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UNCLASSIFIED

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D.C. 20523

JAMAICA

PROJECT PAPER

HILLSIDE AGRICULTURE PROJECT

AID/LAC/P-355

Project Number: 532-0101

UNCLASSIFIED

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add  
 C = Change  
 D = Delete

Amendment Number

DOCUMENT CODE

3

COUNTRY/ENTITY: Jamaica

3. PROJECT NUMBER: 532-0101

4. BUREAU/OFFICE: LAC  05

5. PROJECT TITLE (maximum 40 characters): Hillside Agriculture Project

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM DD YY | 02 | 28 | 91 | 4

7. ESTIMATED DATE OF OBLIGATION (Und 9, below, enter 1, 2, 3, or 4)  
 A. Initial FY: 87 | B. Quarter: 2 | C. Final FY: 91 | 3

8. COSTS (\$000 OR EQUIVALENT \$1 = )

A. FUNDING SOURCE	FIRST FY 87			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total (Grant)	226	574	800	2,824	7,176	10,000
(Loan)	(-0-)	(-0-)	(-0-)	(-0-)	(-0-)	(-0-)
Other U.S. 1.						
U.S. 2.						
Host Country	-	203	203	-	3,346	3,346
Other Donor(s)						
<b>TOTALS</b>	<b>226</b>	<b>777</b>	<b>1,003</b>	<b>2,824</b>	<b>10,522</b>	<b>13,346</b>

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	219	079	-	-	-	800	-	10,000	-
(2)									
(3)									
(4)									
<b>TOTALS</b>						<b>800</b>	<b>-</b>	<b>10,000</b>	<b>-</b>

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 023 031 140 241

11. SECONDARY PURPOSE CODE: 229

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BR	BS	TECH	ENV	COOP	LAR
B. Amount						

13. PROJECT PURPOSE (maximum 480 characters):

To increase productivity and expand acreage of both export oriented and domestic use perennial crops in selected watersheds.

14. SCHEDULED EVALUATIONS: Interim MM YY | 02 | 08 | 90 | Final MM YY | | | |

15. SOURCE/ORIGIN OF GOODS AND SERVICES:  000  941  Local  Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment)

The Mission Controller approves the methods of implementation and financing included in this Project Paper.

*Robert A. Leonard*  
 Robert A. Leonard, Controller.

17. APPROVED BY: William R. Joslin, Mission Director

Signature: [Signature]

Title: William R. Joslin, Mission Director

Date Signed: MM DD YY | 02 | 28 | 91 | 7

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY | 02 | 19 | 91 | 7

PROJECT AUTHORIZATION

Name of County: Jamaica  
Name of Project: Hillside Agriculture Project  
Number of Project: 532-0101

1. Pursuant to Section 103 of the Foreign Assistance Act Of 1961, as amended, I hereby authorize the Hillside Agriculture Project for Jamaica involving planned obligations of not to exceed Ten Million United States Dollars (US\$10,000,000) in grant funds over a seven year period from date of authorization subject to the availability of funds in accordance with the A.I.D. OYB allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the Project is seven years from the date of initial obligation.

2. The Project will provide funding for self-managing projects that will promote production and productivity of perennial crops, primarily in the Rio Cobre and Rio Minho Watersheds. The Project shall consist of: (1) sub-grants to groups to carry out sub-activities that are focused on the overall Project strategy, are technically competent and technologically current, and have a sound strategy for community participation; (2) the provision of technical assistance and training to persons engaged in Project activities; and (3) networking of individuals and groups involved in Project activities.

3. The Project Agreement which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4.a. Sources and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in Jamaica or in the United States except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have Jamaica or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing.

(i)

4.b. Ocean Shipping

Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

4.c. Conditions Precedent to Disbursement

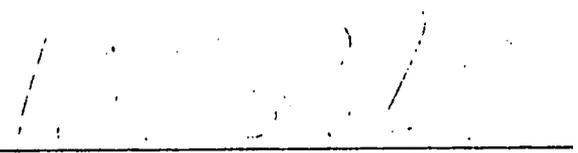
First Disbursement. Prior to the first disbursement under this Agreement, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Government of Jamaica will furnish to A.I.D., in form and substance satisfactory to A.I.D.:

(a) An opinion of the Attorney General of the Government of Jamaica, or other counsel satisfactory to A.I.D., that this Agreement has been duly authorized and/or ratified, and executed on behalf of the Government of Jamaica and that it constitutes a valid and legally binding obligation of the Government of Jamaica in accordance with all of its terms; and

(b) A statement representing and warranting that the named person or persons have the authority to act as the representative or representatives of the Government of Jamaica together with a specimen signature of each person certified as to its authenticity.

Clearances:

RLA:TCarter (draft)  
OPDS:EKadunc 2/12/24  
OPEP:NHardy 2/12/24  
ARDO:SFrench 2/12/24  
ARDO:LVoith 2/12/24  
OEEE:CMathews  
CONT:RLeonard 2/12/24  
DDIR:JSchlotthauer 2/12/24

  
\_\_\_\_\_  
William R. Joslin  
Director  
USAID/Jamaica

\_\_\_\_\_  
Date

(ii)

Clearance:  
OPEP: NHardy                       
OEEE: CMathews                       
CONT: RLeonard                     

OPDS: EKadunc                       
ARDO: SFrench                       
ARDO: LVoth                       
DDIR: JSchlotthauer                      (substance)

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(532-0101)

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\* Copies of these Annexes are on file in ARDO, OPDS, and AID/LAC/DR.  
(0294U/374U/0359U)

## LIST OF ACRONYMS

CARDI	Caribbean Agriculture and Research Development Institute
CATIE	Centro Agronomico Tropical de Investigacion y Ensenanza
CIB	Cocoa Industry Board Coffee Industry Board
CFDC	Cocoa Farms Development Company
CIDCO	Coffee Industry Development Company
CRIES	Comprehensive Resource Inventory & Evaluation System
EA	Environmental Assessment
FIDCO	Forestry Industries Development Corporation
FSCD	Forestry and Soil Conservation Division (MOA)
FY	Fiscal Year
GOJ	Government of Jamaica
ICRAF	International Center for Research on Agro-Forestry
IFI	Intermediate Financial Institution
IICA	InterAmerican Institute for Cooperation in Agriculture
IQC	Indefinite Quantity Contract
IRDP	Integrated Rural Development Project
JADF	Jamaica Agriculture Development Foundation
JAS	Jamaica Agricultural Society
JLA	Jamaica Livestock Association
MIS	Management Information System
MOA	Ministry of Agriculture
MOH	Ministry of Health
NRCD	Natural Resource Conservation Division, MOA
NUCS	National Union of Cooperative Societies
ODP	Office of Disaster Preparedness
PAMCP	Project Appraisal and Monitoring Corporation
PCC	Project Coordinating Committee
PID	Project Identification Document
PIO	Project Implementation Order
PIL	Project Implementation Letter
PMO	Producer Marketing Organization
PS-MOA	Permanent Secretary - Ministry of Agriculture
PSA	Procurement Services Agent
PVO	Private Voluntary Organization
RPPD	Rural Physical Planning Division (MOA)
TA	Technical Assistance
TSM	Technical Support to Mission
USAID	United States Agency for International Development
WHO/FAO	World Health Organization/Food & Agricultural Organization

## I. SUMMARY AND RECOMMENDATIONS

### A. Project Summary

More than 80 percent of the lands in Jamaica can be classified as hillside lands, which for the most part are covered by shallow highly erodible soils. Current cropping systems with emphasis on annuals are resulting in excessive soil loss, increased downstream siltation, decreased dry season stream flow, and lower quality of water.

The complexities of the socio-cultural situation of the Jamaican hillsides dictate that a cautious approach be adopted towards any new project aimed at small farmers. The small size of farm plots, the fragmentation of plots, the advanced age of farmers, the confused land tenure situations, the low level of esteem accorded to farming, the lack of information to make productive choices, and the fear of farm credit all combine to complicate the development milieu. In addition, small farmers on the hillsides have traditionally been burdened with a high level of risk in their ability to cope with climatic disturbances, pest and disease problems, and marketing systems. At the same time, there are external factors that are acting to change the terms of reference of small hillside farmers to the overall Jamaican economy, including (1) an emerging export oriented agriculture on the southern plains that can produce many of the traditional annual crops more cheaply and (2) a shift in emphasis from price toward greater emphasis on quality and timing of delivery of produce when determining the competitiveness of a product.

Small hillside farmers today use a diversified, minimal risk, low input system focused on the production of annuals which is not much different from that used 100 years ago. As a result, they farm at a level that is only slightly above meeting the immediate needs of their families. This continuous open cultivation of annual crops on steep slopes is one of the primary causes of a growing problem relating to serious erosion of the hillsides. A shift from annuals to perennial crops is seen as a solution to both the hillside erosion problem and the farmers need for additional productive income earning opportunities.

The technology for improving production and productivity of existing perennial crops (e.g. coffee and cacao) already exists in some cases, and in other cases needs to be refined and adapted to meet the particular needs of small farmers in Jamaica. Additionally, there are new and expanding markets for perennial crops such as papaya, annatto, and passion fruit, that are presently not exploited. These new techniques and technologies must be integrated into present hillside farming systems if production and productivity of perennials are to be increased.

The Project strategy therefore has three aspects: perennial cropping, improved technologies, and community participation.

The Project will fund self-managing projects that will promote production and productivity of perennial crops. This will be accomplished by: (1) sub-grants to groups to carry out subactivities that are focused on the overall Hillside Agriculture Project strategy, are technically competent and technologically current, and have a sound strategy for community participation; (2) provision of technical assistance and training to persons engaged in Project activities; and (3) networking of individuals and groups involved in Project activities through the sponsorship of workshops, the production of a newsletter, and maintenance of close contact with international and domestic sources of technological innovation for perennial crops.

The total cost of the seven year Hillside Agriculture Project is estimated to be US\$13.346 million, and total AID contributions are estimated to be US\$10 million.

Summary Cost Estimate and Financial Plan (US\$000)

<u>INPUT</u>	<u>AID-FX</u>	<u>AID-LC</u>	<u>Ja.-L C</u>	<u>TOTAL</u>
PCC STAFF	0	0	132	132
SUPPORT COSTS	565	505	428	1,498
SUB-PROJECTS	1,766	5,463	2,386	9,615
SHORT TERM TA & TRAINING	236	237	95	568
NETWORKING & COMMUNICATION	0	169	0	169
ASSESSMENT/EVALUATION/AUDIT	0	150	0	150
SUBTOTAL	2,567	6,524	3,041	12,132
CONTINGENCY	257	652	305	1,214
TOTAL	2,824	7,176	3,346	13,346

B. Summary Findings

Based on the analyses contained in Part IV (Cost Estimates and Financial Plan), Part VI (Project Analyses) and in Annexes D through H of the Project Paper, the Project has been determined to be financially, technically, institutionally, economically, socially, and environmentally sound and ready for implementation.

The Project meets all statutory requirements (see Annex B ).

C. Project Paper Design Team

The Hillside Agricultural Project was designed by:

USAID/Jamaica

- Mark Nolan, Agricultural Development Specialist
- Beth Cypser, Project Development Officer
- William McCluskey, Director of the Agriculture and Rural Development Office
- Leland Voth, Agricultural Development Officer
- Robert Leonard, Controller
- Linda Tarpeh-Doe, Financial Analyst
- Nancy Hardy, Program Officer
- Charles Mathews, Chief Engineer and Environmental Officer

With the assistance of:

- Mr. Tom King, AID/W, LAC/DR/RD
- Dr. Loren Ford, Regional Forestry Advisor, USDA/FS
- Dr. Elsie LeFranc, Professor of Sociology, UWI
- Dr. Alice Morton, Vice President, RONCO Corporation
- Dr. Leon Hessor, Agricultural Economist, RONCO Corporation
- Mr. Ralph M. Field, Environmental Specialist
- Dr. Carl S. Barfield, Professor of Entomology, University of Florida

## II. BACKGROUND, RATIONALE, AND STRATEGY

### A. Country Setting:

#### 1. Geography

Jamaica has a land mass of 4,411 square miles (2,816,000 acres), a maximum length of 146 miles, and a maximum width of 51 miles. It is located in the middle of the Caribbean Sea between 17.5 and 18.5 degrees north latitude, and 76.5 to 78.5 degrees west longitude. It is the third largest island in the Caribbean.

There are three main physiographic regions on the island: (1) the interior mountain ranges, (2) the coastal plains and interior valleys, and (3) the dissected limestone plateau and hilly uplands.

The interior mountain ranges form the spine of the island, and rise to over 7,400 ft in the Blue Mountains in the eastern end of the island. Small ranges exist in the central and western sections of the island. The mountains are generally, very rugged and heavily dissected, with V shaped valleys.

The coastal plains are broadest on the south, and generally narrow on the north side of the island. Composed mainly of alluvial deposits, these plains contain the best agricultural lands, and are well suited for large-scale commercial agricultural production. The largest of these plains extends from Kingston through southern St. Catherine and Clarendon.

Elevations in the limestone plateau and hilly uplands range from near sea level to more than 3000 feet. The plateau surface is heavily dissected with steep slopes dominating the upland areas near to the coast. The rough landscape of the plateau is known as karst, a limestone terrain dominated by sinks, underground caverns and streams, steep hills and caves.

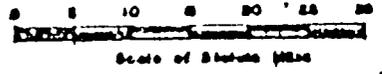
The Hillside Agriculture Project will be implemented primarily in the Rio Minho and Rio Cobre watersheds. The Rio Minho watershed covers most of the parishes of Manchester and Clarendon, with a minor extension into St. Catherine. The entire watershed covers some 430,000 acres, while the hilly uplands cover some 289,400 of these acres. The Rio Cobre watershed covers most of the parish of St. Catherine, with small extensions into St. Mary and St. Andrew. The watershed consists of some 158,000 acres, while the hilly uplands cover some 136,000 of these acres. Figure 1 shows the location of the watersheds in Jamaica.

# LOCATION MAP OF RIO COBRE AND RIO MINHO WATERSHED AREAS

## JAMAICA



- RIO MINHO WATERSHED AREA
- RIO COBRE WATERSHED AREA



PREPARED BY: RURAL PHYSICAL PLANNING DIV.

MAP 1 (18)

The Rio Cobre and Rio Minho watersheds form part of the tertiary limestone plateau. Approximately 50% of the Rio Cobre watershed is occupied by white limestones (Newport and Walderston formations), whereas coastal alluvial deposits cover the remaining area. Northeast of Spanish Town, interior valleys with quaternary alluvium deposits are found near Linstead. The Rio Minho watershed has a geologic pattern similar to that described for the Rio Cobre watershed. However, large portions of the central mountain range are made up of cretaceous rocks (Main Ridge and Summerfield formations). Yellow limestone deposits (Chapelton formation) are found near the mountain range, but they represent only a small part of the watershed.

## 2. Climate

Jamaica has a wide range of climatic conditions, resulting from the irregular, mountainous landscape, and the influence of the northeast trade winds. Maritime tropical conditions prevail in the coastal plains, with summer and winter temperatures of about 28 and 26 C respectively. Diurnal temperature variations on the coastal plain are around 9 C, while similar fluctuations on the limestone plateau range from 11 to 13 C. Because of its elevation, the plateau has a somewhat cooler temperature (22 to 25 C).

Large masses of clouds are associated with the northeast trade winds, and heavy rains fall on the northeast coast. However, the mountain ranges form a rain barrier and the leeward side of the island receives much less rain. The dry months of the year are from December through April, with less than 40mm of rain per month falling on the southern coastal plains.

The average annual rainfall is more than 1500mm, but rainfall varies from less than 800 mm on the southern coastal plains, to more than 5000 mm in the eastern mountain range. Most of the rain comes between May and October, although there are substantial differences among regions in both amount and frequency of rainfall received. Rainfall distribution is erratic, and drought spells are not uncommon during the rainy months. In general, a bimodal distribution characterizes the rainy season, with rainfall peaks in May-June and September-October.

Annual rainfall in the Rio Minho watershed ranges from 940 mm at Bodles in the southeast corner to 2200 mm at Kellits in the north eastern corner. Annual rainfall in the Rio Cobre watershed ranges from 965 mm at Spanish Town in the south, to 2100 mm at Guys Hill on the north border of the watershed.

### 3. Vegetation

Jamaica's maritime tropical climate is suitable for farming year round, but numerous microclimates determine which crops can be grown in specific locations. Rainfall, temperature and elevation ranges all combine to dictate the farmers' choices in a locality. Jamaica has the potential to produce a wide range of crops and livestock of both temperate and tropical origin, and some form of agriculture or forestry is possible nearly everywhere. There are over 4,000 species of plants in Jamaica. However, only a relative few of the cultivated species are indigenous including pineapple, pimento, peanut, cedar, mahoe and mahogany.

The natural vegetation pattern of the island is largely associated with the temporal and spatial distribution of rainfall. Montane forests and rain forests, and exuberant vegetation are prevalent on the high rainfall windward slopes of the mountains and northern coastal plains, respectively. Leeward slopes, however, receive much less rainfall, and vegetation formations common to semi-dry ecosystems prevail. Dry deciduous forest and second growth scrub forest are common on hill slopes, whereas natural or introduced pasture covers most of the limestone plateau.

#### B. The Problem:

##### 1. Hillside Cultivation

The hillsides of Jamaica were settled by runaway slaves and plantation workers during the early part of the 19th century. Plantation owners found that it was easier to let workers keep small farms of their own, than to try and feed their entire work force. These early hillside farmers grew ground provisions and foodstuffs such as yams, sweet potatoes, red peas, coco, dasheen and cassava, on the relatively steep slopes of the interior hillsides. One day a week markets developed to trade in whatever produce was available. A system of land inheritance developed dictating that farms be divided equally among the heirs. This early pattern of hillside development goes a long way towards explaining the present predicament of hillside agriculture today.

More than 80% of the land in Jamaica can be classified as hillside lands. These lands are for the most part covered by shallow, highly erodible soils. Current cropping systems with emphasis on annuals are resulting in excessive soil loss, increased downstream siltation, decreased dry season stream flow, and lower quality of water.

There are approximately 120,000 hillside farmers in Jamaica and another 60,000 that till acreages too small to be classified as farms. The typical farm and rural family is composed of 4.2 persons, meaning that some 750,000 persons or approximately one third of the island's population depend on the small farm sector. These farmers farm plots of land that seldom exceed 5 acres, and typically practice a farming system that combines selected annual crops with minor amounts of perennials and livestock.

There are a wide variety of crops suited to the microclimates of the interior hills and valleys. These range from annuals such as tubers, pulses, and vegetables to perennials such as food trees and forestry. Intercropping is common, and can be seen as a risk avoidance mechanism against crop failure of a particular crop. Cultivation of perennial crops such as coffee, cacao and mango, is widespread, but tends to be grown with a low level of management or chemical inputs. Orchard cropping tends to be confined to the larger farms in the valley bottoms. Monocropping is usually confined to small plots and used with higher value annual crops. On steep lands, cultivation of yams, potatoes, and red peas is widespread. These are usually grown at low plant densities on mostly uncovered soils, and are accountable for large soil losses and productivity decline on hillside lands.

The complexities of the socio-cultural situation of the Jamaican hillsides dictate that a cautious approach be adopted towards any new project aimed at small farmers. The small size of farm plots, the fragmentation of plots, the advanced age of farmers, the confused land tenure situations, the low level of esteem accorded to farming, the lack of information to make productive choices, the fear of farm credit, and the degree of risk faced by small scale producers all combine to complicate the development milieu.

## 2. Soil Erosion

The soils of Jamaica are the result of the interaction of parent materials, contrasting topography, and uneven rainfall distribution. The upland soils are acid and infertile, less than half of them are considered cultivable, and only 14% cultivable without risk of erosion or soil constraints. Soils are generally shallow, on steep slopes, low in nutrients, and easily eroded. Fragmentation of farms is encouraging a trend toward continuous cropping of the better lands, often without adequate fertilization. This is leading to productivity declines.

The geomorphology of Jamaica's upland areas is characteristic of high natural or geologic erosion. This erosion is a natural consequence of the region's geology, climate, and soils, and forms the base rate on which the effects of man's occupation of the

island have been superimposed. There is little that man can do to reduce it; it is in the nature of mountains to produce the soil elements that are then carried downhill to form the soils in the valleys below. This natural erosion is estimated to be in the neighborhood of 15 tons per acre per year.

On top of this natural erosion, the effects of man on the land are taking a potentially disastrous toll. Significant loss of soil is caused by improperly constructed and poorly maintained roads. The improper location and placement of water drains off of rural roads can cause serious erosion problems, and the anger and contempt of rural residents. Additionally land clearing for human settlement can be highly erosive if not properly undertaken.

But even more serious than construction activities is the continued open cultivation of annual crops on steep slopes. This practice continues despite over 30 years of government sponsored soil conservation programs aimed directly at bringing conservation technology directly to the small hillside farmers. Included in these programs is the USAID sponsored Second Integrated Rural Development Project, which despite 5 years of very intensely focused conservation goals failed to make an appreciable difference.

It is estimated that the combined rate of natural and man made erosion in the Jamaican hillsides is in the neighborhood of fifty to seventy tons per acre per year. This erosion is a serious problem with the following consequences:

- Topsoil is lost and the agricultural potential of the area is decreased;
- Water runoff velocities are increasing, reducing absorption by the soil, increasing gully erosion, and causing the potential for flooding; and
- Erosion causes siltation in waterways and reservoirs that supply the cities, industry, and irrigation projects.

### 3. Level of Technology

At present, effective and economically profitable technologies for the sustainable cultivation of hillside soils do not exist for Jamaica. While considerable work has been done on the export tree crops and on pasture crops (primarily for lowland conditions in the latter case), very little effort has been made to find technologies that will improve the small farmer's operation under difficult hillside conditions. As a result, the Ministry of Agriculture extension system does not offer the information hillside farmers need to raise their productivity and incomes without further damaging the hillside resource base.

Small hillside farmers today use a diversified, minimal risk, low input system, which is not much different from that used 100 years ago. Traditional hand tools are used because the slopes permit little mechanization. The level of technology is low, lacking in improved varieties, fertilization, disease and pest management, and erosion control. Where such practices are used, it is for limited acreages of higher value crops such as potatoes, red peas and coffee.

The majority of small hillside farmers are farming at a level that is only slightly above meeting the immediate needs of their families. They are risk avoiders, typically amenable only to incremental change, and, because of limited opportunities, do not have a clear view of the operating alternatives open to them.

The technology for improving production and productivity of existing hillside crops already exists in other countries, and to a limited extent in Jamaica as well. However, these technologies have never been refined and adapted to meet the particular needs and conditions faced by small hillside farmers. The benefits of improved agricultural technology have, for the most part, been confined to an educated elite of Jamaican farmers. These new techniques and technologies must be integrated into present hillside farming systems if production and productivity are to be increased.

#### 4. Farmer Services

Jamaican small hillside farmers are at a severe disadvantage in relation to the two areas most critical for increased production and productivity: technical knowledge and working capital.

In the case of technical knowledge, recent cutbacks of government staff have forced a severe restriction in the extension service of the Ministry of Agriculture. But even prior to these lay-offs the extension service was not in a good position to promote and extend new technologies to farmers. Over the years, the role of the extension agent has gradually shifted from educator to administrator, with negative consequences for farmers.

A large percentage of the extension agent's time and effort is devoted to an array of development tasks, many of which are essentially unrelated to his primary function of advising farmers. These tasks include administering land preparation and planting material subsidies, supervising both housing and water tank construction schemes, and administering credit programs.

The broadness of this extension role causes two problems. First, subsidiary tasks seem to take precedence over what should be the

extension service's primary role, that of training farmers. As a result, administering government programs becomes the extension agent's principal role, and only residual time is allocated to farmer training. Second, many of the extension agent's activities actually conflict with his training duties and thus limit his effectiveness as a trainer. For example, involvement in credit disbursement and repayment causes insurmountable friction between the agent and the farmers. Furthermore, when extension agents assume responsibility for the allocation of subsidies, farmers tend to respond only to extension programs that offer subsidies. For example, in some areas the extension service is unable to form farmer groups to implement the TVM (Training, Visiting, and Monitoring) system because of the farmers' refusal to act without subsidies. An additional weakness takes the form of inappropriate or outdated technology.

The second area is the lack of sufficient capital to finance on-farm operations. There is an efficient agricultural credit system in the Agricultural Credit Bank that supplies credit at concessionary rates to farmers. Additionally, this system has an almost island wide outreach to the majority of small farmers through the Peoples Cooperative Banks (PC Banks). Yet, small farmers are making very limited use of the credit system, as they do not desire to increase their debt burden. Some would consider doing so if there was an assurance that increased returns would offset the effort and costs of production.

The complex land tenure system and the lack of registered title are often cited as reasons why farmers do not access capital through the agricultural credit system. But mechanisms exist such as the Facilities for Titles Act that do permit small farmers without Registered Title access to PC Bank credit. Also the community oriented PC Banks have shown flexibility in accepting loan security through use of guarantors to sign for loans.

There are a variety of other reasons cited by farmers why they do not access credit in the PC Bank system, many of them relating to an understanding of the high risks associated with indebtedness. Among these are the advanced age of farmers, past indebtedness to banks, fear of crop loss, inability to pay interest on principal before the crop comes in, inaccessible properties, and uncertain markets for produce. Even when farmers do reap a successful crop utilizing loan funds, the pressure is great to utilize proceeds to meet the immediate needs of his family. Clearly, an innovative approach is necessary in order to aid farmers in obtaining production capital.

The Ministry of Agriculture has traditionally used subsidies on a variety of items in order to stimulate production. These have included subsidies on fertilizer prices, land preparation, house

and tank construction, farm tools, and concessionary interest rates. The emphasis of these subsidies has been on payment to individual farmers, rather than on measures that the farmers are ready and willing to finance themselves or measures oriented to broader community-wide goals. Government resources would stretch further if they were reserved for off-farm expenditures such as control structures on streams and rivers, reforestation of public lands, and appropriate training of farmers in on-farm technologies.

There is a lack of a single overall strategy for hillside development and watershed management. In the absence of an overall strategy each of the various agencies and organizations units operates independently. These efforts may or may not be mutually supportive in a given case, but these organizations do not have the same priorities, and the national interest would be better served by closer focus and coordination.

## 5. Trends

The inevitable trends are toward the management of perennial crops, livestock, water and forests, and toward a population less dependent upon small-scale hillside farming with hand tools. Such trends inevitably create some social tension; but they are long term and gradual rather than abrupt.

The rural population is generally dedicated to self-sufficiency but only weakly inclined to organize to meet joint goals. Farming is viewed as a low prestige activity and as a means of survival rather than as a business for profit. Although land ownership is seen as a symbol of success, the general wish is to see one's children escape from farming into other pursuits.

At the same time there are external factors that are acting to change the terms of reference of small hillside farmers to the overall Jamaican economy. These factors include an emerging export oriented agriculture on the southern plains that can produce many of the traditional annual crops more cheaply and at a more uniform quality. Also there is a changing emphasis in both export and domestic markets away from price only, toward greater emphasis on quality and timing of delivery of produce. And finally, there is an emerging aspect of the agriculture sector that utilizes principles of business management and marketing expertise to capture many of the markets traditionally dominated by small hillside producers.

Small hillside farmers are caught in a downward cycle of neglect and despair. They are subject to what they perceive as high interest rates, high input prices, and chaotic markets. Small farmers have traditionally been burdened with a high level of risk

in their ability to cope with climatic disturbances, pest and disease problems, and chaotic marketing systems and often meet with crop failure. In many cases, farmers lack the necessary technical information on which to base firm economic decisions.

In an island as small and densely populated as Jamaica, the continued deterioration of the hillsides should not be allowed to continue. The hillsides will continue to play a major role as places of residence and employment for a significant proportion of the island's population for the foreseeable future. Hence, small farmers who populate the hillsides will continue to be the primary stewards of the island's critical watershed resources. It is necessary to work with these small farmers to aid them in coping with the changing conditions they face, and to meet the challenge posed by the changing trends in the agricultural sector.

C. Rationale:

1. Importance of Hillsides

The hillside areas of Jamaica are important because they:

- Contain most of the land area;
- Are the area of residence and employment of at least 33 percent of the population;
- Provide most of the domestic food supply;
- Produce important export crops, including coffee, cacao, pimento, citrus, ginger, and yams;
- Provide the country's forest products;
- Contain the watersheds that supply water to the cities, industry, and irrigated agriculture of the coastal plains; and
- Are where the bauxite mining industry is located.

Also most of Jamaicans living in urban areas today have ties of some form to the people and lands in the hillside areas. These ties provide a safety valve through providing food and shelter to unemployed city dwellers. There is a widespread recognition among urban professional Jamaicans that something needs to be done to aid the hillside residents.

## 2. Past Hillside Development Efforts

Since the 1950's a steady succession of programs has been launched to eliminate the barriers to agricultural growth. The Farm Improvement Scheme of 1949-55, the Farm Recovery Scheme of 1952-55, the Farm Development Scheme of 1955-60, the Agricultural Development Program of 1960-62, the Farmers Production Program of 1963-68, the Farmer Development Program of 1968-72, Operation GROW of the mid 70's, the Emergency Production Plan of 1977, the Integrated Rural Development Project of 1978-83, and the current 5-year Policy and Production Plan of 1983-87 have followed each other in quick order.

Many of these programs included soil conservation and land improvement subsidies, credit plans and low cost inputs. And they were inter-related with donor projects totalling almost US\$50 million for training and extension, credit programs, input subsidies and conservation works. Included among them, in recent years, have been the First and Second Integrated Rural Development Projects and the Small Farmer Production Project of the International Fund for Agricultural Development (IFAD project), which appears to be a close replica of the Farm Development Scheme of 1955-60.

Taken as a group, these many programs have not created any notable or sustained change in farmer activities or well-being. Today, the small farmer seems just as wedded to traditional production methods and just as likely to neglect soil conservation works on his farm as he was 40 years ago. Small farmers continue to experience problems of low productivity and little working capital.

An analysis of the \$26 million Second Integrated Rural Development Project reveals a variety of reasons for the lack of project success. These can be summarized as follows: 1) a too complicated project design with conflicting production, conservation, and social welfare goals; 2) failure to develop economically attractive production practices; 3) too much emphasis on costly soil conservation treatments; 4) the heavy use of subsidies to induce involvement; 5) trying to reach 100% of farmers in a geographic area resulting in superficial and wasted efforts; and 6) influence from political groups during implementation.

## 3. Geographic Concentration

The Rio Minho and Rio Cobre watersheds are chosen for focus because of the possible effect that continued degradation of these watersheds will have on the emerging agriculture on the plains of

Clarendon and St. Catherine. USAID has invested considerable funds in a Crop Diversification/Irrigation program in the St. Catherine area, and work on conserving the watersheds is critical to the long term success of irrigated agriculture in these areas of better farm lands.

Additionally, the plains of St. Catherine and Clarendon are areas of rapid population growth and industrial expansion. Continued degradation of the watershed areas of these plains could have disastrous consequences for the water supply for both the cities and industry. The flood rains of June 1986 are but the most recent example of the critical relationship between watersheds and plains. The impact of the flood would have been somewhat mitigated had a greater portion of the watershed areas been covered with perennial crops.

The cropping pattern of the Rio Cobre and Rio Minho watersheds, does not follow closely either seasonal variation of rainfall and temperature, or trends on the local market. It is an array of crops grown mainly to meet food needs of the small farmer. Occasionally, the routine is changed and cash crops are grown to meet sudden demands of the local market. The upper watershed areas are not competitive with the lowlands in producing most clean-cultivated annual crops, either for export or for domestic consumption.

D. Strategy:

The proposed Project will overcome past deficiencies by focusing resources on the specific purpose of increasing production and productivity of selected perennial crops. This will be accomplished by concentrating on a community based approach that focuses on utilization of improved production technologies. This will be a tremendous improvement over past projects by applying a simple project design, generating appropriate technologies, and incorporating the needs and suggestions as perceived by farmers in the design and implementation of projects in their own communities. The Project strategy has three aspects: 1. Perennial Cropping, 2. Improved Technologies, and 3. Community Participation.

1. Perennial Cropping

Given the dismal failure of past rural development programs that have focused on soil conservation, and given that the hillsides will continue to play a major role in the Jamaican economy and environment for the foreseeable future, a new approach is necessary. This approach must be able to simultaneously meet the

needs of the farmers for productive income earning opportunities, and make a positive impact on the deteriorating hillside resources. In addition, this approach must provide a positive incentive to draw farmers away from annual crops.

The approach taken is that of promoting perennial crops as profitable alternatives to farming systems based predominately on annual crops. Many food tree crops already grow in the hillside regions, and small farmers are not adverse to growing trees. In fact, small farmers already produce the vast majority of the coffee and cacao crops. But the low management, low technology, low input cropping systems used often afford little more than a subsistence income.

Given the chaotic market situations faced by small hillside farmers it is necessary to focus on perennial crops with assured markets. The commodity boards provide a guaranteed market for the production of coffee, cacao, coconut, and pimento. In cases where no commodity board exists, non-formal contractual relationships have developed between small farmers and agro-processors. This has been the case with mango, ackee, citrus, guava, papaya, and to a lesser extent other tree crops. In the case of these crops (except citrus), the Project should facilitate relationships between small farmers and agro-processors to resolve critical problems that limit production and productivity.

The shift from farming systems based on annual cropping to more productive and profitable systems based on perennial crops must be seen as a gradual process. Small farmers presently grow annual crops, because they have a shorter time span and hence offer a quicker payoff, and meet the farmers need for a cash flow for family expenses. Therefore, any attempt to shift from annual cropping to perennial cropping must make economic sense for the small farmers both in the short and long term.

Such an approach focusing on tree crops is often characterized as agroforestry. Strictly speaking agroforestry involves using trees for multiple purposes, while perennial crop production is usually taken to mean orchard cropping of a particular tree. In the Jamaican context where farmers already grow 4 - 8 different types of trees on a given piece of land, the definition becomes blurred. For this reason, it is important that the approach taken in promoting perennial crops be appropriate and adapted to the types of farming systems presently practiced by small farmers. For purposes of this paper, perennial cropping and agroforestry will be used interchangeably.

Basically, agroforestry develops the concept of using trees as a component of the overall management of land resources to meet the needs of the people for food, fuel, shelter and income. The

systems used need to be socially, culturally and economically acceptable to maximize total output at given input levels and to minimize damage to the total environment.

Agroforestry does offer important opportunities and advantages for improving the practice of hillside agriculture in Jamaica. Moreover it does have an important base in traditional practices. Extension agents can be most effective by locating farmers with the resources to add agroforestry trees to their enterprises and realize the benefits therefrom. Such farmers thereby become part of the research and demonstration effort, without subsidies other than planting stock and guidance. Inevitably the spread of agroforestry is gradual but long term, because trees have a gestation period so much longer than most other farm crops.

Aside from the income generating and multiple use characteristics of trees, they have the important beneficial effect of promoting watershed protection. Their principle influences in this regard are those of lessening the forces of wind and rain, physically obstructing the overland flow of water, and increasing the percolation of water into the soil by building up and maintaining a mantle of duff and humus. Furthermore their roots provide channels for the downward infiltration of water and they bind the soil so that it is less likely to be carried away by the gravity fall and flow of water.

The small size of farms often mitigates against planting trees for commercial, single use purposes. While productivity of crops and livestock can be considerably improved by judicious use of trees for windbreaks, shade, fodder and soil rehabilitation, such improvements are rarely being brought to farmers by extension or development programs. Because of the small size, dispersion and widely differing site conditions on hill farms, no single perennial crop or agroforestry system can be singularly superior. However, the concept of promoting trees for hillside agriculture is both logical and widely accepted, and indeed is probably the only viable alternative for the hillsides.

## 2. Focus on Technology

Considerable research on multiple cropping has been conducted for several years in many tropical areas having environmental and soil constraints similar to those found in the uplands of Jamaica. Unfortunately, this large body of relevant technology is not reaching hillside farmers because of the lack of a resource data base as a means for technology transfer, and the inefficiency of local mechanisms (research and extension) to effectively ensure technology adaptation and transfer.

The knowledge needed for such upgrading of technology exists, but mostly outside of Jamaica. A vigorous and focused campaign to bring perennial crop technology to Jamaica, and the requisite means to adapt this technology to the needs of the small hillside farmers are needed. Further, the technology needs to be disseminated and incorporated into present farming systems.

The most important agency for such transfer and adaptation, within the Ministry of Agriculture, is the Research and Development Unit of the Forestry and Soil Conservation Department (FSCD). However, as with other government agencies, the FSCD is facing mandated cutbacks, and is hard pressed to carry out on-going research on forest trees. In the absence of the effective operation of this unit, a mechanism is needed to carry out research and adaptation functions, that is independent of the vagaries of the GOJ budget process. Such a mechanism should be seen as complementary, rather than competitive to existing personnel.

A significant factor is that research is continually indicating more and more opportunities for trees to enter the farm enterprise in ways that enhance the total rewards. Techniques such as alley cropping, use of wind breaks, use of nitrogen fixing species, use of fodder trees, and similar agroforestry techniques can make significant contributions towards farm income. Significant research on trees is being done at both CATIE in Costa Rica, and through the ICRA, based in Kenya.

In terms of the principal tree crops grown, recent studies have shown that productivity increases in the neighborhood of 100-200% per acre can be achieved through utilizing improved management practices. These include closer planting distances, more agronomically sensible intercropping, better shade manipulation, use of improved varieties, closer monitoring of nutrient deficiencies, and more selective pest and disease control.

There is no single technological package that can be promoted as agronomically superior for the hillside areas. Instead, there are several packages, that can be modified and adapted according to microclimatic conditions and farmer preferences. The choice of what technological package for what area can only be made with a combination of input from land use planners, agricultural technicians, and local farmers.

### 3. Community Participation

Past rural development programs have recognized the value and importance of involving farmers in the implementation of the project. Unfortunately, in the resource scarce political environment of Jamaica, this involvement has been limited to

farmers as recipients of government distributed benefits. Involvement in rural development schemes has been ensured through the use of subsidies, rather than felt need. Further, the focus of these subsidies has been on individuals, rather than communities, and therefore there has been little incentive to organize to work towards community benefits.

It is imperative that any new program aimed at small farmers reach beyond the rhetoric of community participation to genuine involvement. Programs must be designed and implemented with the needs of the farmers in mind. This can be achieved only if the farmers are actively involved in deciding what should be done in their area and in actually carrying it out.

Involving farmers in the decision of what should be done and how it should be done, is not an easy task for bureaucracies that themselves are oriented towards top down, hierarchical decision making. Further, involvement by farmers who are accustomed to a paternalistic type of benefit distribution system, is all the more difficult to achieve. The farmers often adopt a characteristic "what do you have to give me" attitude towards government agents. Clearly, a special strategy is needed to overcome this problem.

The more subtle part of their problem can be tackled only by avoiding top-down coercive types of action. Basically, it is by broadening the array of alternative courses of action available to the farmer; by improving the technological information available to him; by improving his ability to choose among them; and then by letting him make his own choice, in his own way. In particular, this approach is educative rather than prescriptive. The focus is on the intellectual task of decision-making rather than on the more mechanical tasks of adopting a procedure or accepting a subsidy. This does not imply extensive schooling and academics for all farmers. It merely means that in dealing with the farmer the emphasis is placed on "how to determine what to do" rather than on "what to do".

In summary, there are significant opportunities to expand the use of trees on hillside farms in the Rio Cobre and Rio Minho watersheds. The possibility of increasing production and productivity, and hence farm income, offers the most powerful motivation, and the most significant opportunity for promoting perennial crop production among small hillside farmers.

Although practical necessities require short term results, the sound development of Jamaica's fragile hillsides requires continuous attention to the long term implications of current activities, and a balance between actions designed to generate immediate increases in production and income and those that will lead to greater gains, but over a long period.

The strategy for the development of hillside agriculture can be summarized as follows;

1. The promotion of perennial crop production for tree crops with known markets. This includes, but is not limited to, coffee, cacao, pimento, mango and papaya.
2. Focus on identification, adaptation and dissemination of improved technologies for perennial crop production by small hillside farmers.
3. Involvement of farmers in the design and implementation of all Project activities in their communities.

Scarce investment resources must be focused where they will be most productive. They should neither be spread across too large an area so that they have little impact, nor over-concentrated so that the return does not justify the investment per acre or farm family. Further, activities carried out under the Project must consist of an internally consistent and coherent set of programs, rather than an aggregation of discrete and independent projects. Additionally, it must be flexible to permit adjustment to changing circumstances and opportunities within both the Jamaican and the world economies.

### III. PROJECT DESCRIPTION

#### A. Goal and Purpose:

The overall goal of the Project is to increase the economic well-being of the residents of the hillside lands in a manner that promotes rational land use patterns.

The purpose of the Project is to increase productivity and expand acreage of both export oriented and domestic use perennial crops in selected watersheds. This targeted increase in agricultural production is expected to result in an increase in the productive employment of hillside residents and in disposable income.

The Project will promote perennial cropping systems primarily in the Rio Minho and Rio Cobre watersheds. The promotion of deep rooted perennial crops in appropriate agrimanagement/production systems, will in and of itself serve as a mechanism to preserve soil resources. Further incorporation of simple, primarily agronomic techniques, into mixed perennial systems, will enhance this process.

The promotion of perennial cropping systems needs to be linked to agro-processing and marketing systems. The choice of varieties, cultural practices, handling, and grading of produce are examples of steps in the process that could be improved with increased education of small farmers. This education should naturally be done in combination with those having a direct economic interest in the processing and marketing of produce.

#### B. End of Project Status:

There will be an increased emphasis on perennial crops by hillside farmers, combined with improved cultural practices and techniques for the growing of tree crops. Associated with this, will be an improvement in the overall level of soil resources in conjunction with a decrease in the level of downstream siltation. This is because improved perennial cropping systems will lead to better soil water holding capacity, increased infiltration and percolation of rainwater, increased ground cover, and more organic matter incorporated into the soil.

Through the education and training of field staff and farmers in improved technologies involving coffee, cacao, and other perennials, there will be an increased level of awareness of the importance of trees for economic and conservation benefits. The lead farmer concept of agricultural extension will be refined and applied for the widespread dissemination of improved techniques.

Additionally, there will be an increased use of contractual arrangements between small farmer producers and processors of agricultural produce. This will be associated with the development of private sector extension agents for the supply and marketing of specific produce.

C. Project Activities:

The Hillside Agriculture Project will be implemented with incremental funding over a seven year period. Continued funding will be dependant on Project progress and the availability of funds.

The Hillside Agriculture Project will be implemented under a mechanism designed to grant funds directly to support sub-projects from USAID/Jamaica. Prospective sub-projects will be developed in line with the criteria and format outlined in an attachment to Annex E, the Institutional Analysis. Sub-projects will be approved for funding by a Project Coordinating Committee (PCC) consisting of senior level representatives from the Ministry of Agriculture (MOA), the Jamaica Agricultural Society (JAS), and the USAID mission to Jamaica. The PCC will be assisted by an Executive Secretary who will function as Project Manager. Additionally, USAID will assist with the provision of an USAID Project Coordinator to assist in the details of grant administration and implementation.

This approach is intended to be decentralized, allowing for a maximum of community participation, with a minimum of administrative overhead. The focus of the Project will be provided through the Project Manager and USAID Project Coordinator who will review, evaluate and recommend all sub-project proposals for funding, as well as monitor on-going sub-projects for conformance to Project goals.

Sub-projects under the Hillside Agriculture Project will be implemented by a variety of managing entities. These managing entities will provide the link between the PCC and the farmers, ensure that projects are managed and administered properly, provide the inputs and technical information necessary for sub-project success, and ensure that all activities carried out under the Project are within the overall goals of the Hillside Agriculture Project.

The three-pronged strategy described in section II.D. above, will be implemented through the following activities:

- Administration of grants to groups to carry out sub-projects that meet specified guidelines. These guidelines have been

drawn to ensure that all sub-projects are focused on the overall Hillside Agriculture Project strategy, are technically competent and technologically current, and have a sound strategy for community participation.

- Provision of technical assistance and training to individuals and groups participating in Project activities. The TA will be primarily of a short term nature, and will be oriented to the identification and solution of specific technical problems arising in the course of implementation. The training will also be of a short term nature, and oriented to resolving specific technical problems.
  
- Networking of individuals and groups involved in Project activities, and coordination of all functions relative to carrying out Project goals. This will be accomplished through the sponsorship of workshops, the production of a newsletter, and the maintenance of close contact with international and domestic sources of technological innovation for perennial crops such as ICRAF, CATIE, and projects of a similar nature in the Caribbean.

#### 1. Sub-project Grants

Groups will be able to submit proposals to carry on specific projects within the framework of the overall Project goal. Interest in the Project will be generated through an advertisement campaign which will be carried out initially and then periodically prior to each closing date for receipt of proposals. The Project Manager and the USAID Project Coordinator will review and evaluate the proposals for appropriateness and technical content, and will recommend appropriate proposals to the PCC for approval. All sub-projects must have an agronomically sound perennial crop production focus, appropriate technical connections, and be tied to identified markets. All sub-projects will be required to maintain a separate accounting system and a separate checking account for Hillside Agriculture Project funds, as well as maintain a project specific reporting format that is designed to fit into the Project Management Information System (MIS). In addition, all sub-projects will have a strategy to involve farmer preferences in the design and implementation of project activities. No advances will be made to profit making organizations.

Potential sub-grantees will include commodity boards, research institutions, farmers' organizations, agro-processors, cooperative societies, private voluntary organizations, and Government of Jamaica agencies. Specific examples could include the Coffee Industry Board, the Cocoa Industry Board, the Coconut Industry Board, the JAS branch societies, a local growers association, IICA, CARDI, the Forestry Department, FIDCO, a mango processor, or a PVO having appropriate experience.

Sub-project activities that fall within the overall Project objectives could include: adaptive or farming systems research directed at generating and adapting appropriate technologies; pilot projects aimed at resolving contractual problems between hillside farmers and agro-processors for perennial crops; pilot projects in specific localities to apply technologies such as topworking of mango trees or intercropping with leucaena; pilot resuscitation programs in specific communities; focused efforts by commodity associations to extend improved management practices; adaptive experiments of agroforestry techniques; innovative efforts to extend technologies through community associations; a farm savings program to raise production capital; and targeted efforts aimed at eliminating specific problems identified by constraint analysis such as obstacles in the processing of land titles.

All sub-project proposals will adhere to the principle of at least a 25 percent contribution on the part of the proposing organization to the total cost of the sub-project. This contribution may take the form of staff or agency resources, utilization of land or buildings, supply of farm inputs, or supply of technical resources.

The Project Manager and the Project Coordinator will monitor all on-going sub-projects to ensure that they are progressing according to the originally agreed upon plan. Any deviations in plan must be jointly agreed to by the PCC and the sub-project. Grants may be for a period of up to five years; however, they will be subject to detailed annual assessments. All sub-project expenditures will be subject to the scrutiny of the Controller of USAID/Jamaica, as well as being subject to independent audit at any time.

## 2. Technical Assistance and Training

All sub-projects will focus on the adaptation, and dissemination of perennial crop technology. The Project Manager and the Project Coordinator, through the review and monitoring of sub-projects, will ensure that sub-projects are proceeding according to plan. Problems encountered in sub-project implementation may be addressed through the contracting out of technical assistance or training on an as needed basis.

The Project Manager and the Project Coordinator will review all sub-project proposals to ensure that they include appropriate technology available. Through the monitoring of on-going sub-projects, they will ensure that the technological advances are incorporated into on-going Project activities. All sub-projects will be responsible for developing a methodology to adapt and disseminate all techniques and methods being tried under the Project auspices.

Provision is made for the hiring of shortterm technical assistance from both international and domestic sources for the solving of specific Project related problems. It is expected that this technical assistance will be of a short duration, and will only be used for specific technical purposes such as an unidentified pest control problem, a hard to resolve marketing or processing problem, or a difficult production problem.

Additionally, the PCC will arrange for periodic training programs for sub-project staff, and farmers involved in Project activities. These programs will range from half day field demonstrations on new techniques, to week long formal training courses on selected topics. In all cases the programs will focus on appropriate technological advances. A working relationship will be established among the Project Manager and the Project Coordinator, the Training Officer of the MOA, and outside contractors as required in order to fulfill the sub-project training needs.

### 3. Networking and Coordination

The PCC, through the Project Manager, will provide the overall framework for networking of individuals and groups carrying out activities under the Hillside Agriculture Project auspices. It will monitor the activities of all sub-projects in order to ensure the most efficient use of Project resources, and maximize the complementarity of projects. It will facilitate contact between technical people engaged in separate sub-project activities. It will maintain a skills bank of available local persons competent in different areas of technical expertise of perennial cropping. And finally, it will provide forums whereby information exchange can take place between farmers and technicians of separate sub-projects.

The Project Manager, working through a contracting mechanism with a Jamaican agency, will arrange for the publication of a Project newsletter, as well as occasional bulletins aimed at sub-project staff and farmers, in order to disseminate information

to all persons engaged in Project sponsored activities. These publications will be distributed to all individuals engaged in Project sponsored activities, and will serve as the primary mechanism for communication within the project.

In addition to networking and communication, the PCC, the Project Manager, and the USAID Project Coordinator will play a central role in focusing the activities of individuals, groups, and agencies that are involved in hillside development. It will carry out this coordination function through both formal and informal means. Formally, the PCC will sponsor a 2-3 day workshop at least once a year attended by representatives of all sub-projects and other relevant technical personnel. This workshop will serve to update individuals and groups on the activities of the project, and bring all concerned up to date with perennial crop technology. Informally, it is expected that the Project Manager and the Project Coordinator will maintain extensive contacts with relevant people concerned with hillside development, and will serve as catalysts in promoting the Project goals.

This type of coordination will provide focus and direction to on-going activities. It is not expected that the PCC, or the Project Manager and Project Coordinator, will manage any sub-project directly, nor is it expected that they provide leadership, management, or operational support for existing organizations. The PCC, however, is expected to focus and incorporate activities of existing organizations into the Project, and aid them in whatever way possible in order to achieve Project goals.

#### D. Timing of Project

The Hillside Agriculture Project will be implemented over a seven year period. It will contain two phases, each lasting between 3-4 years, to be known as Phase I and Phase II. Phase II will build upon the experience learned in the sub-projects of Phase I. The principal difference will rest with the relative emphasis devoted to specific activities. The major purpose of the phases is to emphasize the evolution of the Project from a focus on experimental pilot projects, to a focus on extending information learned.

Phase I will focus on the gathering, pilot testing, and adaptation of technological packages directed at the profitable production of perennial crops by hillside farmers in selected communities primarily within the Rio Minho and Rio Cobre watersheds. Phase II will focus on the dissemination and refinement of the technological packages developed in Phase I to the small hillside farmers throughout the targeted watersheds.

The advantage of utilizing a phased approach to Project implementation lies in allowing flexibility at the critical early stage of the Project to experiment with, test the viability of, and pursue the technologies of greatest promise. A number of pilot projects and adaptive research activities can be undertaken within present institutional arrangements, without the creation of an elaborate implementation unit. This approach will ensure that the technologies developed are specific to the particular needs of hillside farmers.

Phase I will be reviewed at the end of each project year to ensure that grants are directed at meeting overall Project goals. This review will be carried out by the PCC, with the assistance of the Project Manager who will compile annual financial and qualitative reports. Additionally, the USAID Project Committee will conduct regular assessments of Project progress through the Mission Semi-annual Review process. Sub-project grants will be subject to annual review, with continued funding contingent upon satisfactory progress. Grants not meeting planned objectives will be altered by the PCC, or if this is not possible, be subject to having funding discontinued.

It is expected that at the end of Phase I, a series of viable production technologies for perennial crops will have been generated, adapted and tested. The adoption rates by different types and levels of farmers and the effectiveness of the technological packages will be monitored. These results will provide feedback for adjustments and ensuing Project activities, and will comprise the basis for sub-project activities to be undertaken in Phase II.

The design and development of sub-projects in Phase II will be contingent upon the results of Phase I. It is expected that of the many techniques and technological packages developed and tested in Phase I, some will emerge as more viable for small farmers than others. Based on the evaluation at the beginning of the third year of Phase I, the USAID Project Officer, in association with the PCC will make an assessment of the results up to that point. The primary purpose of Phase II will be to disseminate the successful technologies to selected sites within the targeted watersheds. It is expected that problems emerging in the course of implementing the technologies will be dealt with through ongoing Project review.

If the Project is not developing cost effective replicable approaches in Phase I, there will be no Phase II; it is to be authorized now, but the GOJ understands that only Phase I funding is anticipated until a specific decision is made to go to Phase II.

#### IV. COST ESTIMATES AND FINANCIAL PLAN

##### A. Overview

The total cost of the seven year Hillside Agriculture Project is estimated to be US\$13.35 million. Estimated expenditures for Year One of the Project are \$0.64 million.

##### B. Funding

The AID grant funding of \$10 million will be used for the following purposes:

- A portion of Project coordination and support costs.
- Grants to sub-projects.
- Shortterm Technical Assistance and Training to resolve specific technical problems encountered during Project implementation and training for technical staff of sub-projects.
- Networking and Communications which directly contribute to Project goals.
- Assessments, Evaluation, and Audits.

The GOJ will provide for staff time (MOA and JAS PCC representatives and a portion of the costs for RPPD review on an as needed basis) and related support costs. In addition, the GOJ and NGO recipient organizations will be expected to contribute a portion of the local costs of each Grant-financed sub-project. This will possibly include such elements as local operations, clerical services, in-country transportation, air fare if applicable, local currency per diem, etc. The actual GOJ and NGO contributions will be specifically determined for the individual sub-projects and set out in implementation documentation.

Sub-project grants would normally vary between one to three years. Sub-project grants will be subject to an annual review by the PCC staff, and continued funding will be dependent upon a positive result. Any irregularities uncovered in the financial monitoring process will be cause for immediate termination of funding.

Disbursement of funds by USAID/Jamaica will be made either directly to a sub-project account or on an advance/reimbursement basis into a Special Account set up and maintained by the Ministry of Agriculture for the Hillside Agriculture Project. The Project Manager, and MOA accountant will submit quarterly projections, on a rolling basis, at the start of every month. Based on the estimates of expenditure, USAID will maintain an adequate balance in the project special account. Funding for sub-projects or other Project activities, will be drawn directly from the Special Account. On a monthly basis, the MOA accountant will report project special account inflows and outflows to the Ministry of Finance. In this way, the GOJ will be officially notified of Project activities. This procedure is intended to ensure that flow of funds to Project activities is not hampered by constraints in the internal GOJ budgetary allocation process, while at the same time involving the GOJ on an official level. If it is found during Project implementation that this process does not work, discussions between AID and MOA will be pursued to effect remedial action.

Disbursements will be made either directly by USAID or out of the Special Account based on approved sub-projects, or other Project activities. Sub-projects will be required to make projections of expenditures based either (1) through an advance/reimbursement mechanism where sub-projects will be required to submit quarterly projections of expenditures, and monthly cash flow statements to the PCC or (2) through a cost reimbursement mechanism based on monthly voucher submissions. Other activities, such as specific TA or training requirements or the central procurement of commodities, will either be handled by the PCC through host country contracts prepared by the Project Manager, or directly by AID through contracts, purchase orders or work orders.

### C. Cost Summary

Table I summarizes the estimated costs of the Project by project inputs and financial sources.

TABLE I: Summary Cost Estimate by Financial Source (US\$000)

<u>INPUT</u>	<u>AID-FX</u>	<u>AID-LC</u>	<u>Ja.-LC</u>	<u>TOTAL</u>
PCC STAFF	0	0	132	132
SUPPORT COSTS	565	505	428	1,498
SUB-PROJECTS	1,766	5,463	2,386	9,615
SHORT TERM TA & TRAINING	236	237	95	568
NETWORKING & COMMUNICATION	0	169	0	169
ASSESSMENT/EVALUATION/AUDIT	0	150	0	150
SUBTOTAL	2,567	6,524	3,041	12,132
CONTINGENCY	257	652	305	1,214
	2,824	7,176	3,346	13,346

Table II shows the USAID funded estimated costs by project outputs and disbursement category. The outputs are listed as "Project Coordination & Administration" and "Development & Dissemination of Improved Technology Packages". The disbursement categories are PCC Staff, Support Costs, Sub-Projects, Networking & Communication, Technical Assistance & Training, Assessments/Evaluation/Audits, and Contingency.

Table III shows a detailed estimate of project expenditures over the life of the project. These figures are broken down by disbursement category and source of funds for each Project Year.

TABLE II: Estimated USAID Costs by Project Outputs (US\$000)

	PCC STAFF	SUPPORT COSTS	SUB PROJECTS	SHORT TERM TA & TRAINING	NETWORKING	ASSESSMENT/ EVALUATION/ AUDIT	CONTINGENCY	TOTAL
<u>Project Outputs</u>								
Project Coordination & Administration	0	1,070	0	0	0	150	122	1,342
Development & Dissemination of Improved Technology Packages	0	0	7,229	473	169	0	787	8,658
TOTAL	0	1,070	7,229	473	169	150	909	10,000

TABLE III: Projection of Expenditures by Project Year (US\$000)

	Project Year 1 (*)			Project Year 2			Project Year 3			Project Year 4		
	AID	GOJ	Sub-Project	AID	GOJ	Sub-Project	AID	GOJ	Sub-Project	AID	GOJ	Sub-Project
<b>PCC STAFF</b>												
MOA	0	6	0	0	7	0	0	8	0	0	9	0
JAS	0	6	0	0	7	0	0	8	0	0	9	0
<b>SUPPORT COSTS</b>												
Project Manager	30	0	0	35	0	0	40	0	0	46	0	0
USAID Project Coordinator	0	0	0	75	0	0	79	0	0	83	0	0
Support Staff	5	4	0	6	5	0	7	5	0	8	6	0
Other MOA Staff Time	0	10	0	0	12	0	0	13	0	0	15	0
Materials & Supplies	10	10	0	5	5	0	6	6	0	6	6	0
Office Space	0	20	0	0	23	0	0	27	0	0	31	0
Vehicle for manager	15	0	0	0	0	0	0	0	0	17	0	0
Vehicle Operation/Maintenance	8	0	0	9	0	0	11	0	0	12	0	0
<b>SUBPROJECTS</b>	<b>271</b>	<b>0</b>	<b>90</b>	<b>842</b>	<b>0</b>	<b>281</b>	<b>969</b>	<b>0</b>	<b>323</b>	<b>1,185</b>	<b>0</b>	<b>385</b>
<b>SHORT TERM TA &amp; TRAINING</b>												
Technical Assistance	30	0	0	33	0	0	36	0	0	40	0	0
Training	19	10	0	20	11	0	22	12	0	25	13	0
Pesticide Training	1	10	0	2	11	0	2	12	0	2	13	0
<b>NETWORKING</b>												
Publications	12	0	0	12	0	0	12	0	0	12	0	0
Meetings/Forums	10	0	0	12	0	0	12	0	0	12	0	0
<b>ASSESSMENT/EVALUATION/AUDIT</b>												
Evaluation	0	0	0	0	0	0	40	0	0	0	0	0
Audits	10	0	0	10	0	0	10	0	0	10	0	0
<b>SUBTOTAL</b>	<b>421</b>	<b>60</b>	<b>91</b>	<b>1,061</b>	<b>70</b>	<b>281</b>	<b>1,246</b>	<b>79</b>	<b>323</b>	<b>1,458</b>	<b>89</b>	<b>385</b>
<b>CONTINGENCY</b>	<b>42</b>	<b>7</b>	<b>9</b>	<b>106</b>	<b>7</b>	<b>28</b>	<b>124</b>	<b>8</b>	<b>32</b>	<b>146</b>	<b>9</b>	<b>39</b>
<b>TOTAL</b>	<b>463</b>	<b>73</b>	<b>99</b>	<b>1,167</b>	<b>77</b>	<b>309</b>	<b>1,370</b>	<b>87</b>	<b>355</b>	<b>1,604</b>	<b>98</b>	<b>424</b>

(\*): Project Year 1 begins 6 months into FY 1987

TABLE III: Projection of Expenditures by Project Year (US\$000) (Continued)

	Project Year 5			Project Year 6			Project Year 7			TOTAL		
	AID	GQJ	Sub-	AID	GQJ	Sub-	AID	GQJ	Sub-	AID	GQJ	Sub-
			Project			Project			Project			Project
<b>PCC STAFF</b>												
MOA	0	10	0	0	12	0	0	14	0	0	66	0
JAS	0	10	0	0	12	0	0	14	0	0	66	0
<b>SUPPORT COSTS</b>												
Project Manager (Jamaican)	52	0	0	60	0	0	69	0	0	332	0	0
Project Coordinator (American)	87	0	0	91	0	0	96	0	0	511	0	0
Project Support Staff	9	7	0	10	8	0	12	9	0	57	44	0
Other MOA Staff Time	0	17	0	0	20	0	0	23	0	0	110	0
Materials & Supplies	7	7	0	7	7	0	8	8	0	49	49	0
Office Space	0	36	0	0	41	0	0	47	0	0	225	0
Vehicle for Manager	0	0	0	0	0	0	0	0	0	32	0	0
Vehicle Operation/Maintenance	14	0	0	16	0	0	19	0	0	89	0	0
<b>SUBPROJECTS</b>	<b>1,307</b>	<b>0</b>	<b>431</b>	<b>1,503</b>	<b>0</b>	<b>496</b>	<b>1,152</b>	<b>0</b>	<b>380</b>	<b>7,229</b>	<b>0</b>	<b>2,386</b>
<b>SHORT TERM TA &amp; TRAINING</b>												
Technical Assistance	44	0	0	48	0	0	53	0	0	284	0	0
Training	27	15	0	30	16	0	34	18	0	177	95	0
Pesticide Training	2	15	0	2	16	0	1	18	0	12	95	0
<b>NETWORKING</b>												
Publications	12	0	0	12	0	0	12	0	0	84	0	0
Meetings/Forums	12	0	0	12	0	0	15	0	0	85	0	0
<b>ASSESSMENT/EVALUATION/AUDIT</b>												
Evaluation	0	0	0	0	0	0	40	0	0	80	0	0
Audits	10	0	0	10	0	0	10	0	0	70	0	0
<b>SUBTOTAL</b>	<b>1,583</b>	<b>102</b>	<b>431</b>	<b>1,801</b>	<b>116</b>	<b>496</b>	<b>1,521</b>	<b>133</b>	<b>380</b>	<b>9,091</b>	<b>655</b>	<b>2,386</b>
<b>CONTINGENCY</b>	<b>158</b>	<b>10</b>	<b>43</b>	<b>180</b>	<b>12</b>	<b>50</b>	<b>152</b>	<b>13</b>	<b>38</b>	<b>909</b>	<b>66</b>	<b>239</b>
<b>TOTAL</b>	<b>1,741</b>	<b>112</b>	<b>474</b>	<b>1,981</b>	<b>128</b>	<b>546</b>	<b>1,673</b>	<b>146</b>	<b>418</b>	<b>10,000</b>	<b>721</b>	<b>2,625</b>

D. Methods of Financing

Table IV shows the basic methods of financing and implementation for the USAID funded activities of the Hillside Agriculture Project.

TABLE IV: Methods of Implementation and Financing

<u>COMPONENT</u>	<u>IMPLEMENTATION</u>	<u>FINANCING</u>	<u>APPROX AMOUNT (\$000)</u>
<b>SUPPORT COSTS</b>			
	HC Contract	Advance/Reimbursement	505
	AID Direct Contract	Direct Payment	510
	PIO/C, AID PO	Direct Payment	55
			<u>1,070</u>
<b>SUB-PROJECTS</b>			
(a) Sub-Grants	Grant (through MOA)	Advance/Reimbursement	4,500
	Grant (through AID)	Advance/Reimbursement	500
(b) Shortterm TA	HC Contract	Advance/Reimbursement	300
	AID Direct Contract	Direct Payment	600
(c) Training	HC Contract	Advance/Reimbursement	163
	PIO/P	Quarterly Credit Transfer	166
(d) Commodities	AID Purchase Order and IQC/PSA	Direct Payment	1,000
			<u>7,229</u>
<b>SHORT TERM TA &amp; TRAINING</b>			
(a) Shortterm TA	AID Direct Contract	Direct Payment	196
	HC Contract	Advance/Reimbursement	87
(b) Training	PIO/P	Quarterly Credit Transfer	40
	HC Contract	Advance/Reimbursement	150
			<u>473</u>
<b>NETWORKING/COMMUNICATIONS</b>			
	HC Contract	Advance/Reimbursement	169
<b>ASSESSMENT/EVALUATION/AUDIT</b>			
	AID Direct Contract	Direct Payment	150
<b>SUBTOTAL</b>			<u>9,091</u>
<b>CONTINGENCY</b>			909
<b>TOTAL</b>			<u>10,000</u>

USAID will provide the needed funds to MOA on an advance/reimbursement basis. MOA has been found to have the necessary procurement procedures, contracting, and financial capability. An additional review will be made subsequent to the hiring of the accountant and the opening of the Special Account.

## V. IMPLEMENTATION ARRANGEMENTS

### A. Project Mechanism

The \$10 million grant for the Hillside Agriculture Project will be obligated by a Project Agreement between USAID and the Government of Jamaica. The Project will be incrementally funded, and annual obligations will be based on estimates of expenditure for the fiscal year. An initial \$0.8 million will be obligated in FY 87 in the Project Agreement, and the remaining funds will be obligated through annual amendments to the Project Agreement.

Funds will be earmarked in a manner appropriate to the activity to be funded. In the case of sub-projects, funds will be earmarked by a Project Implementation Letter (PIL) countersigned by the Chairman of the Project Coordinating Committee (PCC). This PIL will summarize the sub-project to be funded, and specify any conditions precedent. In the case of training and technical assistance, or networking and coordination, funds will be earmarked by a Project Implementation Order (PIO) that specifies the activity to be funded, or through a PIL. The Chairman of the PCC will sign all earmarking documents as the representative of the Government of Jamaica.

Funds will be committed in the most expeditious manner possible per the activity to be funded. For sub-projects, funds will be committed by a sub-project agreement, signed by the Permanent Secretary in the Ministry of Agriculture (PS-MOA). For other activities, funds will be committed by a contract, purchase order, work order, or other mechanism appropriate to the activity in question.

Disbursement will take place per the terms of the committing documentation. For sub-projects, an advance/reimbursement mechanism will be used wherever possible based on quarterly projections of expenditure. For other activities, disbursement will take place per the terms of the contract, work order, or purchase order.

Table V summarizes the required documentation per the activity to be funded.

TABLE V: Required Documentation by type of Activity

<u>Document</u>	<u>Sub-project</u>	<u>Other</u>
Obligating Document	Project Agreement	Project Agreement
Earmark Document	PIL	PIO/T, PIO/P, PIO/C, PIL
Committing Document	Sub-project Agreement	Contract, Work order Purchase Order
Disbursement	Mechanism specified in Sub-Proj. Agr.	Per terms of committing document

B. Sub-project Proposals

There will be two categories of sub-projects eligible for funding under the Hillside Agriculture Project.

1. Category One sub-projects will be for a maximum of up to \$50,000 for the life of the activity, and will be primarily oriented to smaller community-based and membership organizations, smaller PVO's, individual medium to large farmers and clusters of such farmers, and registered cooperatives. The use of an intermediary PVO will be considered as an umbrella implementing organization for a number of small subprojects.
2. Category Two sub-projects will carry a maximum of \$500,000 over a five year period, and will be primarily oriented towards larger regional and national organizations, MOA agencies, commodity boards, agro-processing entities and cooperative federations.

Sub-project proposals may come from both private and public sector groups. A group seeking to develop a proposal should contact the Executive Secretary/Project Manager of the Project Coordinating Committee (PCC) to discuss the guidelines for proposals, and the types of activities to be undertaken by the sub-project. The Project Manager and the Project Coordinator will arrange an initial site visit in order to discuss the proposal development methodology, view the area and conditions to be emphasized, and ensure that the basic outlines of the proposal are within the overall Project goals. A sub-project proposal format is included in an attachment to Annex E, and suggested contracting forms will be supplied as appropriate.

Groups seeking to develop a proposal will be referred to the Rural Physical Planning Division (RPPD) of the MOA. The RPPD will be asked to perform a technical assessment of the proposed site in conjunction with members of the proposed managing entity, as well as affected farmers. Such a technical assessment should include soil analysis, land capability mapping, crop suitability evaluation, and other specific technical analyses as appropriate to the sub-project proposal.

It is anticipated that proposal development will be a give and take process, and will take 2 to 4 months. Since the success of the overall Project will ultimately depend on the quality of sub-project proposals, it is important not to rush the proposal development process. It is at this stage that farmers must be brought into the planning of the sub-projects that will take place in their communities, in order to ensure that their concerns, expectations, and needs are incorporated in the proposal.

Category One and Category Two sub-projects will undergo a similar review and approval process. The main difference will be with the degree of depth required by the proposal format, and the level of reporting requirements. All sub-projects will be initiated by the proposing organization, who will prepare the proposal within the published sub-project guidelines. Once the Project Manager, and the USAID Project Coordinator feel that a proposal is in its best possible form, they will recommend it to the PCC for approval.

Sub-projects should be developed so that the success of an activity is not dependent upon external variables. Hence, sub-projects should be inclusive of a plan for provision of the required inputs, definition of the necessary technical assistance, and a plan for extending the technical information to farmers within the sub-project boundaries.

All sub-project proposals must include a system for separate accounting and reporting in accordance with the Management Information System (MIS) maintained by the PCC. All funds for sub-projects must be lodged in a separate account and be kept distinct from the normal operating budget of the managing entity. A detailed budget will be required outlining the categories of expenses, and methods of disbursement to be used. An authorized person within the proposing organization will be designated who will be held accountable for all sub-project expenditures.

In addition, all sub-project proposals will include a standard monitoring system for reporting all sub-project activities. A summary report of sub-project activities will be required to be submitted on a monthly basis, and an annual review will be

required in conjunction with the PCC. This reporting mechanism will be the primary means by which the PCC will determine whether or not a sub-project is being implemented within the overall Hillside Agriculture Strategy.

Adherence to the MIS during Project implementation will ensure that sub-projects remain on course, and are carried out in accordance with the overall project design. The MIS will be used to flag potential problems in financial administration, community participation, technical direction, or sub-project management, in order that they may be dealt with immediately as they arise.

The responsibility for implementation of all sub-projects rests with the managing entity named in the sub-project proposal. Upon approval of the PIL outlining the sub-project agreement, a payment mechanism designed specifically to the needs of the particular sub-project will be set forth in an implementation letter. This same PIL will specify any conditions precedent to the disbursement of funds. Such conditions precedent may include the establishment of a separate bank account and the designation of an authorized representative, and signatures.

The managing entity for each sub-project will be responsible for the hiring of sub-project staff, establishing a sub-project office as necessary, and procuring the local commodities necessary for sub-project implementation. In addition, the managing entity will be responsible for making contact with relevant technical personnel critical for sub-project success, as well as maintaining liaison with other agencies and organizations concerned with the particular sub-project.

The PCC may assist the sub-project managing entity through the provision of information and advice at the start, as well as during, sub-project implementation. Such information could include resumes of technical personnel, provision of technical literature, or information on procurement of specific commodities. Advice that the PCC may offer may include answers to specific technical problems, methods for inducing community participation, or interpretation of procurement regulations.

### C. Other Project Activities

In addition to providing funding to sub-projects activities, the Hillside Agriculture Project will fund activities that support the sub-projects. These activities will fall into three categories.

## 1. Technical Assistance and Training

Although sub-projects will be designed to be inclusive of technical content and training for participants, it is anticipated that there will be a need and demand for technical assistance and training outside of sub-projects. This need and demand will be in response to unanticipated problems encountered in sub-project implementation, as well as opportunities that may arise during Project implementation.

This technical assistance and training may be of either Jamaican or outside origin. For technical assistance and training of Jamaican origin, it will be the responsibility of the Project Manager to develop the scope of work, identify individuals or firms, and to and oversee the execution of the work. For technical assistance and training of overseas origin, it will be the responsibility of the USAID Project Coordinator to develop scopes of work, prepare PIO's, and oversee the execution of the work order, purchase order or contract.

The Project Manager will maintain a roster of qualified Jamaican experts in the field of tropical perennial crop production. This roster will be drawn upon to advise sub-project of available experts and technicians to deal with sub-project implementation. Additionally, the Project Manager will establish a working relationship with the Training Division of the Ministry of Agriculture in order to facilitate any training of a special nature necessary for the success of sub-projects.

The USAID Project Coordinator will respond to requests for outside technical assistance and training through the utilization of the network of contacts afforded by the USAID. This network includes the use of regional technical advisors, consultants available through Indefinite Quantity Contracts (IQC's) or Technical Support to Mission (TSM), or expertise identified through AID/Washington assistance. In all cases, the simplest and most expeditious contracting mode will be utilized in order to minimize the amount of paperwork involved to the mission.

## 2. Networking and Communication

The Project Manager and the USAID Project Coordinator will also seek to identify needs of project participants for communication and networking among participants. The basic needs are expected to be in the provision of relevant printed technical matter to sub-projects, the provision of a means to communicate experience and results among sub-projects, and communication of new ideas and technologies from abroad.

Through the keeping up of a roster of perennial crop experts and technicians, the Project Manager and the Project Coordinator will be in a position to keep in touch with advances in tree crop technology. In this role, they will serve as catalysts to give focus to the activities of individuals and organizations in the field.

As necessary, the Project Manager will develop contracts with local firms to perform services required. For example, if it is decided that the best way to communicate among sub-projects is to develop a newsletter, a contract can be developed with a local consulting firm to produce the newsletter.

The PCC through the Project Manager will sponsor a 2-3 day workshop at least once a year for representatives of sub-projects and relevant technical personnel. The workshop will serve to update individuals and groups on the activities of the sub-projects, and will bring all participants up-to-date on the latest technologies being developed. This workshop will be organized under a contract with a Jamaican institution, have a specific budget, and be sanctioned in a Project Implementation Letter.

### 3. Project Coordination

The Project Manager will be hired through a two-year, renewable host country contract with the MOA. The Project Manager will be supported by the Ministry of Agriculture through the provision of office space, and telephone. Additionally, the Project Manger will be supported by a computer system, office supplies and equipment, and a vehicle procured through project coordination funds.

The USAID Project Coordinator will hired under a two-year renewable personal services contract. He will be supported by office space, secretarial support, and the normal support services accorded to AID Personal Service Contractors. The USAID Project Coordinator position will be primarily for the first three years of the Project in order to ensure a smooth start-up of the project, but may continue longer if necessary.

## D. Institutional Arrangements

### 1. Project Coordinating Committee (PCC)

Responsibility for overall coordination of project activities will rest with the Project Coordinating Committee (PCC). The PCC will develop policy about sub-project approval criteria, approve

sub-project proposals, and monitor progress of sub-projects. In addition, the PCC through its Project Manager, will provide focus and support to sub-project activities, maintain the Management Information System (MIS) for accounting and reporting sub-project activities, and will create the conditions necessary for accomplishment of overall Project goals.

The PCC will provide the Project focus through the careful review, selection, and recommendation for approval of sub-projects. All sub-projects will be required to address the three principal elements of the strategy outlined in this Project Paper: to promote profitable perennial crop production; to focus on adapting and extending technology; and to promote the participation of farmers in the sub-projects directly affecting their communities.

The PCC will consist of three members who will be high level representatives of the constituent organizations. The PCC will be chaired by the Permanent Secretary of the MOA (PS-MOA), or his designee, who will also be the authorized signatory for earmarking and committing documents. Other organizations on the PCC will be the Jamaica Agricultural Society (JAS), and USAID/Jamaica. The JAS will be represented by a member selected by the JAS Board of Management, and USAID/Jamaica will be represented by a staff member chosen by Mission management.

The PCC members will meet monthly in the initial start-up phase of the project, and thereafter quarterly as needed. In the initial start-up of the project, the PCC will concentrate on setting policy for sub-project approval, and setting up guidelines for submitting of sub-project proposals for funding.

The PCC will be assisted in carrying out its functions by a Project Manager, who will also function as the Executive Secretary for the PCC. In addition, the Project Manager will be assisted in carrying out his duties by a Project hired accountant, and a Project secretary. The Project Manager/Executive Secretary will also serve on the PCC in an ex-officio capacity. A detailed job description for the Project Manager/Executive Secretary is attached to Annex E.

Given the decentralized nature of the Hillside Agriculture Project, the PCC will not be expected to directly manage any of the sub-project activities. The proper role of the PCC will be sub-project approval, and oversight of on-going activities. The PCC may also recommend funding for discrete activities not directly connected to sub-projects such as training sessions, attendance at conferences, sponsoring workshops, and other activities that can be justified as meeting the Project goals.

The PCC, through the Executive Secretary, will also be responsible for the monitoring of the technical and financial aspects of sub-projects. This will be done through the MIS which will provide the organizational framework for all financial documents, as well as up-date reports produced by sub-projects. The MIS will be supplemented through site visits, report analyses, and the use of financial audits. If a sub-project is not performing to plan, it will be the responsibility of the PCC to recommend changes if feasible, or discontinuation of funding.

## 2. Ministry of Agriculture

The Ministry of Agriculture will be involved in implementation of the Hillside Agriculture Project in four different ways.

The Permanent Secretary in the Ministry of Agriculture (PS-MOA) will serve as chairman of the PCC, and as such will countersign all Project Implementation Letters relating to sub-projects, as well as all earmarking documents for other activities. Counter signature of a PIL by the PS-MOA for a sub-project will signify that the GOJ through the MOA approves of the action in the PIL, and will take any necessary action presented by the letter to carry out the activity.

The Executive Secretary/Project Manager, will be chosen on the basis of experience in, and familiarity with Jamaican agricultural institutions, particularly in the MOA. In addition, this person will be physically located in the Ministry of Agriculture complex. It is expected that this person will forge close links with MOA personnel as required to carry out the goals of the Hillside Agriculture Project. The Project Manager/Executive Secretary will report to the PS-MOA on a periodic basis to update him on sub-project activities.

The Rural Physical Planning Division (RPPD) of the MOA will be involved in performing technical assessments of proposed sub-project sites during the planning stage for sub-projects. In performing these assessments it is expected that RPPD staff will closely interact with the staff from the proposing entity, as well as the farmers to be affected by the sub-project. The RPPD will utilize all data sources at its disposal in this process, as well as techniques and processes developed in the Geographic Information System. In particular, the recently signed contract between the Environmental Systems Resources Institute (ESRI) should be of special use.

And finally, the MOA, through the Director of Financial Administration will oversee the keeping of the accounts for the funds disbursed by the MOA under the project. The MOA will employ

an accountant utilizing Project funds, and this person will keep the project books for all funds spent under Project auspices from the Special Account. This will include making rolling three month projections for both expenditures from the Special Account. The accountant will work to satisfy both the needs of the USAID Controller office, as well as the needs of the MOA normal accounting procedures.

Given the close involvement of the MOA in the PCC, and the proposal development process, it is expected that the counter signing by the PS-MOA of PIL's for sub-projects, and earmark documents for other activities, will not be a cause of implementation delays.

The PS-MOA may propose activities for funding under the Project auspices. However, all such activities must be channelled through the normal project review and approval process. All GOJ affiliated sub-projects will be subject to the same conditions and limitations as any other sub-project. This includes the maintenance of a separate accounting system to keep funds separate from normal operating expenses, including the establishment of a separate checking account, and the maintenance of a sub-project specific reporting system.

### 3. USAID

The implementation responsibility within USAID will be held by the Agriculture and Rural Development Office (ARDO). The USAID Project Officer will sit on the PCC, and review and approve all sub-project proposals submitted for funding. Additional Mission support will be provided by other USAID offices as appropriate (i.e. Office of Project Development and Support, Office of Contract Management, and Office of the Controller).

The USAID Project Officer will generally represent the USAID Mission Director on the PCC. He/she will be assisted in these duties by a USAID Project Coordinator retained under a personal services contract arrangement. This person will be responsible for preparing all earmarking and committing documentation, drafting all Project related correspondence, preparing quarterly and semi-annual reports, and making all arrangements for foreign technical assistance and training for Project participants. This person will be hired for an initial two year period beginning in December, 1987, and will continue as far into the Project as determined necessary by USAID. While initially the Project Coordinator will be hired with Mission funds, Project funds may be used later if necessary.

The USAID Hillside Agriculture Project Committee will meet on a semi-annual basis in order to assess and evaluate the overall progress of the project, and to recommend any changes in direction. This committee shall consist of:

OEEE Representative  
OPDS Representative  
OPEP Representative  
CONT Representative  
ARDO Project Officer

The ARDO Project Officer will act as recording secretary for the Committee.

The principal role for the USAID Project Committee will be evaluation and assessment of on-going Project activities. Assessment will be carried out via the on-going semi-annual review of projects conducted by the mission. Through the close involvement of the Project Officer, Project Coordinator, and Controller's Office, Mission staff will be informed on progress of the project. A formal project evaluation will be performed in the third year of the Project prior to completion of Phase I.

When a sub-project is approved for funding by the PCC, the USAID Project Coordinator will prepare a PIL outlining the terms and conditions of the activity. The signed PIL will be sent to the PS-MOA for counter signature as chairman of the PCC, after which a copy will be sent to the authorized representative of the managing entity. Funds shall be considered earmarked for a sub-project once a countersigned PIL is received in USAID by the Controller's Office.

In the case of other activities to be contracted or procured with US dollars directly by the USAID, the Project Coordinator will make the contacts and preliminary arrangements, as well as prepare a Project Implementation Order (PIO) for approval by USAID and the MOA on behalf of the GOJ. This PIO will serve as the earmarking document, and will be countersigned by the PS-MOA, in his role as chairman of the PCC, and host country representative. Funds will be considered committed once the mission contracts officer has signed a contract, purchase order or work order specify the activity to be funded.

In general, the simplest and most expeditious form of committing documentation will be utilized. The specific committing document to be used will depend on the activity being funded, and may include a PIO/T, PIO/C, PIO/P, Grant Agreement, Contract, or Travel Authorization.

The ARDO Project Coordinator will maintain all original files of all earmarking and committing financial documents, all Project related correspondence, audits, and evaluations, and other closely related documents. The Controller's Office will receive copies of all signed financial documents.

#### E. Environmental Concerns

The Environmental Analysis for this project paper prepared by R. M. Field presents three broad areas of concern relating to environmental consequences of the Hillside Agriculture Project. An environmental awareness statement is attached in Annex H that will be appended to all sub-project agreements. Additionally, Annex I contains a list of pesticides suitable for use, and a list of pesticides restricted for use in the Hillside Agriculture Project. Annex I should be appended in its entirety to sub-project agreements.

The first broad area of concern is the vulnerability of tree crops to hurricane force winds. In this regard sub-projects should endeavor to instruct participating farmers in techniques for physically protecting tree crops through the use of wind breaks, alley cropping, block planting and similar methods. The Jamaican Office of Disaster Preparedness (ODP) has on its agenda for 1987 to establish a post disaster recovery plan for the agricultural sector. Additionally, the Project Manager, and USAID Project Coordinator will encourage sub-projects to evaluate the adequacy of tree crop insurance programs.

The second area of concern is that of hillside land use and farm tenure. One potential danger of the project is that the successful production of tree crops on better hillside lands, will push other farmers on to more marginal lands to grow their annual crops. To guard against this, every effort should be made within the context of sub-projects to channel assistance to farmers who already cultivate the land that they own. Since the success of the project will largely depend on developing a successful corps of farmer-participants, careful attention should be paid to selection of the beneficiaries within sub-projects. Additionally, project assistance to farmers should be in the form of in-kind inputs, technical assistance and training, rather than direct cash transfers in order to maximize increases in production and productivity.

The third broad area of concern is that of pesticide use. In the first year of the project the Project Coordinator will work to develop a training program in pesticide management with a suitable Jamaican institution with the intention of educating participants in this project, as well as participants in the AID funded Agricultural Research Project (532-0128), in proper methods of handling and utilizing pesticides. Additionally, in areas where project assistance is used to directly fund the purchase of agro-chemicals, local authorities should be encouraged to undertake environmental baseline studies, and monitor key variables, relative to water quality.

F. Implementation Schedule

ACTIVITY	FY 1987		FY1988-1992		FY 1993		FY1994
	Project Yr. 1		Proj. Yr. 2-6		Project Yr.7		
	FM	AMJJAS	ONDJFM	AMJJAS	ONDJFM	AMJJAS	ONDJF
PROAG		X					
Selection of MOA PCC member		X					
Selection of JAS PCC member		X					
Selection of Project Manager and Accountant		X					
Sub-project Publicity	XXX	XXX	XXX	XXX	XXX		
Proposal Development	XXX	XXX	XXX	XXX	XXX		
Closing Dates for Receipt of Proposals		X	X	X	X		
Selection of Grantee &/or Contract Recipients		X	X	X	X		
Sub-project Implementation		X	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
Interim Evaluation (8/89)				X			
PACD							X

## VI. PROJECT ANALYSES

### A. Technical Analysis (Summary)

Project activities will take primarily in the Rio Cobre and the Rio Minho watersheds. The Rio Cobre watershed, with approximately 158,000 acres, occupies most of St. Catherine parish, and small portions of St. Mary and St. Andrew parishes. The watershed of the Rio Minho, with approximately 430,000 acres, occupies the greater parts of Clarendon and Manchester parishes, and part of St. Catherine.

According to the land capability scheme used by the Rural Physical and Planning Unit of the Ministry of Agriculture, only 14% of the total land in St. Catherine and Clarendon parishes is suitable for cultivation with no or slight limitations due to risk of erosion or soil constraints (Classes 1 and 2). Approximately 28% is suitable for cultivation with major limitations due to risk of erosion, soil constraints and poor drainage (Class 3). The rest of the area, which constitutes the bulk of hillside lands, is rated unsuitable for cultivation due to severe constraints imposed by steepness of slope and shallowness of soil (Classes 4, 5 and 6).

The rough and mountainous terrain comprising most of the area precludes the use of significant acreages for agricultural purposes; furthermore, continuous misuse of the land over many decades has eroded and depleted appreciable acreages.

In the target watersheds, the original forests have been removed to allow cultivation. In areas that have suffered severe erosion, fields have been abandoned, and scrub secondary forest has established itself. Other agricultural areas are periodically left in fallow for varying periods, and a low growth of secondary forest occupies these sites. However, in a few of the highest areas within the watersheds, artificial forests have been established by the Forest Department on government lands.

The majority of agriculture in the target watersheds is multi-cropping, in which farmers plant a relatively large number of tree and annual crops on the same piece of land. Reasons for this cropping pattern are: (1) farmers feel that a variety of crops gives insurance that at least some of them will be successful; (2) different crops fruit at different times of the year; (3) farmers believe that different crops use different elements in the soil.

The types of crops that are cultivated by a farmer depend to a large degree on the tenure of the land being farmed. Purchased or owned land is most likely to have permanent crops, receive soil conservation practices, and be visited more often than family land or rented land. Those parcels that are not owned outright by the farmer seldom generally have more than one or two annual crops.

A review of current production practices for coffee and cacao indicates a number of improvements that could be carried out to increase production. (See Annex D.) These include recommendations in the areas of variety selection, nursery practices, plantation practices, harvesting, marketing, and processing.

B. Institutional Analysis (Summary)

Efforts are being made to redirect scarce GOJ staff and financial resources in line with policies that will encourage increased export production, and substitution for food imports. These include divestment of state-run enterprises, promotion of joint investment, involving commercial banks in development, relaxation of import and export regulations and an increased involvement by the private sector in all aspects of production.

A number of institutions are already at work doing activities that relate to Project activities. These include regional and national research organizations, farmers organizations, commodity based organizations, agro-processors, and donor agencies. The probable role, forms of support, and potential contributions of the organizations are discussed in detail in Annex E.

The Hillside Agriculture Project will be implemented through a Project Coordinating Committee whose main role will be to develop policy for sub-project application and approval criteria, approve proposals, and monitor sub-project progress. The members of the PCC will be senior level representatives of the Ministry of Agriculture, Jamaica Agricultural Society, and the USAID.

The role of the Project Manager will be: Executive Secretary to the PCC; provider of support services to sub-projects; focal point for input from the MOA; and catalyst for project development. The role of the USAID Project Coordinator will be to: coordinate activities necessary to the movement of financial resources; arrange necessary outside technical assistance and training; monitor activities of sub-projects; and catalyst for project development.

Guidelines for the number and range of sub-projects will be governed by: the number of proposals submitted in each category; volume of funds to be disbursed; management capacity of the PCC staff; technical competence of proposals; and the range of technologies contained in the proposals.

Selection criteria for sub-project proposals must include the following:

- consonance with overall Project objectives;
- demonstration of capacity to manage the proposed activity;
- a sound technical and socio-economic approach to the proposed problem;
- possibility of replication of results;
- do not overlap other sub-projects;
- demonstration of capacity for providing a 25% contribution on the part of the managing entity;
- a feasible workplan and budget;
- an interim income generating strategy for deferred income; and
- cannot be funded with other sources of funding.

A similar format for Category One and Category Two proposals includes the following:

- a statement requesting funding;
- detailed description of activities proposed;
- a description of the proposed management structure;
- outline of how sub-projects will involve farmers;
- description of likely impact on the physical environment;
- description of training, equipment and supplies needed to implement sub-project; and
- estimated budget containing prescribed line items.

The principal difference between the two categories of proposals will be the degree to which background and description of activities is necessary. A standard Management Information System is included for inclusion in all sub-project agreements.

C. Economic Analysis (Summary)

The recent series of devaluations (which stand to benefit farmers who produce for the export market) and deregulation (lessening of monopsonistic marketing powers for certain commodities) have set the economic stage more favorably for the Hillside Agriculture Project than would have been the case a few years ago. The prospective financial returns to growing selected perennial crops look quite attractive and, with relevant assistance through this Project, would suggest that there will exist reasonably strong financial incentives to planting trees and growing perennial crops.

In view of the uncertainty at this time of the effect that Project activities may have on the rate of increase in planting of perennial crops in the two target watersheds, a range of estimates of the economic worth of the primary benefits was done, based on different assumptions about the rate of adoption. Several indicators were looked at as to what might be possible (not predicted) future acreages for the various crops in the target area. The lowest rates of adoption assumed (Set I) were only one-fourth those of Set IV and the other two assumed rates of adoption were in between.

Given those assumptions regarding rates of plantings of perennial crops, and after certain adjustments using shadow prices were made to available cost and returns data, estimated economic internal rates of return were calculated on the basis of net incremental agricultural production only. Subsequently, the internal rates of return were calculated taking into account the added benefits from improved watershed management. Following is a summary of the estimates:

	<u>Acreage</u>	<u>Increase</u>	<u>-----Economic IRR-----</u>	
	<u>Annual</u>	<u>25 years</u>	<u>Net Incremental</u>	<u>Including Value of</u>
			<u>Ag Production Only</u>	<u>Stabilized Watersheds</u>
			<u>-----percent-----</u>	
Set I	150	3,600	8	9
Set II	300	7,200	15	16
Set III	450	10,800	18	19
Set IV	600	14,400	21	22

It can reasonably be expected that the rate of increase in plantings of perennial crops in the target watersheds will have taken place along the mid-range, between Sets II and III and that the economic worth of the Project is satisfactory simply on the basis of its primary benefits. Even if the "worst case", that is Set I, were to prevail, the returns would still be reasonably good, considering the secondary and tertiary benefits expected as well.

Secondary benefits, which were not taken into the calculus of the economic IRRs, can be expected to be substantial and would include the value added to the perennial crops through processing (processors serving the area are generally running at considerably less than capacity); increased activity by traders, transportation concerns, and input merchants; a net favorable contribution to the Balance of Payments through increased exports; and incremental employment at maturity (25 years) of the equivalent of 2,500 to 3,800 full-time jobs in production alone. Tertiary, or intangible, benefits would include a favorable impact on income distribution, because the target area is one in which average incomes are relatively low.

#### D. Social Soundness Analysis (Summary)

The historical and current contribution of the small farmer to the Jamaican economy is well-known. He has been responsible for the diversification of the agricultural sector and today, is responsible for most of the domestic food production, the major share of export crops such as cacao and coffee, and at least 25% of other traditional export crops such as sugar cane, and bananas.

Yet, the small farmer is typically restricted to the steeper, more remote and less arable farm lands. Numerous efforts have been made to stimulate the agricultural economy and in particular, to improve the levels of social and economic welfare in the small-farm sector. Very few have been noted for their success and the agricultural sector has continued to be seriously disadvantaged vis-a-vis the urban areas in terms of their access to income, education, and other resources. Also, the high out-migration rates experienced during the Post War II period have not been accompanied by significant increases in productivity.

Three of the most important characteristics of the small-farm sector of the post-independence period are (1) their remarkably high degree of purchased food dependency, (2) the prevalence of multi-cropping that involves a relatively large number of tree and annual crops on the same piece of land, and (3) the surprisingly large quantities of idle land. The first can, to a large extent, be explained by the long-standing commercial orientation of the

small-farmers. The second and the third are, in their own ways, responses and adaptations to a resource-skewed socio-economic environment and the bottlenecks that tend to be found in such situations. There is insufficient access to land, credit, and inputs, and the distribution networks and marketing intelligence systems continue to hobble along in ways that do not encourage the small-farmer to break out of petty commodity production. This form of multi-cropping is one way of reducing risk and increasing cash income, and land underutilization is a consequence of the lack of resources to exploit the land available.

A review of the available literature on small farm hillside agriculture, and the survey carried out for this analysis shows that there is a generally receptive though cautious attitude toward the introduction of new ideas and practices. (See Annex G.) In particular, most were in agreement with the idea of tree crops as one way of simultaneously combating soil erosion and increasing farm incomes. The large majority are already planting the tree crops proposed by the Project and the majority (though not so large) believe in the need for, and do practice some kind (though necessarily efficient) of soil conservation. It was found that this caution, as well as the incidence of idle land noted above, was less influenced by factors such as age, education, and tenure than it was by simple financial and economic considerations. This was not all to deny the general reluctance of farmers operating land with insecure tenure to invest in longer term crops or farm improvements. Rented and more distant plots are consequently probably the most abused. But the problem is a complex one, and is unlikely to be solved by simply increasing the security of land tenure. Fragmentation is also a real issue, and it might be expected that this affects the managerial efficiency of the farmer.

Finally, there now seems to be a fairly high level of cynicism and skepticism towards officialdom - and it is an attitude which is the result of long years of broken promises, official inefficiency and clientelism. The importance of local participation in project planning and implementation cannot be overemphasized. Any project must therefore of necessity expend time and effort in identifying the most appropriate ways of ensuring its social and economic acceptability.

E. Environmental Assessment (Summary)

Although income generation is the principal goal of the Hillside Project, a number of closely related objectives are (implicitly or explicitly) woven into the Project design. They include the following:

- Reducing soil loss in the hilly uplands;
- Improving surface water quality by reducing stream sedimentation;
- Increasing dry weather stream flow to facilitate dilution, and provide for downstream irrigation needs;
- Reducing flood frequency and intensity;
- Increasing Jamaica's agricultural exports by expanding coffee, cacao, and related tree crop production;
- Protecting and enhancing the crop diversification program being carried out in the lower reaches of the watersheds; and
- Reversing a patronage pattern in which public subsidies are provided to agriculture without materially increasing public benefits.

A comparative analysis of three substitute approaches for accomplishing these objectives gave the following results:

(1) The Do-Nothing Alternative:

While attractive on its face, this alternative has certain negative ramifications which cause its rejection.

For one thing, it continues to place lowlands agriculture in jeopardy from upstream flooding which could lead to a recurring pattern of crop and livestock losses, thus endangering the agricultural diversification program in St. Catherine and Clarendon. Secondly, as the hillside farm population ages, its productive capacity will necessarily diminish.

A further shortcoming of this alternative has to do with its economic ramifications. Small farmers produce almost all of Jamaica's coffee and cacao, two crops for which there is strong world market demand. Hence, to adopt a do-nothing alternative would be economically, politically and socially untenable.

(2) The Voluntary Resettlement Alternative:

Voluntary resettlement is the environmentally most desirable alternative. As the population thins, revegetation would occur in those areas taken out of production. With the inducements to migrate, the rate of depopulation would be higher than if existing demographic trends were simply allowed to continue (as under the do-nothing alternative). This alternative would result in rapid revegetation and resulting environmental benefits to both upland ecology and lowland agriculture.

There are negative economic ramifications which make this an unlikely strategy despite its environmental advantages. Primary among them is its negative impact on coffee, cacao and other tree crop production. Foreign exchange earnings from these sources would decline. At the same time social costs associated with resettlement would increase. Hence, this alternative is rejected despite its high relative score.

(3) The Improved Management of Existing Cropping Pattern Alternative:

This alternative would have little if any positive effects in improving environmental conditions or in significantly altering the semi-subsistence pattern of hillside farming. Benefits and costs would cancel out. Expenditures would simply perpetuate the status quo making this an unattractive strategy to pursue.

Each of the three alternatives, while having some attractive aspects, on balance, are less effective than the proposed Hillside Agriculture Project in protecting the soil and water resource base of the uplands and conforming to the economic and social objectives of current Government policy. In conclusion, the Hillside Agriculture Project represents the most desirable course and should be endorsed -- but not without reservations and conditions. These fall into three areas: vulnerability of tree crops to hurricane damage; increased use of agro-chemicals, particularly pesticides; and the need for an appropriate Project response to current hillside land use and tenure patterns.

F. Pesticide Analysis (Summary)

It is possible that Hillside Agriculture Project may finance chemical inputs in the form of pesticides in the context of sub-project activities. Despite the fact that this is likely to be a very minor aspect of Project activities, it was deemed

necessary in the PID to do a generic assessment of the possible pesticides likely to be used for crops to be promoted by the Hillside Agriculture Project. The complete Pesticide Assessment is attached as Annex I.

The Pesticide Assessment contains two lists. The first list, referred to as Table One, lists Pesticides available in Jamaica and proposed for use in the perennial crops of concern to the Hillside Agriculture Project. The second list, referred to as Table 1A, contains a list of pesticides that are classified as restricted, and should not be used by participants in the Hillside Agriculture Project.

Because reliance on pesticides is expensive and rarely gives lasting control, the project should seek to encourage the use of Integrated Pest Management (IPM) techniques. Experience has shown that the best way to avoid pest resistance, and sustain agricultural production is to employ a variety of control tactics including the biological, genetic, physical and the legislative. This project affords the opportunity to support research, training and technical assistance to advance IPM concepts, and hasten the day when pesticides are truly used only on an "as needed" basis.

The Pesticide Assessment contains a list describing the toxicity of proposed pesticides in terms of the LD 50 for both oral and dermal contact, as well as the EPA signal word (i.e. "caution", "warning", or "danger"). Also a list is contained of the toxicity categories of proposed pesticides by hazard indicator giving the specific definitions by hazard indicator.

Annex I contains a proposed training program to provide training in IPM and Pesticide Management. The content of this training program is applicable not only to the Hillside Agriculture Project, but also the the AID funded Agricultural Research Project (532-0128). The training program also contains a budget for training certain participants in the Hillside Agriculture Project. The ultimate purpose of the training program is to produce card carrying, certified pesticide users. A description is made of the personnel needed to carry out such training, and an outline for a 10 day training course is included. In addition, a set of 16 modules are outlined, each containing an objective statement, and a topical outline, for an inaugural training course.

## VII. EVALUATIONS AND AUDITS

### A. Project Review

Role of the PCC: Sub-project grants would normally vary between one to three years. All sub-project proposals will include a standard monitoring system for reporting all sub-project activities. A summary report of sub-project activities will be required to be submitted on a monthly basis, and a formal annual review will be required in conjunction with the PCC.

This reporting mechanism will be the primary means by which the PCC will ensure that grants are directed at meeting overall Project goals. The purpose of these reviews will also be to assess the Project portfolio with respect to weak points and to make recommendations for improved implementation.

This review will be carried out with the assistance of the Project Manager who will compile annual financial and qualitative reports. Continued funding will be dependent upon satisfactory progress. Grants not meeting planned objectives will be altered by the PCC, or if this is not possible, be subject to having funding discontinued. Any irregularities uncovered in the financial monitoring process will be cause for immediate termination of funding.

Role of Project Committee: Additionally, the USAID Project Committee will conduct regular assessments of Project progress through the Mission Semi-annual Review process. Through the close involvement of the Project Officer, Project Coordinator, and Controller's Office, progress of the Project will also be monitored through this means.

Evaluation: It is anticipated that the Project will undergo a formal Project evaluation during Year 3, prior to completion of Phase I. This will assist in determining whether Phase II will be initiated as planned. The exact timing of the evaluation and evaluation issues will be an outgrowth of the project monitoring process. However, it is expected that the evaluation will be implementation oriented, and that although sub-projects begun in Phase I will be in various stages of implementation, a series of viable production technologies for perennial crops will have been generated, adapted and tested. Evaluation results should provide feedback on possible Project adjustments and plans for Phase II Project activities, as well as providing USAID, the GOJ and, to some extent, sub-project grantees, with lessons learned applicable to the design and implementation of other projects and programs. Given the pilot nature of the Hillside Agriculture Project, an evaluation conducted prior to the completion of Phase I should

help in determining if the necessary systems are in place and functioning as anticipated, and whether any changes in implementation procedures are advisable. Outside technical assistance will be contracted to assist in conducting the evaluation, if this TA is deemed to be necessary.

The scheduling of a final evaluation will depend upon recommendations of the first evaluation and whether such an evaluation (perhaps conducted in conjunction with assessments of other projects) will further the development of the Mission's portfolio, particularly in the agricultural sector. Such a program type evaluation could focus on analysing effective means of assisting small farmers in improving their incomes, the utilization of PVOs in project implementation, and appropriate mechanisms to increase productivity of Jamaica's small farms.

Audits: Given the multiplicity of implementing organizations, a formal outside audit will be undertaken at the end of every Project year.

#### B. Sub-Project Reporting and Assessment

Towards the end of Phase I, it is expected that some of the many techniques and technological packages developed and tested in this Phase, will emerge as more viable for small farmers than others. The thrust of Phase II, therefore, should be on the dissemination of the more viable technologies to other sites within the targeted watersheds.

In accordance with this thrust, sub-projects will be encouraged to undergo regular internal assessments of sub-project activities on an on-going basis. The guidelines for implementing and reporting on sub-projects will include a requirement to provide an annual work plan, and the opportunity for an annual assessment. Involved in these assessments will be the PCC, the AID Project Committee, the grantees themselves, and farmer-participants.

To facilitate the analysis of cost of production data collected, a format will be provided to all appropriate grantees, and the results over time can be calculated and assessed. Analysis of cumulative results, and their implications will be carried out by the project staff, with assistance as necessary from other MOA staff consultants.

The following technical annexes of the Hillside Agriculture Project Paper are bound in a separate volume:

- Annex D. Technical Analysis
- Annex E. Institutional Analysis
- Annex F. Economic Analysis
- Annex G. Social Soundness Analysis
- Annex H. Environmental Assessment
- Annex I. Pesticide Analysis

LOGICAL FRAMEWORK HILLSIDE AGRICULTURE

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<u>GOAL</u>			
To increase the economic well-being of the residents of the hillsides in a manner that promotes rational land use patterns.	<ul style="list-style-type: none"> <li>-Increased disposable income</li> <li>-Increased employment</li> <li>-Decreased average soil loss rates</li> <li>-Decreased downstream siltation rates</li> </ul>	<ul style="list-style-type: none"> <li>-MOA production data</li> <li>-GOJ trade statistics</li> </ul>	<ul style="list-style-type: none"> <li>-Agricultural policies will be supportive of project objectives</li> <li>-Normal weather patterns</li> <li>-No adverse shift in terms of trade for agriculture vis a vis the rest of the economy</li> </ul>
<u>PURPOSE</u>			
To increase productivity and expand acreage of both export oriented and domestic use perennial crops in selected watersheds.	<p data-bbox="832 674 891 697"><u>EOPS</u></p> <ul style="list-style-type: none"> <li>-Existence of proven technological packages for the economically viable production of perennial crops by hillside farmers</li> <li>-A successful strategy/model developed which can be applied to other hillside lands in Jamaica</li> <li>-Active participation by farmers in the adoption and dissemination of appropriate cropping patterns and technologies</li> <li>-The widespread use by small farmers' of contractual arrangements to market produce</li> <li>-Increased production of both domestic and export crops</li> </ul>	<ul style="list-style-type: none"> <li>-Project evaluation</li> <li>-Site visits</li> <li>-Project records</li> <li>-Contracts from participating agro-processors</li> <li>-Comparison of initial base line survey with mid-term evaluation results</li> </ul>	<ul style="list-style-type: none"> <li>-Agricultural policies are supportive of project objectives</li> <li>-Export and domestic markets and perennial crops are open and accessible to production by hillside farmers</li> <li>-Donor agency and host government remain committed to basic project objectives</li> </ul>
<u>OUTPUTS</u>			
<ol style="list-style-type: none"> <li>1. Economically viable technological packages for production of perennial crops</li> <li>2. Increased awareness and emphasis by hillside farmers of trees in their farming systems</li> <li>3. Adaptive testing of technology packages in various micro-climatic situations</li> <li>4. Expansion of acreage devoted to perennials in watersheds</li> <li>5. Increased productivity of production of perennial crops</li> </ol>	<ul style="list-style-type: none"> <li>-6,000 additional acres planted in perennial crops</li> <li>-50% increase in coffee yields</li> <li>-100% increase in cacao yields</li> <li>-1,000 persons trained</li> <li>-20 workshops/seminars</li> </ul>	<ul style="list-style-type: none"> <li>-Interviews with farmers</li> <li>-Social Survey</li> <li>-Research records</li> <li>-Project publications</li> <li>-On-farm records</li> <li>-Farmer/agro-processor contracts</li> <li>-Site visits</li> <li>-Evaluation report</li> </ul>	<ul style="list-style-type: none"> <li>-Capacity of advisory board institutions to effectively support project</li> </ul>

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5C(2) PROJECT CHECKLIST

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

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

Yes (December, 1986)

Yes

A. GENERAL CRITERIA FOR PROJECT

1. FY 1986 Continuing Resolution Sec. 524; FAA Sec. 634A.

Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project.

Congress has been notified in accordance with routine AID procedures.

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

N/A

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

No further legislative action required.

4. FAA Sec. 611(b); FY 1986  
Continuing Resolution Sec.  
501. If for water or  
water-related land resource  
construction, has project met  
the principles, standards,  
and procedures established  
pursuant to the Water  
Resources Planning Act (42  
U.S.C. 1962, et seq.)? (See  
AID Handbook 3 for new  
guidelines.)

N/A

5. FAA Sec. 611(e). If project  
is capital assistance (e.g.,  
construction), and all U.S.  
assistance for it will exceed  
\$1 million, has Mission  
Director certified and  
Regional Assistant  
Administrator taken into  
consideration the country's  
capability effectively to  
maintain and utilize the  
project?

N/A

6. FAA Sec. 209. Is project  
susceptible to execution as  
part of regional or  
multilateral project? If so,  
why is project not so  
executed? Information and  
conclusion whether assistance  
will encourage regional  
development programs.

No

N/A

7. FAA Sec. 601(a). Information  
and conclusions whether  
projects will encourage  
efforts of the country to:  
(a) increase the flow of  
international trade; (b)  
foster private initiative and  
competition; and (c)  
encourage development and use  
of cooperatives, and credit  
unions, and savings and loan  
associations; (d) discourage  
monopolistic practices; (e)  
improve technical efficiency  
of industry, agriculture and  
commerce; and (f) strengthen  
free labor unions.

(a) Yes, through increased production  
of perennial crops for export.

(b) Yes, through funding of sub-  
project activities that encourage  
expansion of individual productio  
of perennial crops.

(c) Yes, sub-project funding may be  
channelled through production  
cooperatives.

(d) Yes, by encouraging individuals  
in the production of perennial  
crops.

(e) Yes, by encouraging the  
adaptation and dissemination of  
appropriate production technology  
packages.

(f) N/A

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- (1) T.A, will draw on U.S. sources where appropriate.
- (2) Equipment procured from U.S. private sector firms.
9. FAA Sec. 612(b), 636(h); FY 1986 Continuing Resolution Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- The Grant Agreement will require that both the Government of Jamaica and the sub grant-recipients contribute to the cost of the project.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- No, there is no excess U.S. owned local currency available for this project.
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
- Yes.
12. FY 1986 Continuing Resolution Sec. 522. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?
- No.
- No.

13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16. Does the project or program take into consideration the problem of the destruction of tropical forests? Yes.  
N/A
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? N/A
15. FY 1986 Continuing Resolution Sec. 533. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution? No.
16. ISDCA of 1985 Sec. 310. For development assistance projects, how much of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? The project will be primarily funding locally procured commodities and services. However, when U.S. goods and services are required, the referenced institutions will be included in the pool of institutions considered.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance  
Project Criteria

- a. FAA Sec. 102(a), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status, (e) utilize and encourage regional cooperation by developing countries?
- (a) The project will disseminate appropriate production technology packages in order to improve production and productivity, and thereby incomes of small hillside farmers.
- (b) Cooperatives in the areas will be given greater visibility and status as a result of their role in sub project implementation.
- (c) Upgrade the capabilities of hillside farmers and cooperative organizations in the production of perennial crops.
- (d) 25 percent of target farmers are women.
- (e) N/A

- b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? Yes.
- c. FAA Sec. 107. Is emphasis on use of ~~appropriate technology~~ (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? Yes.
- d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed country)? The Grant Agreement will require that at least 25% of the costs of the project be furnished by the Government of Jamaica and the sub grant recipients.
- e. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth? Yes, The project will contribute to the productive capacities of the hillside farmers.

f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

N/A

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

The project was prepared in consultation with the Government of Jamaica's Ministry of Agriculture and a number of other parastatal and cooperative organizations active in the project area

2. Development Assistance Project N/A  
Criteria (Loans Only)

a. FAA Sec. 122(b). N/A  
Information an conclusion on  
capacity of the country to  
repay the loan, at a  
reasonable rate of interest.

b. FAA Sec. 620(d). If N/A  
assistance is for any  
productive enterprise which  
will compete with U.S.  
enterprises, is there an  
agreement by the recipient  
country to prevent export to  
the U.S. of more than 20% of  
the enterprise's annual  
production during the life  
of the loan?

3. Economic Support Fund Project N/A  
Criteria

a. FAA Sec. 531(a). Will this N/A  
assistance promote economic  
and political stability? To  
the maximum extent feasible,  
is this assistance  
consistent with the policy  
directions, purposes, and  
programs of part I of the  
FAA?

b. FAA Sec. 531(c). Will N/A  
assistance under this  
chapter be used for  
military, or paramilitary  
activities?

c. ISDCA of 1985 Sec. 207. N/A  
Will ESF funds be used to  
finance the construction of,  
or the operation or  
maintenance of, or the  
supplying of fuel for, a  
nuclear facility? If so,  
has the President certified

that such country is a party to the Treaty on the Non-Proliferation of Nuclear Weapons or the Treaty for the Prohibition of Nuclear Weapons in Latin America (the "Treaty of Tlatelolco"), cooperates fully with the IAEA, and pursues nonproliferation policies consistent with those of the United States?

N/A

- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

N/A

ACTION: AID INFO: AMB DOM ECON RE/9

VZCZ0240995  
 PA 30743  
 DE RUEEC #2404/21 1132252  
 ZNR UUUUU ZZP  
 F 232249Z APR 86  
 FM SECSTATE WASHDC  
 TO AMEMBASSY KINGSTON 4934  
 BT  
 UNCLAS STATE 132404

29-APR-86  
 TOR: 16:55  
 CN: 43656  
 CERG: AID  
 DIST: AID

AIDAC

E.O. 12356: N/A

TAGS:  
 SUBJECT: REVIEW OF THE USAID/JAMAICA FY 87/88  
 ACTION PLAN

1. THE REVIEW OF THE USAID/JAMAICA FY 87/88 ACTION PLAN WAS CHAIRED BY DAA/LAC MALCOLM BUTLER ON APRIL 3-10. MISSION DIRECTOR BILL JOSLIN REPRESENTED THE MISSION. GIVEN BUDGET STRINGENCIES, FUTURE FUNDING LEVELS ARE VERY UNCERTAIN. HOWEVER, IT WAS AGREED THAT THE MISSION WOULD BE GUIDED, IN PREPARING THE FY 88 ABS, BY THE FOLLOWING PLANNING LEVELS FOR FY 87 AND FY 88.

--(DOLS 000)	FY 87	FY 88
DA	23,000	23,300
ESF	102,000	102,000
PL 490 TITLE I	30,200	30,000

THESE ARE CURRENT LAC BUREAU PLANNING NUMBERS, AND DO NOT HAVE PPC OR INTERAGENCY AGREEMENT. ISSUES DISCUSSED AND DECISIONS REACHED WERE AS FOLLOWS.

2. MACRO-ECONOMIC CONCERNS - THE MISSION DIRECTOR STATED THAT PRELIMINARY CONCLUSIONS FROM THE TRIPARTITE "FRESH LOOK" TEAM WOULD NOT APPEAR TO REQUIRE CHANGES IN THE POLICY DIALOGUE AGENDA CONTAINED IN THE ACTION PLAN. IT WAS AGREED, HOWEVER, THAT ONE OF THE AREAS OF ESF RELATED POLICY DIALOGUE SHOULD BE MEASURES TO HELP ENSURE CREDIT AVAILABILITY FOR THE PRIVATE SECTOR WHICH HAS BEEN SQUEEZED BY PUBLIC SECTOR REQUIREMENTS. IT WAS ALSO AGREED THAT CONTINUING EFFORT WOULD BE MADE TO REDUCE THE COST BURDEN OF THE PUBLIC SECTOR. THERE WAS OVER-ALL CONSENSUS THAT THE ACTION PLAN ADEQUATELY DESCRIBED JAMAICA'S PRESENT ECONOMIC CIRCUMSTANCES AND THE POLICY MEASURES NEEDED TO ACHIEVE SHORT-TERM STABILIZATION AND MEDIUM-TERM ECONOMIC RECOVERY. IT WAS AGREED THAT BY JULY 1, AFTER THE TRIPARTITE REPORT IS ISSUED AND EVALUATED, THE LAC BUREAU AND THE MISSION WOULD DETERMINE IF AN ESF CONCEPTS PAPER IS REQUIRED TO FURTHER DEFINE THE U.S. POSITION. IF A CONCEPTS PAPER IS NEEDED, IT WILL BE SUBMITTED IN EARLY SEPTEMBER.

DATE RECEIVED	4/29
ACTION OFFICE:	OPEP
INFO TO:	
DIR ✓	ARDO
D/DIK ✓	OHNP
OPEP	GEHR
OPDS	OPED
OEEB	CCM
EXO	RHUDO
CONT	R.F. ✓
DST.C.	
DUE BY:	5/6
ACTION:	

3. PL 480 - CONCERNS WERE RAISED REGARDING THE IMPACT ON JAMAICA'S AGRICULTURE SECTOR OF THE LARGE AMOUNT OF FOOD IMPORTS BY JAMAICA, INCLUDING THROUGH PL 480 AND CCC. PARTICULAR CONCERN WAS EXPRESSED ON THE POTENTIAL DISINCENTIVE EFFECTS. THE MISSION REPORTED THAT WORK WAS UNDERWAY ON A NUMBER OF STUDIES THAT WOULD ADDRESS THIS CONCERN. THE MISSION WAS REQUESTED TO ADVISE THE BUREAU BY CABLE WHAT STUDIES WERE UNDERWAY AND WHEN THEY WILL BE AVAILABLE.

4. AGRICULTURE SECTOR STRATEGY - WHILE THE MISSION'S STRATEGY AND BENCHMARKS CALL FOR INCREASING PRODUCTION OF FOOD FOR DOMESTIC CONSUMPTION AS WELL AS EXPORTS, CONCERN WAS EXPRESSED THAT THE TWO PROPOSED AGRICULTURE SECTOR PROJECTS SEEM TO FOCUS ALMOST EXCLUSIVELY ON EXPORTS. ALSO, THE LINKAGE BETWEEN NEEDED IMPROVEMENTS IN MACROECONOMIC AND AGRICULTURAL SECTOR POLICIES, AND THE COUNTRY'S ABILITY TO MAKE EFFECTIVE USE OF EXTERNAL ASSISTANCE IN THE AGRICULTURE SECTOR NEEDS TO BE MORE CLEARLY DRAWN. THE MISSION DIRECTOR EXPLAINED THAT THE MISSION'S AGRICULTURAL SECTOR STRATEGY IS STILL EVOLVING, AND THAT THE MISSION IS NOW REVIEWING A DRAFT AGRICULTURAL SECTOR ASSESSMENT, WHICH WILL LEAD TO A BETTER DEFINED AND MORE COHERENT STRATEGY. IT WAS AGREED THAT THE MISSION WOULD CABLE A SUMMARY OF THE ASSESSMENT'S CONCLUSIONS AND IMPLICATIONS FOR THE REVISED MISSION AGRICULTURE STRATEGY BY JUNE 30.

5. AGRICULTURAL RESEARCH PROJECT - THERE WAS DISCUSSION OF THE NATURE AND TIMING OF IMPACT THAT COULD BE EXPECTED FROM THE PROPOSED PROJECT. THE MISSION DIRECTOR CLARIFIED THAT THINKING ON THE PROJECT HAS EVOLVED SINCE THE ACTION PLAN DESCRIPTION WAS PREPARED AND THAT HE NOW ANTICIPATES THE IMPLEMENTING INSTITUTION WILL BE PRIVATE. FUNDING DECISIONS ON RESEARCH PRIORITIES, AND REVIEW AND FUNDING OF RESEARCH PROPOSALS WILL PROBABLY BE MADE BY A QUOTE USER BASED GROUP UNQUOTE REPRESENTING DIFFERENT PRIVATE AGRICULTURAL PRODUCER ORGANIZATIONS. THE PROJECT WILL NOT ATTEMPT TO DEVELOP A CAPACITY TO CARRY OUT AGRICULTURAL RESEARCH, BUT DIRECT FUNDING TO THE RESOLUTION OF PRIORITY PRODUCTION PROBLEMS. THE MISSION IS AUTHORIZED TO APPROVE THE FID AND PP, BUT ANY MAJOR CHANGE FROM THE ABOVE UNDERSTANDINGS SHOULD BE THE SUBJECT OF CABLE CONSULTATIONS.

6. LIGHT INDUSTRY/MANUFACTURING - THERE WAS AGREEMENT THAT THE INNER KINGSTON DEVELOPMENT PROJECT IS AN ATTRACTIVE IDEA, AND IS INNOVATIVE FOR AID. IT WAS ALSO AGREED THAT THE MISSION SHOULD AVOID A LARGE ROLE FOR THE PUBLIC SECTOR IN PROJECT IMPLEMENTATION, AND SHOULD MAXIMIZE THE ROLE OF THE PRIVATE SECTOR. MAJOR DESIGN

PARAMETERS WERE AGREED ON, WHICH LED TO A DECISION THAT THE MISSION SHOULD APPROVE THE PID AND THE PP. THE PROJECT SHOULD FOCUS PRIMARILY ON RENOVATION OF PRIVATELY OWNED BUILDINGS FOR INDUSTRIAL/COMMERCIAL SPACE IN INNER KINGSTON. SINCE UDC IS A MAJOR LANDHOLDER IN INNER KINGSTON, THE PROJECT COULD BE USED AS A VEHICLE FOR GETTING UDC TO MAKE GOOD ON ITS EXPRESSED INTENTION OF DIVESTING ITSELF OF SOME OF THESE PROPERTIES. FOR EXAMPLE, PROJECT FUNDS COULD BE USED TO FINANCE THE RENOVATION OF UDC OWNED BUILDINGS, STARTING WITH A SINGLE BUILDING, AND INITIATING RENOVATION OF A SECOND ONLY AFTER THE FIRST IS SOLD, AND SO ON. THE PRINCIPLE OF FULL COST RECOVERY FOR THE PROJECT AS A WHOLE SHOULD BE OBSERVED. THE MISSION WILL MINIMIZE THE USE OF AID FUNDS FOR LONG TERM MORTGAGES. THE PRIVATE SECTOR SHOULD PLAY THE MAJOR ROLE IN IMPLEMENTING THE PROJECT AND PROVIDE A REASONABLE SHARE OF THE FINANCING. THE MISSION SHOULD CONSULT WITH AID/W BY CABLE SHOULD THE FINAL DESIGN CALL FOR ANY MAJOR DEVIATION FROM THESE PARAMETERS. ALSO, IF THE FINAL DESIGN CALLS FOR ON-LENDING OR ON-GRANTING OF PROJECT RESOURCES, PLEASE CABLE A DESCRIPTION OF THE ARRANGEMENTS TO AID/W PRIOR TO PROJECT AUTHORIZATION.

7. U.W.I. SCHOOL OF MANAGEMENT IMPROVEMENT - RDO/C RECENTLY RECEIVED PID APPROVAL FOR A PILOT PROJECT WHICH ALSO AIMS, IN PART, AT STRENGTHENING UNDERGRADUATE LEVEL BUSINESS/MANAGEMENT EDUCATION IN U.W.I.'S CAVE HILL FACULTY AND WHICH PROVIDES FUNDING FOR SOME OF THE SAME INPUTS AS THOSE PROPOSED BY USAID/JAMAICA FOR UWI'S MONA FACULTY. THE TWO MISSIONS SHOULD PREPARE A JOINT CABLE FOR AID/W IN WHICH THEY INDICATE HOW THEY WILL WORK TOGETHER TO ENSURE THAT DUPLICATION OF EFFORT IS AVOIDED AND COOPERATION PROMOTED, E.G. THROUGH SHARING OF SEMINAR AND CASE STUDY MATERIALS. GIVEN THAT BOTH THE RDO/C AND USAID/JAMAICA PROJECTS ARE INTENDED AS FIRST STEP ACTIVITIES THAT WILL TEST AND EVALUATE VARIOUS MANAGEMENT TRAINING ALTERNATIVES FOR DIFFERENT TARGET GROUPS, AND IN SOMEWHAT DIFFERENT ENVIRONMENTS, SEPARATE ACTIVITIES MAY BE REASONABLE. HOWEVER, THE TWO MISSIONS SHOULD AGREE TO HOLD A JOINT REVIEW OF THEIR EXPERIENCES UNDER THE TWO PROJECTS PRIOR TO EITHER OF THEM PROCEEDING WITH AN ADDITIONAL PHASE OR FOLLOW-ON PROJECT AND GIVE CAREFUL CONSIDERATION TO A JOINT FOLLOW-ON PROJECT. BECAUSE OF THE IMPORTANCE OF THE U.W.I. GENERALLY AS AN INTELLECTUAL AND EDUCATIONAL CENTER FOR THE ENGLISH-SPEAKING CARIBBEAN, THE MISSION WAS ENCOURAGED TO MAKE AVAILABLE TRAINING OPPORTUNITIES IN THE U.S. FOR FACULTY MEMBERS, AS APPROPRIATE.

8. TOTG - THE MISSION DIRECTOR EXPRESSED THE DESIRE TO MOVE THE TOTG PROGRAM UNDER A PROJECT WITH A MORE CLEARLY DEFINED PURPOSE AND STRATEGY. IT WAS AGREED THE MISSION WOULD CABLE AN ACTION PLAN LEVEL DESCRIPTION WHICH SUMMARIZES THE STRATEGY AND PURPOSE THE MISSION WISHERS TO PURSUE, AND THE PROJECT DESIGN CHANGES THAT WILL BE NEEDED TO IMPLEMENT THEM.

9. FY 88 PROGRAM - THE FY 88 PROJECT DEVELOPMENT SCHEDULE

WAS DISCUSSED. IT WAS AGREED THAT ATTEMPTING TO COMPLETE SEVEN PPS AND PP AMENDMENTS IN THE REMAINING MONTHS OF THIS FY WAS A MOST AMBITIOUS TASK. WHILE WE ARE SYMPATHETIC TO MISSION'S DESIRES TO PUSH AHEAD AS PROPOSED, WE QUESTION WHETHER THE TIME GAINED THIS YEAR WILL NOT BE LOST IN MAKING ADDITIONAL DESIGN MODIFICATIONS IN THE FUTURE. IT WAS AGREED THAT PROGRESS IN COMPLETING THE PROPOSED PROJECT DESIGNS WOULD BE REVIEWED AGAIN DURING THE MISSION DIRECTOR'S PLANNED TDY IN EARLY MAY.

10. PIPELINE - THE MISSION WAS CONGRATULATED FOR ITS EFFORTS IN PROJECT RESTRUCTURING AND EXPEDITING PROJECT IMPLEMENTATION. THE MISSION DIRECTOR DESCRIBED STRENUOUS

EFFORTS TO INCREASE EXPENDITURES, INCLUDING REDESIGN OF SEVERAL MAJOR PROJECTS AND CONVINCING THE GOJ TO INCREASE BUDGET FOR AID FINANCED EFFORTS. THE MISSION DIRECTOR STATED THAT HE EXPECTS FY 86 EXPENDITURES WILL BE ROUGELY TWICE THE LEVEL OF LAST YEAR, OR APPROXIMATELY DOLS 27 MILLION THIS YEAR. IT WAS AGREED THAT PROGRESS IN REDUCING THE PIPELINE SHOULD BE CLOSELY MONITORED.

11. BENCHMARKS - THE APPROPRIATENESS OF THE PROPOSED BENCHMARKS FOR FY 87 AND FY 88 WAS QUESTIONED IN RELATION TO THE LIGHT INDUSTRY/MANUFACTURING AND HEALTH AREAS. IT WAS AGREED THAT THE BENCHMARKS NEEDED REVISION. MISSION PERSONNEL AND AID/W TECHNICAL BACKSTOP OFFICERS WILL DISCUSS THE BENCHMARKS AND CONFIRM AGREEMENTS REACHED BY CABLE.

12. GRANT VS. LOAN FINANCING - THE ACTION PLAN PROPOSES GRANT FINANCING OF ALL ACTIVITIES. - THE MISSION DIRECTOR EXPLAINED THAT THE COUNTRY'S OVERALL FINANCIAL SITUATION REQUIRES THAT NEW FINANCING BE PROVIDED ON A GRANT BASIS, AND THAT THE USE OF GRANT IN CERTAIN CASES IS NEEDED TO FACILITATE IMPLEMENTATION AND TO ASSIST IN LEVERAGING POLICY CHANGES. AID/W WILL REVIEW WHETHER CIRCUMSTANCES IN JAMAICA WARRANT ALL GRANT FINANCING, AND WILL ADVISE

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STATE 132404/03

BT  
THE MISSION.

DIST: AID

13. DELEGATIONS - THE MISSION DIRECTOR IS AUTHORIZED TO APPROVE ALL PIDS, PPS, AND AMENDMENTS FOR FY 86-87 PROJECTS IN THE ACTION PLAN UNLESS OTHERWISE INDICATED. AN EST CONCEPT PAPER, IF NECESSARY, WILL BE SUBMITTED NLT SEPTEMBER 1986. SEPTEL WILL FOLLOW ON PROJECT DESIGN CONCERNS. WHITEHEAD  
BT

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STATE 132404/03



004500  
OFFICE OF THE PRIME MINISTER

1 DEVON ROAD,

P.O. BOX 272,

KINGSTON 6, JAMAICA

February 27 1987

Please Quote Our

Reference Number

Dear Mr. Joslin,

re Hillside Agriculture Project

On behalf of the Government of Jamaica, I would like to request the assistance of the U.S. Agency for International Development in undertaking Phase I of a project for Hillside Agriculture.

The Project seeks to improve the economic well-being of the residents of the interior hillside lands in a manner that promotes rational land use patterns. This will be accomplished by increases in productivity and expansion of acreage of both export-oriented and domestic use perennial crops in selected watersheds. Along with other on-going and planned projects, it will contribute to the overall goal of developing the agricultural sector to increase productivity, increase employment, and enhance the country's capability to earn foreign exchange.

The Project would be implemented by: the Ministry of Agriculture; other governmental organisations, such as the Coffee Industry Board and the Cocoa Industry Board; and various private voluntary organisations. It would provide a mechanism to fund self-managing pilot projects that will promote production and productivity of perennial crops, primarily in the Rio Cobre and Rio Minho watersheds. This will be accomplished by: (1) the administration of grants to groups to carry out sub-projects that are focused on the overall project strategy, are technically competent and technologically current, and have a sound strategy for community participation; (2) the provision of technical assistance and training to persons engaged in project activities; and (3) networking of individuals and groups involved in project activities through the sponsorship of workshops, the production of a newsletter, and maintenance of close contact with international and domestic sources of technological innovation for perennial crops.

The main inputs of the project as identified by the Ministry of Agriculture in conjunction with USAID will include: long and short term technical assistance, training, equipment and commodities. We propose that the Project be implemented in two phases. Phase I of the Project is expected to last three years, through February 28, 1990.

The total cost of Phase I of the project is estimated at approximately US\$4.0 million. Of this cost, we request USAID assistance of US\$3.0 million in grant funds over the three year period of Phase I. The balance of the funds required for Phase I, amounting to approximately US\$1.0 million, is expected to be contributed by the Government of Jamaica and by the participating subgrantees in the form of both cash and in-kind contributions as applicable.

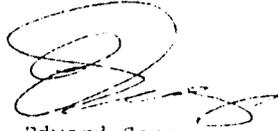
Mr. William Joslin,  
Director,  
U.S. Agency for International Development,  
Kingston

We/

2.

We further propose that the project move into Phase II only if Phase I has been successful in developing cost effective replicable approaches for adapting and disseminating technological packages for perennial crops to the farmers in the hillsides. This will be determined through an evaluation of the Project prior to completion of Phase I.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Edward Seaga', with a large, stylized flourish at the end.

Edward Seaga  
Prime Minister and  
Minister of Finance and Planning