feasibility of particular A.I.D. loan terms, it is expected that the PP will propose loan terms of 25 years for the credit component of the program and 30 years for those elements which will finance technical assistance, training, and institution-building.

Program Development

Upon the approval of this PID, A.I.D. will initiate discussions with the highest officials of the Andean Pact and the CAF. A.I.D. will express its interest in financing a program such as that described in this PID provided that intensive review analyses demonstrate feasibility and Andean Pact members are willing to provide meaningful support in terms of both personnel and counterpart contributions to establish the credit fund.

The key analysis to be conducted during the intensive review will be the preliminary assessment of current and potential environmental problems in

the Andean countries, as well as the identification of institutional and research capabilities which currently exist. It is anticipated that a technical team of experts in environmental economics, natural resource protection, land-use planning, engineering and industrial design, and environmental sanitation will be contracted to do these studies.

A report on the preliminary findings of these studies could be prepared by late 1979. Based on these findings, a Project Development Team composed of A.I.D. officers from LA/DR and TA/OST and Andean Pact technical personnel will determine credit and technical assistance needs of the proposed loan program. Supplementary contracted assistance may be available under A.I.D.'s IGC's with environmental consulting firms, which would be financed from Project Preparation and Technical Support funds.

Following this review, a Progress Report will be prepared and presented to A.I.D./W by mid-1980 or earlier. Negotiations will follow with top Andean Pact officials on sub-lending terms and conditions, counterpart contributions, procedures for operating the grant fund, and a proposed plan for technical assistance. The PP would be ready for final A.I.D./W approval in FY 81, although PP submission could be accelerated to FY 80.