A BACKGROUND REPORT ON THE CROP DIVERSIFICATION AND IRRIGATION PROJECT (USAID PROJECT NO. 532-9103)

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ACRONYMS

ARDO	-	Agriculture & Rural Development Office (of USAID)
CaribCan	-	Caribbean Canadian Trade Agreement
CBI	-	Caribbean Basin Initiative
CD/I	-	Crop Diversification and Irrigation Project
DAI	-	Development Alternatives, Incorporated
GOJ	-	Government of Jamaica
JAS	-	Jamaica Agricultural Society
MOA	-	Ministry of Agriculture
NIC	-	National Irrigation Commission
O&M	-	Operations and Management
OPM	-	Office of the Prime Minister
PACD	-	Project Action Completion Date
PP	-	Project Paper
RCIW	-	Rio Cobre Irrigation Works
SFL	-	Small-scale Farmer Linkage Program
USAID	-	U.S. Agency for International Development

PREFACE AND ACKNOWLEDGEMENTS

On the 6th September, 1988, the DAI team commenced work in Jamaica to assist USAID/Jamaica in conducting an evaluation of the Crop Diversification and Irrigation Project(CD/I).The intent was "to assess the institution's progress and problems to date in achieving the Project purpose and to assess the building of Agro 21, the Project's lead implementing agency" (See Annex 1 for Work Order). During the first week of the, then, evaluation assignment, the team had initial discussions with USAID and Agro 21 staff, reviewed background documentation and made a one-day field visit to the Project area. However, in week two of the assignment, the team's efforts were overtaken by climatic events, viz. Hurricane Gilbert struck Jamaica on the 12th September, 1988, inflicting considerable damage on the people and property of Jamaica. In the light of dislocations to the normal work schedule in the aftermath of the hurricane(and, not least, the shifting of all agencies' priorities to disaster relief), USAID called for the consultants: to prepare a background report on the CD/I Project (see Annex 2), including an assessment of the likely impact of the hurricane damage on the efficient implementation of the Project; and to truncate the evaluation assignment with the view that the assignment should be completed early in 1989 when conditions in Jamaica are closer to normal.

This background report provides a preliminary review of CD/I Project activities and identifies some key issues, that bear consideration, which may have an impact on the outcome of the Project at PACD and after.

Under the most difficult circumstances- lack of electricity, water-damaged offices etc. - and at a time when the national priority was to provide immediate disaster relief, staff of USAID and Agro 21 were consistently co-operative and found time (in and out of office hours) to assist the DAI team members in developing thoughts that are articulated in this background report. Team members wish to express our sincere thanks for all the assistance we received and to wish the respective agencies well in their vital efforts to help the nation recover from the ravages of Hurricane Gilbert.

1. EXECUTIVE SUMMARY

In the light of dislocations to the normal work schedule in the aftermath of Hurricane Gilbert and, not least, shifting of all agencies' priorities to disaster relief, the CD/I Project Evaluation team were requested to terminate formal evaluation tasks and prepare a background report on Project activities, including a brief assessment of the likely impact of hurricane damage on Project implementation plans. In this report, some issues are raised for consideration that may have an impact on the outcome of the Project at PACD and after.

The CD/I Project was authorised in September, 1985. The goal of the Project is to promote investment in the agricultural sector in Jamaica that will improve productivity, increase employment and enhance the nation's capability to earn and save foreign exchange. The Project's purpose is to strengthen the institutional capacity of Agro 21 to promote private agricultural investment in Jamaica. Project resources have been concentrated on four principal activities: institutional strengthening of Agro 21 and NIC; rehabilitation and addition of facilities to upgrade the Rio Cobre irrigation system; investor promotion of Project lands; and establishment of a small-scale farmer linkage program.

The principal thrust of the investor promotion component of the Project was to seek large-scale commercial farming investors, particularly from the U.S., to establish large-scale winter vegetable farms on the Project area. Such farms were to provide the "mother farm" nucleii upon which small-scale farmer "outgrower" programs were to be launched. Several events have serve to mould the Project into its present shape: some 7,000 acres of the original 13,400 acre Project area were taken over by Petronol for the growing of sugar cane for ethanol production; small-scale farmer-owned lands adjacent to the Project area were added in their stead; the diversification focus was widened to include other crops such as bananas and papaya; an Agro 21-managed demonstration unit was established on the 210 acre Horticultural Park to accelerate the promotion of

in particular, ornamental and foliage ventures; as a result of changing national priorities, the "mother farm"-small scale farmer linkage program was extended to outside the Project area; and , very recently, the investment promotion strategy has been widened to include the promotion of medium-scale farms, specifically for bananas, on part of the 5,000 acres or so of Government-owned lands in the core of the Project area.

Financial Overview

Obligation of Project funds, at this stage are close to the level envisaged in the original CD/I PP. Of the obligated funds, 77 per cent are committed and 57 per cent disbursed; the lag in commitment reflecting, to a large extent, the delay in release of 1988 Fiscal Year funding occasioned by Congressional dictate. The major change from the original PP in use of funds has been the disbursement of $900,000, actually intended for the small-scale farmer component, that was utilised for flood disaster relief in 1985/86.

Investor Promotion

The attraction of larger-scale, extra-regional investors in the Project Lands,while not without successes, has been slow to take-off. (Agro 21 view that it is too early to judge its current investment stragegy). There has been more tangible success in identifying and placing investors on lands that comprise the Horticultural Park, viz. 70 per cent of the Park area is either under cultivation or awaiting direct investments by investors who have signed land leases with Agro 21. The latter investors, typically, are Jamaican nationals.

Project Engineering

The engineering and construction aspects of the CD/I Project are progressing satisfactorily and should be completed by about the end of 1989. Agro 21 has developed a competent and enthusiastic cadre of professionals to implement the engineering component of the Project. In general, the procurement and contracting management systems are now operating to ensure proper project implementation.

Hurricane Damage Assessment

Hurricane damage to Project infrastructure is significant but not overwhelming; it will require additional expenditure for restoration and to complete the present and proposed construction works. The small-scale farmer lands in the Project area are also, in general, in relatively good shape. These farmers view that the shortage of food crops that is envisaged in Jamaica will provide them with a market opportunity in the short-to medium-term .

National Irrigation Commission

The NIC was established in 1987 to provide national level direction to the management of irrigation systems in Jamaica. The Commission has responsibility for managing the operations of the irrigation system in the Project Area. The CD/I Project has provided technical assistance, transportation and equipment for NIC to enable it to prepare to meet its Project responsibilities. It is too early to judge whether NIC can efficiently operate and maintain the Rio Cobre irrigation system. However, the Commission has made good progress in laying down the administrative ground work to undertake its duties.

Small-Scale Farmer Linkage Program

In the present absence of viable "mother farms" within the Project area, the CD/I small-scale farmer linkage program has stalled and Agro 21 has sought satellite grower program opportunities outside the geographical boundaries of the Project. USAID has recognised that, as the shape of the CD/I Project has been changing (i.e. with the addition of small-scale farmer areas), there is a need to develop a more comprehensive small-scale farmer strategy that transcends the original "mother farm" concept presented in the PP.

Project Implementation Issues

Several key issues bear consideration that may have implications for Project implementation and attainment of Project goal and purpose. In the text, the implications of these issues are explored and suggestions presented as means of addressing the issues. The key issues include:

* Investor Promotion
- the status of Agro 21 relations with JAMPRO
- the broadening of the investor promotion strategy to include medium-scale farmers in a range of crops
- the need for a medium-scale farm development strategy for the Project area.

* Small-Scale Farmer Linkage Program
- the absence of a baseline survey on the CD/I small-scale farmer areas.
- the need to develop a more comprehensive strategy for small-scale farmer development in the Project area.
- the status of Agro 21 relations with MOA and national and regional agencies that represent the interests of the small-scale farmer.
- the implications of expending funds on "mother farm" linkage programs outside the Project area.

* Project Engineering
- encouraging commercial farm development on Project lands as components of the irrigation system are completed.
- availability of irrigation water for small-scale farmers at the down-stream end of the irrigation system during dryer parts of the year.

* National Irrigation Commission
- procedures for transferring rehabilitated irrigation system components from Agro 21 to NIC.
- the ability of NIC to self-finance the operations and up-keep of the R.C. irrigation system after the PACD.

* Cross-Cutting Issues
- the need for USAID/Agro 21 co-ordination on, in particular, overall Project progress.

2. BACKGROUND - PROJECT CONTEXT AND HISTORY

The CD/I Project was authorised in September, 1985. The goal of the Project is to promote investment in the agricultural sector in Jamaica that will improve productivity, increase employment and enhance the nation's capability to earn and save foreign exchange. The Project purpose is to strengthen the institutional capacity of Agro 21 to promote private agricultural investment in Jamaica.

Project resources are concentrated on four principal activities, viz:

- strengthening the capacity of Agro 21 to promote private enterprise agricultural investment by local and/or foreign investors;
- assisting Agro 21 to rehabilitate the existing Rio Cobre irrigation system, upgrade it and add facilities required to ensure full effectiveness;
- providing Agro 21 and the NIC with the resources necessary to upgrade the GOJ's ability to operate efficiently and maintain the rehabilitated irrigation system;
- and establishing a small-scale farmer linkage program at Agro 21 to help small-scale producers gain access to technology, market outlets, land and employment through formal and informal relationships to be developed with larger-scale producers and markets.

The focus of the CD/I Project reflected the private sector-led market-driven mood of the times that has been a characteristic of several major USAID-financed initiatives in the Caribbean region (e.g. HIAMP in the Eastern Caribbean, the export market development ROCAP Project in Central America). USAID and several governments in the region have been enthusiastic to harness the energies of agribusiness private sector and, in particular, the agribusiness sector in North America to accelerate the pace of commercial agricultural development, using modern farming technology and preferred access to North American and European markets(via the CBI and CaribCan programs and the longer-standing Lome and British preferential trade agreements).

While the ancitipated cropping emphasis of CD/I was broad (including import substitution items such as food and feed grains, oilseeds etc.), the major emphasis was expected to be on winter vegetables, ornamentals, and horticultural crops. The centerpiece for larger-scale commercial farming has been the abandoned sugar properties and other under-utilised lands on the St. Catherine plains, with the Project-financed improvements in the Rio Cobre irrigation system providing the impetus for these scarce flat lands to reach their agricultural potential.

The principal thrust of the investor promotion component of the CD/I Project was to seek large-scale commercial farming investors from, in particular, the U.S.A. who would be encouraged to establish larger-scale winter vegetable farms on the Project area USAID, Agro 21 and the GOJ perceived that the majority of the 13,400 acres (the original land allotment for the Project) should be under larger-scale commercial farming by the PACD if the hoped-for leap in agricultural exports and employment were to be generated as a result of the Project activities. The establishment of ten, or more, successful large-scale commercial farms was to provide the "mother farm" nucleii upon which comprehensive small-scale farmer "outgrower" programs were to be launched.

Several events have served to mould the CD/I Project into its present shape. First and foremost, in 1986, some 7,000 acres of Project lands were taken over by Petronol for the growing of sugar cane for ethanol production. As a quid quo pro, project acreage was brought back up to close to original levels by the inclusion of land areas, largely small-scale farmer-owned, contiguous to the Project area and within the boundaries of the irrigation system. Concomitantly, the diversification focus in the Project area was widened, from the particular emphasis on winter vegetables, to encompass crops such as bananas and papaya. Additionally, an Agro 21-managed demonstration unit was established on the 210 acre Horticultural Park, with a view to promoting, in particular, ornamental and foilage production and export marketing ventures.

Agro 21 had experienced some success in attracting large-scale winter vegetable farming on the plains; over 1,000 acres were farmed in the 1985/86 and 1986/87 seasons and a reduced acreage in 1987/88, however, the ventures were not commercially successful. "Mother farm" linkages with small-scale farmers in the area were also less than successful, not least because of the nascent stage of development of the core commercial unit. In the absence of vibrant large-scale "mother farms" on the plains, Agro 21 sought opportunities to develop the satellite grower concept outside the geographical area of the Project; Serge Island Dairy was identified as an appropriate candidate and USAID approved Project grant funds to support the initiative in the first half of 1988. Paradoxically, the lack of small-scale farmer Project activity had a serendipitous budgetary side, that is, at the request of the Prime Minister, the entire small-scale farmer budgeted amount (US$900,000) had been accessed for non-Project emergency flood relief in 1985/86.

During 1988, the strategy for encouraging commercial farming on the 5,000 acres or so of Government-owned lands that remained in the Project area was evolving further. In the absence of firm takers for large blocks of land for winter vegetables and/or other diversification crops, and with the engineering component of the Project well underway and moving relatively smoothly, Agro 21 thinking was tending towards the promotion of some medium-scale commercial farms, with Jamaican investors as the target market, as a means of attaining Project objectives. This change in emphasis was consonant with USAID thinking and, indeed, the Mission had encouraged Agro 21 to take this investment promotion line, in association with an incremental approach to irrigation system development (rehabilitate discrete sections of the Project area, endeavor to attract investors to the completed portion etc.) in mid 1987.

On September 12, 1988, Hurricane Gilbert swept across the nation. In its immediate aftermath, the priority has been disaster relief, including assessment of the damage caused by the hurricane in the Project area in particular and the agricultural sector in Jamaica in general.

3. MAJOR PROJECT COMPONENTS

Financial Overview

The CD/I Project Agreement anticipated that 97 per cent of funds would be obligated in the first three years of the Project term (See Pro Ag Fig. C.1.), whereas the MACS report for 9/01/88 indicated 91 per cent obligated. Of the obligated Project funds, 77 per cent are committed and 57 per cent disbursed; the lag reflecting, to a large extent, the delay in release of 1988 Fiscal Year funding occasioned by Congressional dictate. The major change from the original PP in use of funds has been the disbursement of about US$900,000, actually intended for the small-scale farmer component of the Project, that was utilised for flood disaster relief in 1985/86.

Project Financial Summary(US$'000)

Item	Original Project Agreement 9/25/85	Per Amendment #5 8/31/88	MACS 9/01/88 Obligated	Committed	Disbursed
Long Term TA	3,690	3,525	3,525	2,725	1.958
Short Term TA	464	1,419	1,419	1,352	599
Commodities	583	700	.867	789	614
Operations	375	425	425	321	179
Infra.Rehab.	10,167	9,398	8,158	6,020	4,673
Interim O&M	100	500	400	262	183
Training	425	145	145	60	18
Special Proj.	326	915	915	883	883
Eval./Audits	156	10	10	0	0
Cont. & Infl.	1,715	796	541	291	182
TOTALS	18,000	18,000	16,405	12,703	9,289

Investor Promotion

The initial and, still continuing aim is to attract off-shore investors to the Project area to undertake large-scale commercial farming, with the original focus being on winter vegetables and, more recently, also on bananas and other export fruit crops. Agro 21 has had only very limited success in attracting such "keystone" tenants to the Project area(specifically, two ventures that both were commercial failures and one of which was a consortium of local investors). What can explain, patently, the very limited demand from larger-scale off-shore investors? It is appropriate to look at the task facing the potential investor: to penetrate very competitive volatile markets, with distinct albeit limited windows of market opportunity, for highly perishable fresh produce from a domestic production and marketing base that is still severely limited in terms of trained people, technology, infra-structure, export experience etc. and to do all this and make a profit. The task is daunting. The one cost comparative study that is available concluded that for cucumbers, bell peppers and zucchini, Jamaica was "not cost competitive with Florida and Mexico ...during the 1985/86 season."1/- an isolated and limited study but, nevertheless, indicative.

Given the level of commercial risk that accompanies large-scale winter vegetable farming in Jamaica, it is not surprising and experience has shown - in the face of consistent and continuing investor promotion efforts by Agro 21 and JNIP- that major vegetable growing and exporting companies will not choose Jamaica as an export base. Rather the limited investor pool will comprise: either the company(ies) that is new to the fresh produce

1/Katherine C. Buckley, 'Production and Marketing Costs of Selected Winter Fresh Vegetables in Jamaica: A comparison with Florida and Mexico'. Agro 21, June 1986, p.i, 'Summary'.

business and is unaware of the extent of the risks; or the company(ies) that, with sound commercial judgement, will minimise its own financial exposure(through some combination of limiting its equity input, providing equity "in kind" via generous pre-investment estimates for feasibility study reports, or recouping initial investment via management contract payments etc.) and bank on crop failures in major supplying countries that will force up market price and provide a C.I.F. price per box that will give an attractive financial return even though its unit costs are high. The latter company has not the depth of pocket or, indeed, has its Jamaican-based partners, to roll the dice for more than one or two seasons.

Notwithstanding the extraordinary riskiness of winter vegetable farming in Jamaica, the risk can be justified if it is a means of reaching a critical mass of exports such that a sustained presence is established in the market. The most strategic decision, from a national point of view, is how long to keep trying! Certainly, it seems perspicacious to have more than one investment promotion approach; through its evolving interest in promoting medium-scale commercial farm investment, Agro 21 is acknowledging the advantages of a multi-tiered investment promotion approach.

Agro 21 has had more tangible success in identifying and placing investors on the lands that comprise the Horticultural Park. As of September, 1988, 30 per cent of the 210 acre park is under cultivation (including Agro 21's own 10 acre demonstration unit), an additional 30 per cent of the lands are signed up with new clients, 10 per cent is set-aside under options to existing and signed-up new investors, and the remaining 30 per cent is yet to be placed. The typical investor is Jamaican, with relatively limited extra-regional investor interest in the 5 acre modules. The recent Agro 21 move to allow investors more flexibility in their choice of crops (e.g. using papaya as a cash crop to generate income early in the investment period while production techniques and marketing contracts are established for ornamental products) has been well received by present and potential investors.

If the market for large-scale investors is thin, then, to what extent can medium-scale investors take up the slack? Agro 21's experience in divesting agricultural lands in Jamaica outside the project area shows that there are ample takers; of course, this experience is somewhat different to the St. Catherine plains in that the farmers have considerably more flexibility in agricultural land usage. Some negative factors that may constrain land up-take by the medium-scale investor include:

* investor perception of political uncertainty and the risk of "changes in the lease rules" associated with changes in government policy;
* although a 49 year lease is long-term it is not ownership;
* choice of cropping patterns are limited;
* the impact of hurricane damage may have reduced spare cash availability and reminded potential investors of the vulnerability of agricultural enterprises to weather damage;
* there is a limited human resource base to manage the technical aspects of the farm enterprise and the investors themselves have limited experience in farm management;
* tourism and real estate investments may seem sounder investments;
* export marketing experience for agricultural products is limited and components of the production and marketing system over which the investor has limited control can serve to crush profit opportunities;
* European markets may offer easier market access and less direct competition than North American markets, but air freight charges are relatively high and capacity is limited;
* there are few commodities(bananas are one) that have well-defined marketing arrangements and strong marketing support through the system;
* the family estate can be an attractive emotional consideration but, if profit maximisation is the objective, then for the absentee lessee the adage that "the master's eye fattens the calf" can serve to confound financial goals.
* the level of investment, even on a medium-scale farm can be substantial e.g. 60 acres of bananas can call for a fixed investment of over J$2 million.

However, there are some obvious positive factors:

* knowledgeable observers believe that there is spare cash available, with investors seeking business opportunities, and a small-scale estate has emotional and recreational appeal;
* the Project Lands are very suitable for agriculture, close to Kingston, and are (or will be) well served with water;
* well-managed export agricultural enterprises can earn a good profit and provide a source of hard currency;
* there are some examples of medium-scale farms that seem to make money;
* non-traditional agricultural exports have shown an upward trend and the export infra-structure(facilities and human resources) has been improving with experience;
* Jamaica has preferred market access for many fresh and processed products in North America and Europe;
* the domestic market- both indigenous and tourist - offers profit opportunities for the interim, while experience is built in growing and merchandising fresh produce, as well as in the longer-term;
* Agro 21 has developed a cadre of experienced staff that can provide agronomic and marketing advice, at an appropriate technical level, to assist the medium-scale investor in implementation;

In a parallel project to the Agro 21-CD/I initiative, financed by USAID in the Eastern Caribbean (the HIAMP Project - providing equity financing and technical assistance support to investors), it was expected, initially, that about 75 per cent of investor clients would be drawn from outside the region, with the remainder being local. In fact, the reverse has been the case. As per Jamaica, larger-scale extra-regional investors (with cash to invest) have been difficult to attract. However, Eastern Caribbean investors (largely current participants in agribusiness) have been ready and willing to invest. The availability of Project-provided technical assistance has played an important part in consummating the investment process.

Project Engineering

The engineering and construction aspects of the CD/I Project are progressing satisfactorily and should be completed by about the end of 1989 if the present scope remains fixed and funds are not restricted. Construction costs are in line with similar irrigation rehabilitation projects elsewhere in the world and the resulting system will be capable of supporting diversified crop production. Whether or not it is cost-effective depends more heavily on the crop production costs and market situation rather than on the cost of the irrigation water.

Two factors that contributed to the need for an extra year of rehabilitation time(above the Project Paper estimate) are not without merit:

a) time was needed to recruit and train both engineering and support staff and to follow U.S. engineering procedures (instead of letting the construction contractor assume design responsibilities as is common practice). The result is that Agro 21 now has a seasoned engineering group whose training can continue to serve Jamaican rural engineering needs.

b) multiple small contractors were used for canal rehabilitation works(as opposed to a single large contractor for the entire rehabilitation contract). Allowing the 'locals' to do the work has the effect of improving Project area skills and improving the area employment rate whereas establishing a single big construction contract would have largely benefited Kingston-based business.

The evaluation team was given a tour of the CD/I Project area by Agro 21 on September 8th (See Annex 3 for the itinerary). It was a well prepared and comprehensive look at the Project facilities starting at the irrigation diversion, past canal rehabilitation work, and through rehabilitated lands with a final stop at the Horticultural Park. The Agro 21 staff, both junior and senior levels was competent to explain what had been accomplished and what was planned.

The engineering planning studies of Agro 21's Land Development Department(April 1986 and July 1987) have been able to provide the needed Project redirection to accommodate changes in emphasis such as: acreage changes brought about by the elimination of land ceded to Petronol and the addition of small farmer-owned lands; and to provide for the addition of reservoirs adjacent to some secondary canals to help smooth out water deliveries.

In general, the procurement and contracting management systems are operating to ensure proper project implementation. However, the management system is time consuming and does require numerous written approvals for rather small expenditures. If, for example, prior approval of minor contract change orders were no longer required, then a 2-4 week delay would be removed from the system allowing for more timely construction progress.

Post Hurricane Project Visit

In the company of Agro 21 staff, a tour was made of the project engineering works from the Rio Cobre diversion dam past several canal construction sites, and through Blocks A & C ending at the Horticultural Park. In summary the hurricane damage to Project infrastructure is significant but not overwhelming; it will require additional expenditure for restoration and to complete the present and proposed construction works. Enumeration of more serious problems follows:

1. Additional erosion behind the diversion dam wingwall has probably doubled the volume of structural repair needed.
2. All of the canals are littered with broken branches and other storm debris. However, no damage to lined canal sections, completed or under construction was observed.
3. Building and perimeter fence damage was seen at block A (Intergrow Ltd.) and the Horticultural Park. Although plant shade structure damage was severe, most of the ornamentals appeared to have survived the storm in marketable condition.

Added construction time on the order of three to six months is

quite likely since building materials and equipment will undoubtedly be given higher priority for housing, electrical and water supply repairs further compounding completion delay caused by storm damages. However, the RCIW staff temporarily freed from normal canal operations should be able to initiate some canal restorations on a force account basis.

The National Irrigation Commission and Operation of the Rio Cobre Irrigation Works

The National Irrigation Commission (NIC) was created in 1987 to provide national level direction to the management of Jamaican irrigation systems. The NIC legal system is coming into place with authority to set, collect, and use water fees for irrigation project operations and maintenance (O&M). New water user contracts are being drafted by NIC so that customers will only pay for the actual water delivered. A water users handbook has been prepared providing a sound set of regulations to cover the user's responsibilities within the system. And work has begun on an O & M manual to specify operating procedures and scheduling throughout the irrigation system.

The NIC has been directly assisted by the CD/I Project since January 1988 (prior help was via Agro 21) to help attain a creditable O&M system for the Rio Cobre Irrigation Works(RCIW). Staff and equipment are being improved. However, much is yet to be completed, for example:

- RCIW is conducting an inventory to determine the actual number of users on each canal;
- users must learn about and accept the new water rate structure;
- canal water pollution by industry must be addressed;
- the backlog of unpaid water bills, dating back four years or more, needs to be settled;
- the new method for canal attendants to monitor water deliveries (with computer program assistance) needs to be completed and activated;
- water measurement (and, therefore, water measuring devices) must be more frequent so that conveyance efficiencies can be determined.

On the positive side, technical assistance, and needed transportation and equipment, has been provided through the CD/I Project. In addition, CD/I has funded the contract with a security firm which has resulted in reduced pilfering from the system. Finally, a new main canal cleaning program was initiated in March and has maintained the canal's improved water carrying capacity.

All-in-all it is still too early to judge whether NIC can efficiently operate and maintain the RCIW irrigation system. Or even to estimate to what extent the RCIW can improve irrigation efficiencies above the 35-40 per cent levels reported by FAO in 1985.

Small-Scale Farmer Linkage Program

Part of the strategy of the CD/I Project was "a small farmer linkage program designed to facilitate access to technology, market outlets, land and supplementary employment through private commercial agriculture activities.."(PP/CD/I). This approach was based on the Mother Farm/Satellite Farm concept in which a large-scale private investor would "adopt" small farmers in his area, and help them to understand relevant technology, improve their agricultural practices, and expand marketing outlets for their crops with the spin-off for the core farm being supplementary volumes of export quality produce. These conditions were actually written into the Lease Agreement signed between the potential investor and Agro 21.

Agro 21 was established, inter alia, to promote private investment in agriculture and to by-pass cumbersome bureaucracy and local politics. This meant by-passing the Ministry of Agriculture and the Jamaica Agricultural Society - both of which although bogged down with problems - are traditional outreach networks for Jamaican small-scale farmers. MOA has provided useful though erratic technical services, while JAS has been the most trusted lobby for small farmer interests. This ommission not only vexed MOA and JAS officials, especially in its field staff, but affected Agro 21's image among one of the CD/I's target populations. This was further aggravated by the high-profile promotional campaign aimed at big overseas investors - a focus that was not well received by many small-scale farmers.

The First Mother Farm to be recognised under the SFL Program was Intergrow Ltd. which was given a total of approximately $410,000 for this aspect of its operation. This farm was located close to several densely populated urban areas such as Central Village, Gregory Park and Waterford. During peak production periods up to 1,200 persons were employed - about 65 per cent of whom were women. One farmer in the area who operated a 90 acre farm benefitted from Intergrow and cultivated 16 acres of winter vegetables for export through the Intergrow market outlet. A small Farm Liaison Officer was funded from the Project who doubled asan Officer for Intergrow.

The SFL fund was exhausted by mid-1986 as a result of two disaster relief initiatives to assist communities that had suffered from flash floods. In fact, both these emergency programs were to assist farmers outside the Project areas. This hobbled the SFL for some time. By the end of 1986, Intergrow had slowed down its operations and its management systems were questioned in a widely publicised controversy. Many of the women employed by the company moved to the nearby 807 garment factories.

In October 1986, USAID and Agro 21 were both concerned about the status of the SFL Program, given the lack of viable mother farms in the Project area and the exhaustion of the SFL budget. AGro 21 appointed a Director of SFL and an external consultant was contracted in order to "mend fences" with the Ministry of Agriculture and to develop a Small Farmer Outreach Program(note change of semantics).

In December 1986, Agro 21 submitted a Concept Paper entitled "Small Scale Farmer Linkage". The paper reflected little philosophical change with regard to the mother farm concept; it recommended that the Director of SFL be made a permanent staff member of Agro 21 with liaison with the MOA Extension service being an explicit responsibility of the staff member. The total cost of the proposed SFL program was $818,000 to be expended over a three year period (with commodities accounting for over half of the total and technical assistance much of the remainder). In early 1987, USAID formally supported the proposed SFL approach and expressed willingness to consider some of the outreach programs identified in the Concept Paper.

Reports from the St. Catherine Vegetable Farmers' Association and other feedback sources in 1987 indicated that small-scale farmers were not interested in taking chances with winter vegetables, after unhappy experiences with Intergrow. Specific concerns(see G.McAvoy report to USAID) were that mother farm produce prices were low relative to local market prices, rejection rates were high, there was scepticism that Agro 21 would adequately represent the interests of small-scale farmers, and that availability of water and irrigation equipment was inadequate. Certainly, the SFL program assumed certain behavioural changes for small-scale farmers and

the community at large that would normally take several decades to achieve. These include: adoption of new technology, cultivation of new, high-risk crops, dependency on foreign/local big investors, use of pesticides and fertilizers, outlay of additional personal capital, involvement with unknown - unseen overseas markets, maintenance of irrigation infrastructure, understanding of water use and management, trust in an organisation (Agro 21) that is not aligned with the small-scale farmer sub-sector.

From the beginning of the CD/I Project, there was confusion regarding the definition of "small farmer", since no comprehensive baseline study was done, little was known about the population of the Project, area, its cultural practices, demographics and its needs. Thus, plans for the SFL Program were based on untested assumptions and. in many cases, lack of knowledge of the human component.(See Annex 4 for a synopsis of small-scale farmer numbers, location and socio-economic characteristics in the Project area). But, for Agro 21, the first and major task at hand was to promote the establishment of large-scale farms; without them there could be no mother farm program in the Project area.

During 1987/88, Agro 21 presented a variety of proposals to USAID incorporating the mother farm concept, for funding under the SFL component. These included: IRCJ Project(rice): Trelawny vegetables(vegetables); Glenbrooke Farms(goats); Paradise Farm (fruit, vegetables); Serge Island(dairy). All of the proposed schemes were outside of the Project area. Only the Serge Island scheme was accepted by USAID (awarded a grant of $195,000). Training-in the form of Workshop on Water Use and Management- was organised for the farmers from Spring Village and conducted by NIC. At this stage in the Project, the SFL emphasis was switching to diversified crops that were more palatable to small-scale growers than high risk vegetable crops and, in the absence of identifiable core farm units in the Project area, there were no geographical boundaries for potential mother farm candidates.

USAID thinking was evolving as the likelihood of large-scale commercial development was perceived to be waning. The Mission saw, now, that the shape of the Program was changing; the relatively increased proportion of small-scale farmers in the Project indicated that a more comprehensive small-scale farmer strategy was required that transcended the original mother farm concept presented in the PP. Given the differences in perception of the Project 'shape' between USAID and Agro 21, it is not surprising that there has been communication difficulties on the issue of a small-scale farmer strategy for the Project area.

4. PROJECT IMPLEMENTATION ISSUES

Investor Promotion

1. Issue:
   It is evident, certainly from the JAMPRO side, that this organization views Agro 21 as a worthy but somewhat competitive investment promotion agency.

   Implication:
   Investors are difficult enough to entice without internecine exchanges that serve to obfuscate the investment promotion process.

   Suggestion:
   Agro 21 should expand its agency relations with JAMPRO stressing the complementary nature of their respective businesses.

2. Issue:
   The focus of investor promotion activities on attracting large-scale investors while, if successful, may have the largest pay-off in terms of generating export revenues and employment, is a very high risk investment strategy (as is evidenced by the limited success experienced so far). Although Agro 21 has come to terms with alternative investment thrusts, viz. the very recent decision to explore the opportunities for medium-scale banana farm plots on the plains, it may prove too restricted an investment diversification strategy.

   Implication:
   At present, there are close to 1,500 acres of cultivable land, with access to adequate water, that are not under crop. A restrictive investor promotion strategy may reduce the opportunity to attain the commercial potential of the Project area and, thereby, reduce the likelihood of attaining the Project goal.

   Suggestion:
   In addition to exploring the commercial feasibility of establishing medium-scale banana plots on Project Lands, make a pilot area available for local medium-scale investors on which there are no (or at least, very limited) cropping

Suggestion

regulation constraints. This would serve: to test the market for medium-scale local investors; to identify the enterprises that the investors believe have the most potential; to determine, on a limited scale, the motivation for Jamaican investors to lease land(e.g. profit maximisation, social/recreational/emotional etc.). If demand for these plots, as some in Agro 21 believe, far outstrips supply, then, it would suggest that the present level of lease payments should be reassessed. While politically unpalatable, it may be in the very best long-term interests of the country to have prime Government-owned land leased at prices that reflect the market, particularly if the market-driven professional private sector entrepreneur is the target investor market.

As a general policy, and particularly at this stage of the CD/I Project implementation as irrigated lands become available, it would seem commercially sound to have a leasing program that releases land onto the market as it becomes suitable for cultivation. One compelling reason for doing so is that it will provide, hopefully, an opportunity for potential investors to see working commercial farms in operation. This demonstration effect may substantially improve the chances of attracting appropriate investors.

3. Issue

Larger-scale extra-regional commercial farming investors have, frequently, the experience and internal resources to solve many, if not most, of their on-farm problems. This will probably not be the case for local medium-scale investors who are not, currently, active in commercial farming.

Implication:

Medium-scale investors will seek assistance- agronomic, management, post-harvest, marketing- and will look to the investment promoter to provide, or at least access, needed assistance.

Suggestion:

While Agro 21 acknowledge the need to develop a comprehensive feasibility study and plan to explore the potential of establishing a network of medium-scale banana farms, if the decision is taken to expand the availability of medium-scale farms for other crops, it will be wise to develop a strategy for medium-scale farms in general. Agro 21 should explore the needs of such farm operations, the required support programs, participating institutions, and program financing and other resource requirements. For example, medium-scale farms will likely require extension assistance. MOA is not well provided with the appropriate technical personnel; Agro 21 has a team of well-qualified professionals that could provide services to a discrete group of medium-scale enterprises. One consideration might be that extension and business planning services should be provided on a fee for services rendered basis. This could provide one source of finance for the sustained part-financing of an institution such as Agro 21.

Small-Scale Farmer Linkage Program

1. Issue:

There is no baseline survey of the small-scale farmer areas in the CD/I Project.

Implication

In the absence of baseline information, a needs assessment analysis is impossible. In the post-Project period, it will be difficult to assess the impact of Project activities on the small-scale farming areas (e.g. on living standards, farm output, employment etc.).

Suggestion:

Complete the survey as soon as possible.

2. Issue:

The CD/I Project has changed shape since inception. Now, there are proportionately more small-scale farmers and the initial outreach model, characterised as the mother farm concept, has had little impact and will have limited impact.

Implication:

Small-scale farmers will receive water from the Project but, as yet, no additional service support is scheduled.

Suggestion:

Develop a comprehensive strategy for small-farmers in the Project area which identifies-their needs (credit, extension etc.), required programs, implementing institutions, financial and other resource requirements. Given the present state of relations between Agro 21 and MOA, the traditional linkage between MOA and the small farmer, and the water usage extension role of NIC in the Project area, a Task force jointly-led by NIC and MOA, should be responsible for strategy development and implementation.

3. Issue:

Agro 21 has poor relations with MOA and national and regional agencies that represent the interests of small-scale farmers.

Implication:

A vibrant small-scale farmer sub-sector is good for large-scale commercial agriculture- these farmers are an integral part of the Project area, e.g. they provide a ready source of labour for both the larger farms and support services(e.g. the irrigation system) - to attain its objectives, Agro 21 needs the support of small farmers and the agencies that serve them.

Suggestion:

Agro 21 use its Director of SFL to liaise and foster better relations with the above target group(excepting that its primary focus is, and should be, large-scale farming). Agro 21 should continue its efforts to provide market linkages for small-scale farmers through, for example, mother farm programs, arranging linkages with local and regional export traders and domestic processing companies.

4. Issue:

In the absence of significant larger-scale commercial farming development in the Project area, Agro 21 has sought mother farm linkage program opportunities outside the St. Catherine plains.

Implication:

Small-scale farmers in the Project area are increasingly less likely to receive CD/I program support as the SFL budget is diminished, particularly given that the entire original budget was utilised on disaster relief outside the Project area.

Suggestion:

Notwithstanding that Agro 21 support of satellite farming activities outside the Project area is economically justifiable, it reduces the likelihood of attaining the CD/I Project goal. As a result, Agro 21 should consider seeking funds for such activities from other sources than the CD/I budget. Additionally, USAID should consider the implications of the changing shape of the CD/I Project on the resource requirements for small-scale farmer support services and make appropriate changes in the level of financing support to this expanded activity.

5. Issue

A cursory review of the impact of Hurricane Gilbert on small-scale farmers in the Project area revealed that, in general, and excepting damage to houses and some flood damage, the damage to the agricultural base was not severe.

Implication:

With the expected shortage of Jamaican food crops in the short to medium-term, there is a market opportunity for small-scale farmers to exploit in terms of satisfying domestic market requirements. This opportunity, no doubt, will reduce their enthusiasm for participating in higher risk export ventures.

Project Engineering

1. Issue:
Use of arable land, with completed irrigation works, for commercial farming.

Implication:
At present, about 1,500 acres of Project lands are supplied with water, are ready for arable cultivation and are, as yet not in commercial farming. Supporting evidence for this statement comes from the Agro 21 Engineering Planning Study 1987, conversations in the Land Utilization Department, and personal observations as follows:

a) land in Block A (formerly Intergrow), which has been used under sprinkler irrigation in previous years has 3,215 gpm available from wells; water supply enough for 460 acres.
b) land in Block B has a completed PVC pipe/riser system with well capacity of 3,650 gpm, enough for 520 irrigated acres.
c) the land in Block E has an interconnected pipe network completed throughout the block and 6 operating wells with 3,940 gpm total capacity, enough for irrigation of 560 acres.

Suggestion:
Notwithstanding the recently proposed medium-scale "banana park" project and the green bean commercial farm on a portion of the Intergrow land, Agro 21 should dedicate a proportion of vacant but viable lands to a medium-scale farm block pilot project to test the market for this investor group (See Investment Promotion section).

2. Issue:
Small-scale farmers at the down-stream end of the irrigation system may have short water supplies during the dryer parts of the year, irrespective of whether regulating reservoirs are completed.

Background:

Upstream and, therefore, first to be served on the RC irrigation system are the large land holdings. These are lands in furrow irrigation, notoriously of low water use efficiency. Optimistically, such lands will attain a 50 per cent efficiency, needing a flow of 10.5 gpm/acre during the driest period of the year. Consequently, the 7,415 acres occupied by Petronol will require 77,857 gpm (or 173 cu. ft/sec.) while the Innswood Plantation's 5,900 acres will require 137 cu. ft./sec. Together the two large farms are likely to use 310 cf/sec, or about 80 cf/sec. above the maximum flow divertable from the Rio Cobre. Perhaps, the cyclical cane harvesting will account for a 10 or 20 per cent reduction and, admittedly, ground water can supply the difference through a network of wells. However, it is unlikely that the large grower at the upstream end of a canal would use more expensive ground water when canal water is available.

Implication:

Small-scale farmers may be short of irrigation water at critical times in the cropping year. This will have negative consequences for the Agro 21 SFL program and tax the credibility of NIC to deliver a consistent quality water product.

Suggestion:

NIC should encourage the establishment of water users' association to represent, in particular, the interest of small-scale farmers.

NIC Institutional Development

1. Issue

There are no mutually-accepted procedures for transferring rehabilitated irrigation system components from Agro 21 to NIC.

Background:

The Land Development Department of Agro 21 is responsible for rehabilitation work on the diversion dam, canals, reservoirs and other project components. The long term operational responsibility for the rehabilitated system is to rest with NIC. At present, no guidelines or formal agreement exists to document the transfer of completed components.

Suggestion:

As a basis for discussion, Agro 21 should list what it feels should be provided to NIC (drawings, contracts, instructions, etc.). Simultaneously, NIC should list those items it feels are needed for O & M . The engineering office of USAID could review both lists and help reach reasonable guidelines for transfer.

2. Issue:

The ability, or otherwise, of NIC to self-finance the operations and up-keep of the R.C. irrigation system, after the PACD of the CD/I Project, through collection of water dues.

Background: 1/

Recent Payment situation

a) Water has been almost free. 6 per cent of the costs have been paid by farmers and estates. The Government does not recover the remaining 94 per cent by way of taxes on agriculture production;

b) Water is not valued and is used inefficiently on the farm.

c) RCID water dues in arrears as of October 1, 1985 J$1,075,800 or 547 per cent of the 85/86 dues.

Implication:

RCIW residents have a long history of doing as they please with the surface water supply. Changing their behavioural patterns and mind-set will likely be a momentous task.

Suggestion:

Encourage the GOJ to give legal status to water user associations to emphasize water conservation and proper water use by farmers, both small and large-scale(including irrigation efficiency, testing services etc.)

1/"Irrigation Water Pricing Policy and Tariffs" FAO Working Document by Michael J. Rayner,1985

Cross-Cutting Issues

1. Issue:

Agro 21 has national responsibility for agricultural investment promotion and development in Jamaica. The CD/I Project is specific to a particular geographic area and USAID has a Mission interest in encouraging the attainment of the Project goal within a specified time frame.

Implication:

Perhaps, inevitably, given the national responsibilities of Agro 21, the priority it assigns to implementation of all the components of the CD/I Project, although high, may be less than the donor assigns with, justifiably, USAID's parochial project-specific interest. Such a situation can lead to mis-communication between USAID and Agro 21 as they strive to attain their respective agency objectives.

Suggestion:

It may prove useful to bring relevant USAID and Agro 21 personnel together (to include, at least, the USAID Project Officer, and Agro 21 CD/I Project Co-ordinating Committee members) , on a weekly basis, to discuss Project progress and problems (i.e. in its widest sense, including the engineering, small-scale farmer and investment promotion components). This should provide an opportunity for all parties to focus on progress made in attaining the Project purpose and goal, rather than on aspects of individual components or on important but, nonetheless, irritating administrative matters.

2. Issue:

The Project area was not damaged heavily by Hurricane Gilbert; it was largely restricted to flooding with consequent damage to electricity installations and debris collection in the irrigation canals.

Implication:

Given the well-advanced stage of the engineering works, the agronomic potential of the St. Catherine plains, the opportunities that exist for commercial agriculture in both domestic and export markets, and the ability of Agro 21 staff, the CD/I Project area is in good shape to attract the mix of investors that can ensure it can meet its commercial potential. If the clarion call for the CD/I Project is "market driven", then, so should be the investment promotion strategy. In a market economy, a market driven investor promotion strategy can be complementary with national economic goals and aspirations.

Attachment No. 1
PIO/T No. 532-9103-3-80031
Page 1 of 5 Pages

A. OBJECTIVE:

USAID is conducting an evaluation of the Crop Diversification and Irrigation Project (532-0123) to assess the institution's progress and problems to date in achieving the Project purpose and to assess the building of Agro 21, Project's lead implementing agency. This evaluation will be used by USAID/Jamaica, AID/W, and the Government of Jamaica (GOJ) to identify and execute pertinent corrections or improvements in project design and implementation.

B. BACKGROUND:

The goal of the Project is to promote investment in the agricultural sector that will improve productivity, increase employment and enhance Jamaica's capability to earn and save foreign exchange. The purpose of the Project is to strengthen the institutional capacity of Agro 21 to promote private agricultural investment in Jamaica.

Agro 21 was created in October 1983 by the GOJ to facilitate expanded private investment in agriculture which was then, and still is today, considered crucial for economic recovery. Investment in agriculture is expected to enhance Jamaica's capacity to earn and/or save foreign exchange, while easing the constraints on growth brought on by heavy debt burdens and declining world markets for some of the country's traditional exports.

The centerpiece of investment in agriculture was to have been abandoned sugar properties or other under-utilized lands. These lands were to be made available to investors through a land lease/crop diversification program, administered by Agro 21. It was anticipated that crops planted would include winter vegetables, ornamental horticulture crops, food and feed grains, tree crops and oil seed crops. Phased development of the lands was anticipated with some 13,400 acres (subsequently reduced to approximately 10,000 acres) with the focus of these efforts on the St. Catherine plains.

To accomplish the previously stated purpose, the Project was designed to assist Agro 21 in undertaking this urgently needed program. Project resources are concentrated on four (4) principal activities, namely: (1) strengthening the capacity of Agro 21 to promote private enterprise agricultural investment by local and/or foreign investors; (2) assisting Agro 21 to rehabilitate the existing irrigation system, upgrade it and add facilities required to ensure full effectiveness; (3) providing Agro 21 and the National Irrigation Commission (NIC) with the resources necessary to upgrade the GOJ's ability to efficiently operate and maintain the rehabilitated irrigation system; and (4) establishing a small farmer linkage program at Agro 21 to help small producers gain access to technology, market outlets, land and employment through formal and informal relationships to be developed with larger producers and markets.

Project implementation has proceeded at an uneven pace with some project supported activities progressing at a faster rate than others. As part of the evaluation exercise, the team of contracted specialists will analyze and document this development and propose remedial actions that will accelerate project implementation.

C. STATEMENT OF WORK:

This evaluation will seek to answer the following specific questions related to design, implementation, current status and future orientation of the Project. Specifically, the evaluation exercise will address the following issues and factors:

1. To what extent has progress been made towards achievement of the Project goal and purpose;

2. What is the current status and future potential of Agro 21's efforts to promote private enterprise agricultural investment by local and/or foreign investors?

3. Will the efforts being made by Agro 21 in the rehabilitation, upgrading and addition of new facilities to the irrigation system result in a cost-effective irrigation system capable of supporting diversified crop production?

4. Once the irrigation system is finished, will NIC possess the necessary systems, staff, legal framework and autonomy of operations to efficiently operate and maintain the rehabilitated irrigation system?

5. To what extent has small farmer linkage program been established and how has it helped small producers gain access to technology, market outlets, land and employment? What changes are needed to increase its effectiveness?

6. Are the management systems (i.e., procurement, contracting, financial management, internal controls and planning) currently in use by Agro 21 sufficient to ensure effective and timely project implementation? Are modifications to the management systems needed? If so, to what aspects?

7. Has the original project focus on large to medium sized leased holdings resulted in significant crop diversification? Should greater emphasis be placed on small farmers in and around the project area? If so, how can small farmers, including women, best be integrated into the project and how can they be expected to react to/take advantage of the rehabilitated irrigation system?

8. What modifications in Project design and/or implementation are necessary (if any) for achievement purpose within the current Life of Project and eventual achievement of the goal to which this project contributes?

Using recognized methods of data collection and statistical inference, the evaluation report will present empirical findings addressing the issues and factors listed above. Conclusions with corresponding recommendations will be consistent with and supported by the evaluation exercise's empirical findings.

D. METHOD AND PROCEDURES:

In order to collect the necessary information and data required to formulate empirical findings upon which the evaluation conclusions and recommendation will be based, the evaluation team will; (a) review pertinent project documentation at USAID, Agro 21 and NIC; (b) interview USAID, Agro 21 and NIC staff as well as other individuals familiar with the project; and (c) visit the project site to observe project activities and discuss project progress with actual and potential beneficiaries of the project.

While in Jamaica the evaluation team will work primarily in Kingston and at the principal project site on the St. Catherine plains (approximately 30 minutes drive west of Kingston). The evaluation team will be expected to work an eight-hour day. A six-day work week will be authorized. Limited logistical support will be provided by USAID and Agro 21 as the lead implementing agency for the project. However, special provisions for clerical support will have to be made by the contractor. USAID, Agro 21 and NIC will make available all pertinent project documentation based on an initial listing of needs that will be prepared by the evaluation team in conjunction with the USAID. At a minimum, one member of the USAID Project committee will be assigned full time to assist the evaluation team.

The tentative schedule of the evaluation exercise will require the contracted specialists to spend at least three weeks working in Jamaica, with an additional week in the U.S. to finalize the evaluation report. The tentative schedule follows:

Week One	Arrival, entry briefing, initial introductions and site visits, begin document review and interviews.
Week Two	Site visits, document review, interviews.
Week Three	Prepare draft evaluation report and brief Mission.
Week Four	Prepare final evaluation report for submission to USAID.

The evaluation exercise is scheduled to commence on/or about August 15, 1988.

E. EVALUATION TEAM COMPOSITION:

The evaluation team will be composed of four (4) members: the evaluation team leader, an agricultural engineer, a rural sociologist and an AID direct-hire employee not from USAID/Jamaica. Other than English language proficiency, there are no special language requirements. The specific experience and tasks for each member of the evaluation team are described below:

Evaluation Team Leader: This individual should have a minimum of five years experience in the design, implementation and evaluation of AID funded projects, with a special focus on management systems. Prior experience in Jamaica is desirable but not required.

Agronomist/Agricultural Engineer: This individual should have at least five years experience in the design, management and evaluation of AID funded irrigation projects. The Agronomist/Agricultural Engineer should also be experienced in the workings of small farmer water user organizations. Previous experience in Jamaica is desirable but not required.

Rural Sociologist/Cultural Anthropologist: This individual should have at least five years experience in the area of evaluating small farmer responses to, and adoption of, irrigated agricultural production schemes. Previous experience with the small farmer sector in Jamaica is required.

F. REPORTING REQUIREMENTS:

The evaluation report will follow AID's required format for evaluation reports as follows:

- Executive Summary
- Project Identification Data Sheet
- Table of Contents
- Body of Report
- Appendices

The Executive Summary will state the development objectives of the activity evaluated; purpose of the evaluation; study method; findings, conclusions, and recommendations; and lessons learned about the design and implementation of this type of development activity. (Attachment B contains more detailed instructions for the completion of the Executive Summary section of the evaluation report).

The body of the report will include discussion of: (1) the purpose and study questions of the evaluation; (2) the economic, political, and social context of the project; (3) evaluation team composition and study methods (one page maximum); (4) evidence/findings of the study concerning the evaluation questions; (5) conclusions drawn from the findings, stated in succinct language; and (6) recommendations based on the study findings and conclusions, stated as actions to be taken to improve project performance. The body of the report should be limited to 40 pages, with more detailed discussions of methodological or technical issues (if necessary) placed in appendices.

Appendices will include a copy of the evaluation scope of work, the most current Project Logical Framework Matrix, a list of documents consulted, and individuals and agencies contacted. Additional appendices may include a brief discussion of study methodology and technical topics if necessary.

ANNEX 2

M E M O R A N D U M

TO: See Distribution

FROM: Vivian Rochester, ARDO
THRU: Steve French, ARDO

SUBJ: CD/I Evaluation

DATE: September 20, 1988

Consequent on the impact of Hurricane Gilbert which hit Jamaica on September 12, 1988, the DAI team evaluating the CD/I Project is asked to prepare a Background Paper on the Evaluation by week ending September 23 indicating:

a) an assessment of the progress made towards achievement of the project goals based on the major points indicated in the Scope of Work, with emphasis on the lack of success in attracting large-scale farming investors to Jamaica and the implications for future investor promotion strategy.

b) the likely impact of the hurricane damage on the efficient implementation of the project.

The report will be distributed by cob on Thursday, September 22, 1988, and you are invited to attend a meeting to discuss the paper in the 4th floor conference room, USAID, Friday, September 23, 1988 at 10 a.m.

Distribution:

DIR:WRJoslin
A/DDIR:TTifft
ARDO:RLOwens
OPPE:BCypser
OPEP:NHardy/RBaker
CONT:RLeonard
OEEE:RCook/RBird
OPED:DMackell

Agro 21:RThompson
TEasterling

NIC:GBrown
WBoyne

DAI - Team

ANNEX 3

AGENDA

FIELD TRIP FOR USAID EVALUATION TEAM ON THURSDAY, SEPTEMBER 8, 1988

ITEM	TIME	DESCRIPTION	CONTACT
1	10:00 a.m.	Leave AGRO-21 Main Office	Tommy Easterling Stanley Rampair Ed Norum
2	10:45 a.m.	Arrive RCIW Dam Headworks & Main Canal	Ed Norum
3	11:15 a.m.	Arrive Spanish Town Waterworks, Gates & Lift Station	Stanley Rampair
4	11:45 a.m.	Arrive Spring Village Irrigation System Well	Sonia French/ Vernon Morris
5	12:00-12:30 p.m.	LUNCH (Spring Village Pump Station)	
6	1:00 p.m.	Arrive Old Harbour Canal R.R. Culverts	Sonia French/ Vernon Morris
7	1:30 p.m.	Arrive Turner's Pen Canal / Hill Run	Stanley Rampair/ J. Senaratne
8	2:00 p.m.	Arrive Port Henderson Canal Lining Project (Cumberland Pen Canal Block "E")	Alwin Hales
9	3:15 p.m.	Arrive Inter-Grow Ltd. (Block A) Visit Farm, Visit Wells	Tommy Easterling/ D.V. Ramanamurty
10	3:45 p.m.	Arrive Block B -View Construction Activities	Ellon Peterkin
11	4:15 p.m.	Arrive Block C -View Infrastructural Improvements	Ellon Peterkin/ Vernon Morris
		-Demonstration Farm with Shade House, Propagation House & Plantings.	Colin Bloomfield

ITEM	TIME	DESCRIPTION	CONTACT
12	4.45 p.m.	Arrive AGRO-21 Export Centre	Avril Tapper
13	5:30 p.m.	Arrive AGRO-21 main office	

ANNEX 4

A synopsis of small-scale farmer characteristics in the Project Area

The areas now identified by AGRO 21 and the NIC as small-scale farmers benefitting or to benefit from the CD/I in the Project Area are:-

- Bushy Park
- Spring Village
- Hartlands and Little Hartlands
- Lawrencefield
- Hill Run

Although some of these communities have received increased water supplies, Bushy Park and Little Hartlands need additional supplies in order to meet increasing demands. According to the NIC, the Rio Cobre Irrigation Project now serves a total of 355 farmers with 14,141 acres. 70 per cent of this acreage belongs to 8 farms including Petronol, Innswood and Caymanas estates. The other 30 per cent is farmed by 347 farmers - 330 of whom have plots of 1-30 acres and are in mixed vegetables, sugarcane, bananas and aquaculture.

Existing data (survey conducted for the Japanese International Co-operation Agency in 1987) reveals that the average farm size in the Rio Cobre Irrigation Scheme area is 7.8 acres. The majority of the small subsistence farms are on leased or captured land. The educational level of the farmers is exceptionally high for Jamaica, with 80 per cent having attended primary or secondary school, 50 per cent have other occupations. 34 per cent of farmers participate in a farmer's organisation(30 per cent in the JAS).

AGENCIES AND INDIVIDUALS CONTACTED

AGRO 21

M. Barrackman
C. Bloomfield
K. Brito
I. Brown
T. Easterling
S. French
S. Ghaaznavi
A. Hales
R. Jackson
V. Morris
E. Norum
E. Peterkin
S. Rampair
C. Taffe
R. Thompson
E. Watson

USAID

A. Baker
W. Coles
R. Cook
P. Crowe
B. Cypser
S. French
A. Leonard
P. Lerner
D. Mackell
R. Owens
V. Rochester
T. Tifft

NIC

G. Brown
W. Boyne

CARE- St. Catherine's Vegetable Producers' Association

G. McAvoy
D. McAvoy

MOA

M. Pencil
M. Rampal

JAS

E. Brodber
M. Williamson

OPM

V. Logan